COMMON SUBJECT

NATION BUILDING & CIVIC PREPAREDNESS

EDITION 2025

SD/SW CADETS' HAND BOOK
NATIONAL CADET CORPS

National Cadet Corps

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सत्यमेव जयते

CONSTITUTION OF INDIA

PREAMBLE

WE, THE PEOPLE OF INDIA, HAVING
solemnly resolved to constitute India into
a sovereign socialist secular democratic republic
and to secure to all its citizens :

JUSTICE,
Social, Economic And Political; LIBERTY
of thought, expression, belief, faith and worship;

EQUALITY
of status and of opportunity; and to promote among them all

FRATERNITY
assuring the dignity of the individual and
the [unity and integrity of the nation];

IN OUR CONSTITUENT ASSEMBLY
this twenty-sixth day of november, 1949, do
HEREBY ADOPT, ENACT AND GIVE TO
OURSELVES THIS CONSTITUTION.

NATIONAL ANTHEM

Jana-Gana-Mana-Adhinayak Jaya He

Bharat-bhagya-vidhata

Punjab-Sindhu-Gujrat-Maratha

Dravid-Utkal-Banga

Vindhya-Himachal-Yamuna-Ganga-

uchchala-jaladhi-taranga

Tava Subha name jage,

tava subha asisa mage, gahe tava jaya-gatha.

Jana-gana-mangala-dayaka

jaya he Bharata-bhagya-vidhata

Jaya he, Jaya he, Jaya he, jaya jaya jaya jaya he.

FOREWORD

It gives me immense pleasure and pride to present the Revised NCC Précis of Common and Special Subjects, 2025 Edition, marking the culmination of a protracted effort mounted for the purpose for more than two years. This achievement has only been made possible through the collective and whole-hearted effort of all stakeholders, comprising the Directorates, the Board of Officers for revision and for printing, & my staff. Your contribution in bringing the project to fruition merits highest appreciation.

The revision was aimed at structuring and updating the syllabus to reflect contemporary thought & realities, as also equip cadets with skills to apply their NCC training in real-life situations. The challenge was to simultaneously keep the language simple for easy comprehension, avoiding too much jargon or pedantry. Endeavour was also to make the presentation interesting and the layout reader-friendly, enabling cadets to engage with each topic meaningfully even through self-study. I extend my sincere appreciation to the entire team for successfully achieving these objectives in their entirety.

This endeavour also aligns the NCC syllabus with tenets of *Vikasit Bharat* for the youth, familiarising NCC cadets with history, geo-strategy, and contemporary technological advances, while remaining rooted in our cultural heritage and ethos. I am sanguine that this vision will be carried forward by present and future generations of cadets, ensuring strong foundations for a robust nation, enabled and ready to achieve greater heights and our rightful place on the global stage.

GOD bless and JAI HIND

Director General,
National Cadet Corps

MASTER INDEX – NATION BUILDING & CIVIC PREPAREDNESS (SD/SW)

SER NO	CODE	SUBJECT	PERIODS			TYPE	PAGE
			1st Yr	2nd Yr	3rd Yr		
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5	NI-II	Key Attributes of National Security & Challenges		01		T	40
		BORDER & COASTAL AREA (BCA)	**(05 PERIODS)**				
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		DISASTER MANAGEMENT	**(12 PERIODS)**				
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	Total Periods (without SSCD Practical)		**18**	**20**	**18**		

SUMMARY				
	Theory	**Practical**	**SSCD Practical**	**Total**
1ST YEAR	15	-	12	15
2ND YEAR	13	01	12	14
3RD YEAR	14	03	12	17
TOTAL	42	04	36	46

NCC: BUILDING BLOCKS

1

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NCC: BUILDING BLOCKS (SD/SW)

CHAPTER I: AIMS, OBJECTIVES, ORGANISATION, AND THE ROLE OF NCC IN NATION BUILDING

"We are responsible for what we are, and whatever we wish ourselves to be, we have the power to make ourselves."

Swami Vivekananda

Ready for Action

TEACHING INSTRUCTIONS

Period	**:**	**01 (One)**
Type	**:**	**Lecture**
Year	**:**	**SD/SW (First Year)**
Conducting Officer	**:**	**ANO**
Training Aids	**:**	**Class room, OHP, Board and Chalk/Markers**

Time-plan

- Part I: What NCC Means : 10 mins
- Part II: Aims and Objectives of NCC : 10 mins
- Part III: Organisation of NCC : 10 mins
- Part IV: Role of NCC in Nation Building : 05 mins
- Conclusion, Summary, and Practice : 05 mins

INTRODUCTION

1. The youth of today are the leaders of tomorrow. NCC aims to harness the youth towards service of the nation by inculcating the values of patriotism, character, social commitment, and discipline.

2. Further, NCC provides an opportunity to explore the diverse cultural treasures of the country. It aims to develop the qualities of discipline, leadership, character, and patriotism in order to make the cadets ideal citizens of the country.

Selfless Commitment

3. Selfless commitment to the nation and upholding the values of secularism, equality, and justice are essential qualities of a model citizen. A cadet will be guided to not only become a responsible citizen but also be given exposure to leadership duties. This apart, the cadets will also be encouraged to take a career in the Armed Forces.

PREVIEW

The lecture will be conducted in following parts:-

(a) Part I: What Does NCC Mean?

(b) Part II: Aims and Objectives of NCC.

(c) Part III: Organisation of the NCC.

(d) Part IV: Role of NCC in Nation Building.

LEARNING OBJECTIVES

- Cadets should be able to define the NCC and explain its primary purpose and significance.
- Cadets should be able to articulate the aims and objectives of NCC.
- Cadets should understand the various levels and organisations within the NCC.
- Cadets should be able to explain how NCC contributes to nation building.

PART I : WHAT NCC MEANS?

4. The primary aim of raising NCC was to groom the youth, nurturing them and directing their energy toward nation building by making them responsible citizens. Today, the NCC boasts a large enrolled strength of cadets, and it continues to grow through planned expansions. The NCC consists of two divisions/wings of Army, Navy, and Air Force, i.e., the Senior Division/Senior Wing for boys/girls from colleges and the Junior Division/Junior Wing for boys/girls of schools.

DID YOU KNOW?

- During the First World War, University Officers' Training Corps was conceptualised.
- After independence, the present-day NCC formally came into existence on 15 July 1948. The Girls Division of the NCC came into existence in July 1949.
- The Air Wing was raised on 01 April 1950.
- July 1952 saw the establishment of the Naval Wing.

Always Prepared

5. **NCC Cadet**. Being an NCC cadet is the embodiment of the spirit of courage, determination, and selfless service. The NCC training aims to instil leadership qualities, time management skills, and teamwork abilities in the cadets. The cadets acquire the ability to challenge themselves, develop self-assurance, and surmount obstacles.

6. **National Orientation of NCC**. India has a very rich culture encompassing linguistic, religious, ethnic, and geographical diversity. NCC plays a significant role in developing national orientation among the cadets. It brings together cadets from diverse backgrounds, fostering a collective identity. The cadets are encouraged to participate in community development, social services, and public awareness campaigns, thereby promoting values of selfless service.

7. **Developing a Sense of Pride**. NCC activities are unique in nature, which provides a distinct identity to the cadets. This apart, NCC provides a platform to showcase talents as well as participate in national events. This assists in developing a sense of pride among the cadets. It is important to highlight that the uniform of NCC cadets is a constant reminder of responsibilities, as it represents the values of discipline, integrity, and honour.

8. **Value of Humility**. The training at NCC emphasises humility. The values of NCC require the cadets to sacrifice individual interest towards the collective interest. NCC, through participation in national events, promoting community services, and selfless services, helps in upholding the qualities of humility among the cadets.

9. **Adventure and Community Service**. NCC provides an excellent opportunity to explore a sense of adventurism. The facilities include adventure activities, flying, and sailing. These activities are not easily accessible to normal citizens. Participation in these activities aims to build the spirit of adventure and promote outdoor activities among the youth. Participation in various social service drives, like blood donation, cleanliness

campaigns, and environmental preservation, teaches the cadets to direct their efforts towards society.

PART II : AIMS AND OBJECTIVES OF NCC

10. The aims of NCC are mainly three fold:-

(a) To develop the following qualities in the cadets:-

Leadership of Tomorrow

(i) Character

(ii) Comradeship

(iii) Discipline

(iv) Secular Outlook

(v) Spirit of Adventure

(vi) Ideals of selfless service among the youth of the country

(b) To create a human resource of Organised, Trained and Motivated youth, to provide leadership in all walks of life and always be available for the service of the nation.

(c) To provide a suitable environment to motivate the youth to take up a career in the Armed Forces.

11. The objectives of the NCC are:-

(a) To reach out to the maximum youth through various institutions.

(b) To make NCC an important part of the society

(c) To teach positive thinking and attitude to the youth

(d) To become a source of National Integration by making NCC as one of the greatest and strongest united force of the nation irrespective of any caste, creed, religion or region.

(e) To mould the youth of the entire country into united, secular, and disciplined citizens of the nation.

(f) To provide an ideal platform for the youth to showcase their ability in nation building.

(g) To instil the spirit of secularism and united India by organizing National Integration Camps all over the country.

(h) To reach out to the youth of friendly foreign countries through Youth Exchange Programmes.

PART III : ORGANISATION OF NCC

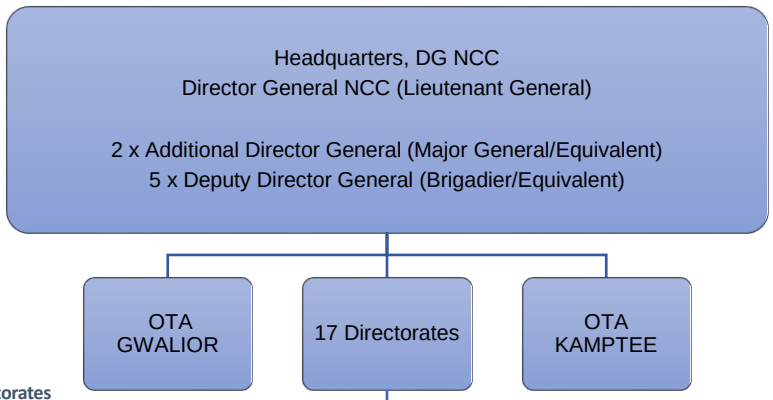
12. **Apex Structure**. The NCC is a voluntary youth organisation that functions under the Ministry of Defence. NCC Headquarters is located in New Delhi. It is headed by a Director General of Lieutenant General rank. The Director General is responsible for the functioning of the NCC across the country.

13. **Directorates and Groups**. NCC has 17 directorates that are located in the state capitals. An officer of the rank of Major General/Brigadier or equivalent, from the three services, leads each of the directorates. Depending on the size of the state and the growth of the NCC within it, directorates may have several Group Headquarters under their command. Directorates, through Groups, organise various NCC activities in the state. Each group is headed by an officer of the rank of Brigadier/Colonel or equivalent, known as the Group Commander.

14. **Units**. Each NCC Group Headquarters controls 5-7 NCC units/battalions, commanded by Colonel/Lieutenant Colonel or equivalent. Each battalion consists of companies that are commanded by the Associate NCC Officers (ANO) of the rank of Lieutenant, Captain, or Major.

15. **Training Establishments**. There are two training academies, namely the Officers Training Academy, Kamptee, for men, and the Officers Training Academy, Gwalior, for women, where professors and teachers from colleges and schools are specially trained to impart training to the cadets as Associate NCC Officers (ANOs).

The Organisation structure of the NCC is as under:-



NCC Directorates

1 Andhra Pradesh & Telangana
2 Bihar & Jharkhand
3 Delhi
4 Gujarat,Dadra & Nagar Haveli,Daman and Diu
5 Jammu & Kashmir and Ladakh
6 Karnataka & Goa
7 Kerala & Lakshdweep
8 Madhya Pradesh & Chhattisgarh
9 Maharashtra
10 North East Region (Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Tripura)
11 Odisha
12 Punjab, Haryana, Himachal Pradesh and Chandigarh
13 Rajasthan
14 Tamil Nadu, Puducherry, Andaman and Nicobar Islands
15 Uttarakhand
16 Uttar Pradesh
17 West Bengal & Sikkim

PART IV : ROLE OF NCC IN NATION BUILDING

16. NCC training aims to build character in the cadets by promoting the values of integrity, selfless service, and discipline. The training in NCC not only aids in the development of leadership qualities but also fosters a sense of adventure. The promotion of Unity in Diversity and a secular outlook are major objectives of NCC. Thus, NCC encourages its cadets to become model citizens of the country. NCC also plays a significant role in nation building by fostering discipline and patriotism among the youth of the country through its training curriculum and activities.

DID YOU KNOW?

- The NCC Act, 1948, provides for the constitution and regulation of the NCC.
- The Act establishes a legal framework for NCC, including its organisation, governance, administration, and funding.
- It also sets out the roles and responsibilities of the Director General of NCC, the Central Advisory Committee, and the State and Union Territory Governments in relation to the NCC.
- The Act empowers the Central Government to make rules for carrying out its provisions..

17. **Character Development**. The youth of the country have immense potential. Harnessing the youth's energy for both individual and nation building is essential. Character building is a crucial aspect that shapes the individual. The ethos and values of NCC promote the character development of the cadet. During the training, the cadets develop a sense of discipline, integrity, and eagerness to serve the nation in all capacities. The values imbibed in the cadets not only assist them in achieving their goals but also help the nation.

18. **Service Training**. Service subjects are an integral part of the NCC curriculum. Training in these subjects not only assists in developing leadership qualities but also adds to their confidence. The core values of service training are discipline and teamwork. The cadet undergoes rigorous drill sessions and group exercises that help in imbibing these qualities. Further, the cadets are also trained in disaster management and emergency response.

19. **Unity in Diversity**. Cadets are required to attend training camps at the NCC. The cadets experience a glimpse of regimental life through these structured training activities. These camps serve as a hub where cadets from various backgrounds engage in shared training. These events help cadets understand the cultural and social aspects of diverse groups. It helps not only in promoting unity in diversity but also in promoting secular values and a greater sense of patriotism.

20. **Sense of Patriotism**. NCC plays a vital role in fostering a greater sense of patriotism among young cadets by instilling values of service and commitment to the nation. Through various activities, including drills, leadership development, and community service, NCC cadets gain a deeper understanding of their responsibilities as citizens. The organisation’s emphasis on national integration, where cadets from diverse backgrounds

come together, helps build a sense of unity and pride in the country. NCC instils a strong belief in the importance of national security and social welfare, inspiring cadets to contribute positively to the nation's progress and well-being, thus nurturing a lifelong spirit of patriotism.

21. **Peace and Security**. NCC emphasises the importance of national unity, respect for law and order, and non-violence. The NCC educates cadets about the significance of peace and conflict resolution and encourages them to become ambassadors of harmony in their communities. NCC's involvement in disaster management, social service activities, and community outreach programs further contributes to building a peaceful society. These efforts ensure that cadets grow up to be responsible citizens ready to contribute to the peaceful progress of the nation.

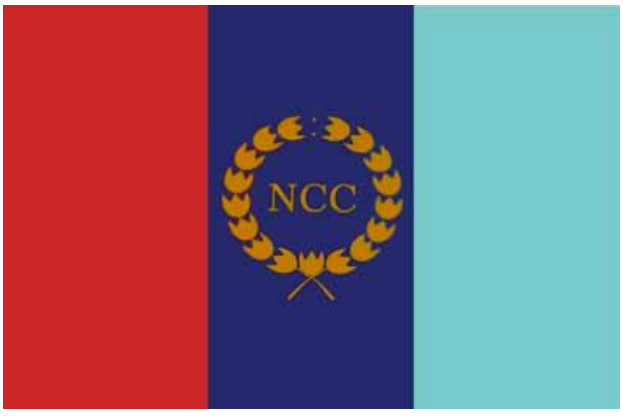
CONCLUSION

22. NCC is an invaluable organisation committed to the development of youth in India, aiming to shape them into responsible citizens, future leaders, and devoted members of society. With its motto of 'Unity and Discipline,' NCC focuses on imparting essential qualities such as leadership, character, discipline, patriotism, and a secular outlook. By offering a structured training and exposure to various fields, including military skills, social service, and adventure activities, NCC develops a sense of responsibility and commitment to the nation in the cadets. The overarching goal is to prepare cadets not just for careers in the Armed Forces but for leadership roles in all spheres of life.

DID YOU KNOW?

NCC Flag.

- The flag's three colours symbolize the three branches of the Armed Forces; Red for the Army, Deep Blue for the Navy, and Light Blue for the Air Force. Surrounding the NCC crest in Gold is a wreath of 17 lotus flowers, which represent the 17 Directorates of the NCC. Additionally, the flag includes two dots, representing the Officer Training Academies located at Gwalior and Kamptee.



23. The NCC's role in promoting unity in diversity is fundamental to its mission. The cadets come from different linguistic, religious, and cultural backgrounds, and the program encourages them to work together toward common goals. Through participation in training camps and national events, cadets develop a deep sense of camaraderie, secularism, and respect for diversity, which helps in building a collective national identity.

NCC SONG

In 1956, the idea of creating an official song for the NCC was first considered. By 1963, the song 'Kadam Mila Ke Chal' was adopted as the official anthem of the NCC. However, in 1974, there was a growing sense that a new song was needed. Efforts to find a suitable replacement began but the process remained unresolved for some time. Around the same period, the Film Division was producing a documentary on the NCC titled 'A Cadet's Diary'. The director of the documentary was searching for a fitting song and came across 'Ham Sab Hindi Hain', a song that had first been performed at a Youth Festival in Chandigarh during 1968-69. The song quickly became popular and was frequently played at Republic Day Camps. In 1980, the word 'Hindi' in the song was replaced with 'Bhartiya'. Unfortunately, the original writer of the song has remained unidentified.

The Lyrics of NCC song is as under :-

Hum Sab Bharatiya Hain, Hum Sab Bharatiya Hain

Apni Manzil Ek Hai,

Ha, Ha, Ha, Ek Hai,

Ho, Ho, Ho, Ek Hai.

Hum Sab Bharatiya Hain.

Kashmir Ki Dharti Rani Hai,

Sartaj Himalaya Hai,

Saadiyon Se Humne Isko Apne Khoon Se Pala Hai

Desh Ki Raksha Ki Khatir Hum Shamshir Utha Lenge,

Hum Shamshir Utha Lenge.

Bikhre Bikhre Taare Hain Hum Lekin Jhilmil Ek Hai,

Ha, Ha, Ha, Ek Hai

Hum Sab Bharatiya Hai.

Mandir Gurudwaare Bhi Hain Yahan

Aur Masjid Bhi Hai Yahan

Girija Ka Hai Ghariyaal Kahin

Mullah ki Kahin Hai Ajaan

Ek Hee Apna Ram Hain, Ek hi Allah Taala Hai,

Ek Hee Allah Taala Hain, Raang Birange Deepak Hain Hum,

lekin Jagmag Ek Hai, Ha Ha Ha Ek Hai, Ho Ho Ho Ek Hai.

Hum Sab Bharatiya Hain, Hum Sab Bharatiya Hain.

SUMMARY

- The National Cadet Corps (NCC) aims to foster responsible citizenship and nation-building by grooming boys and girls into disciplined and motivated individuals.
- With over 1.7 million cadets and expanding, the NCC encompasses both Senior and Junior Divisions for various age groups.
- The program instils leadership, teamwork, and time management skills while promoting humility, adventure, and community service.
- It plays a crucial role in nurturing national unity and diversity through its training, which includes social service, adventure activities, and military preparation.
- The NCC primarily aims to develop qualities of comradeship, discipline, a secular outlook, a spirit of adventure, and ideals of selfless service, as also:-
  - Create a human resource of organised, trained, and motivated youth.
  - Provide leadership in all walks of life who will serve the nation regardless of which career they choose.
  - Provide an environment conducive to motivating young Indians to choose the Armed Forces as a career.
- Organised under the Ministry of Defence, the NCC is structured into multiple directorates, group headquarters, and units to conduct NCC activities.
- NCC has two training establishments, one each at Kamptee and Gwalior.
- NCC is dedicated to shaping disciplined, selfless leaders who contribute to nation-building and uphold values of integrity and patriotism.
- NCC training helps in developing a greater sense of patriotism and maintaining peace and security.

ASSESSMENT EXERCISE

Multiple-Choice Questions (MCQs)

Q1. Which year saw the official launch of NCC?

(a) 1937

(b) 1945

(c) 1948

(d) 1950

Q2. Which of the following cater to boy school students?

(a) Junior Division

(b) Senior Division

(c) Junior Wing

(d) Senior Wing

Q3. NCC Flag has how many lotus flowers?

(a) Two

(b) Five

(c) Seventeen

(d) Twenty-seven

Q4. Which values does the NCC training promote?

(a) Academic excellence and financial success

(b) Sports

(c) Discipline, integrity, and selfless service

(d) Technological innovation and entrepreneurship

Q5. What is the primary aim of the NCC?

(a) To prepare cadets for military service

(b) To groom boys and girls for nation-building and responsible citizenship

(c) To promote sports among youth

(d) To offer academic training to students

Q6. Which of the following is NOT a division of the NCC?

(a) Senior Division

(b) Junior Wing

(c) Youth Wing

(d) Senior Wing

Q7. What key quality does NCC training aim to develop in cadets?

(a) Wealth generation

(b) Political influence

(c) Leadership and teamwork

(d) Academic excellence

Q8. Which of the following best describes the "National Orientation of NCC"?

(a) Promoting international diplomacy

(b) Encouraging nationalism and unity in diversity

(c) Teaching foreign languages

(d) Focusing on environmental preservation

Q9. What is the primary purpose of NCC adventure activities?

(a) To prepare cadets for military service

(b) To build the spirit of adventure and promote outdoor activities

(c) To provide a platform for international sports

(d) To teach technical skills

Q10. Which of the following is an objective of the NCC?

(a) To create a human resource of trained youth for leadership

(b) To provide free education to all cadets

(c) To organise community festivals

(d) To train cadets in specific career skills

Q11. What does the NCC uniform symbolise for the cadets?

(a) Academic achievement

(b) Political allegiance

(c) Responsibility, discipline, integrity, and honour

(d) Participation in global events

Q12. Which of the following activities does the NCC provide cadets the opportunity to participate in?

(a) International trade conferences

(b) Social service drives, like blood donation and cleanliness campaigns

(c) Academic debates

(d) Corporate leadership programs

Q13. What is the aim of NCC training in terms of community service?

(a) To teach social science subjects

(b) To promote national events

(c) To make constructive contributions toward society

(d) To encourage political participation

Q14. Who oversees the functioning of the NCC?

(a) The Prime Minister

(b) The Ministry of Defence

(c) The Ministry of Education

(d) The Ministry of Youth Affairs

Q15. What is the focus of the training in NCC service subjects?

(a) Physical fitness only

(b) Discipline, teamwork, and leadership

(c) Technical skills development

(d) Political awareness

Short Questions

Q1. How does the NCC help in developing national orientation among cadets?

Q2. What unique activities does the NCC offer to its cadets?

Q3. Name the two training academies for NCC officers.

Q4. What is the role of the Defence Minister in relation to the NCC?

Q5. What is the ultimate goal of NCC training in terms of career choices for cadets?

Long Questions

Q1. Discuss the significance of NCC in promoting unity and diversity among cadets and how it contributes to nation building.

Q2. Explain the organisational structure of the NCC and its various components.

Q3. Describe the training objectives of the NCC and how they aim to develop leadership, communication skills, and character in cadets.

Q4. Evaluate the role of the NCC in shaping future leaders and its influence on the armed forces recruitment and national service.

Q5. How does NCC contribute to nation building?

NCC: BUILDING BLOCKS (SD/SW)

CHAPTER II: INCENTIVES TO NCC CADETS AND DUTIES & RESPONSIBILITIES OF NCC CADETS

"Be active! Take on responsibility! Work for the things you believe in. If you do not, you are surrendering your fate to others."

– APJ Abdul Kalam

Together We Move Forward

TEACHING INSTRUCTIONS:

Period	**:**	**01 (One)**
Type	**:**	**Lecture**
Year	**:**	**SD/SW (First Year)**
Conducting Officer	**:**	**ANO**
Training Aids	**:**	**Class room, OHP, Board and Chalk/Markers**

Time-plan

- Part I: Benefits to NCC cadets by Central Government : 15 mins
- Part II: Incentives to NCC cadets by State Governments : 10 mins
- Part III: Duties and Responsibilities of NCC Cadets : 10 mins
- Conclusion, Summary and Practice : 05 mins

INTRODUCTION

1. Upon completing their NCC training, cadets are moulded into ideal citizens with strong leadership qualities. To harness these attributes, both central and state governments offer various incentives for employment and admission to certain educational institutions. The Armed Forces have also established specific provisions for granting preference to NCC cadets in various entry schemes. To avail of these benefits, NCC cadets are expected to achieve proficiency in certificate examinations.

Never Give Up

2. NCC cadets are expected to uphold a strict code of conduct and adhere to high ethical and moral standards, as outlined in their designated duties and responsibilities.

PREVIEW

The lecture will be conducted in following parts:-

(a) Part I: Benefits to NCC cadets by the Central Government.

(b) Part II: Incentives to NCC cadets by State Governments.

(c) Part III: Duties and Responsibilities of Cadets.

LEARNING OBJECTIVES

- Cadets should have an overview about benefits offered to NCC cadets for entry into Armed Forces, Central Armed Police Forces and other incentives offered by the Central Government.
- Cadets should have basic information regarding the incentives offered to NCC Cadets by State Government
- Cadets should have adequate understanding regarding role and responsibilities of the Cadets

PART I : BENEFITS TO NCC CADETS BY CENTRAL GOVERNMENT

3. The training of NCC cadets includes service subjects. Also, the aim of the NCC is to encourage cadets to join the Armed Forces. Various incentives are provided to NCC cadets for this purpose.

4. **Officer Entry.** Cadets who hold NCC ‘C’ certificates are eligible for certain benefits when applying for officer positions in all three branches of the armed services:

(a) **Army**. Cadets must be graduates with a minimum of 50% aggregate and an ‘A’ or ‘B’ grade in the NCC ‘C’ certificate, having served 2 or 3 years (as applicable) in the Senior Division/Wing of NCC. Vacancies are reserved for NCC ‘C’ Certificate

holders at the Indian Military Academy, Dehradun and OTA, Chennai. No written test is required for this entry, and selection is based on the SSB interview and overall merit. For details, refer to the official notification.

(b) **Navy**. Graduates with an NCC 'C' Certificate, a minimum 'B' grade, and at least 50% marks in their degree examination are eligible for commissioning in the Navy as regular commissioned officers. These candidates are exempt from the Combined Defence Services Examination and are selected through the SSB interview. NCC certificate holders can also apply for a Short Service Commission in the Executive Branch.

(c) **Air Force**. NCC Special Entry is available in the Air Force for cadets holding a valid NCC Air Wing 'C' certificate. Through this entry, cadets can join the Flying Branch-Men are eligible for Permanent Commission, while both Men and Women can apply for Short Service Commission. The age limit for this entry is 20 to 24 years as of the date of commencement of training, with a relaxation of up to 2 years for Commercial Pilot License holders.

5. ***Agniveer***. For *Agniveer* recruitment, NCC cadets are awarded additional marks in the final merit list:

S. No.	Certificate Exam	Marks in Army	Marks in Navy	Marks in Air Force
(a)	A Certificate	05 Marks	02%	05 Marks
(b)	B Certificate	10 Marks	04%	06 Marks
(c)	C Certificate	20 Marks	06%	07 Marks
(d)	Cadets who have attended Republic Day Camp	25 Marks (with 'C' Certificate)	04% over and above the marks awarded above	-

6. **Central Armed Police Forces**. In April 2020, the Ministry of Home Affairs announced that NCC cadets will receive additional marks for recruitment as sub-inspectors and constables in Central Armed Police Forces: -

S. No.	Certificate Exam	Marks
(a)	A Certificate	02%
(b)	B Certificate	03%
(c)	C Certificate	05%

7. **Financial Assistance/Scholarships.** The Cadet Welfare Society (CWS) provides financial aid and support to cadets in the event of an injury or to the next of kin (NOK) in the case of a fatality during NCC-related activities.

The details of the financial assistance are as follows:-

	NCC Activities	Death Cases	Permanent Disability	Temporary Disability
(a)	High Risk	10,00,000/-	up to 5,00,000/-	up to 1,75,000/-
(b)	Other Activities	7,50,000/-	up to 4,50,000/-	up to 1,75,000/-

8. The benefits provided by the CWS are:-

(a) CWS awards a scholarship of Rs 6000/- per cadet for 1000 NCC cadets every year to academically brilliant students.

(b) Grant of Best Cadet Award of Rs 4500/- and 2nd Best Cadet Award of Rs 3500/- at each group level.

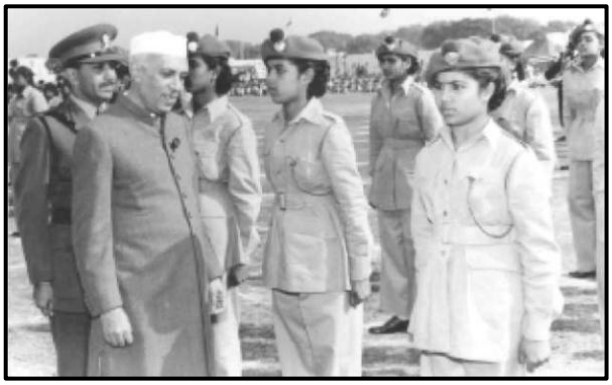
(c) Conduct of sports and adventure activities.

DID YOU KNOW?

- One of the aims of NCC is to provide an environment conducive to motivating young Indians to choose the Armed Forces as a career.
- The benefits offered to the cadets for joining the Armed Forces provide a distinctive edge.

PART II : INCENTIVES BY STATE GOVERNMENTS

9. Every State/Union territory offers benefits to cadets holding NCC certificates in various fields. These benefits are notified every year for entry into academic institutes and employment opportunities. Cadets can avail themselves of these benefits offered in the respective fields. For details refer to official state government websites.



New Frontiers

10. **Academic Fields**. States offer benefits to NCC cadets for entry into academic institutions. These benefits are either in the form of additional marks for NCC certificates or earmarking certain seats for NCC cadets. Some states also provide benefits to NCC cadets in terms ofrelaxation in fees. In general, several states have instituted benefits for NCC Cadets for entry into the following academic institutes:

(a) Polytechnics.

(b) State Universities.

(c) Engineering Colleges (limited seats in some states).

(d) Medical Colleges (limited seats in some states).

11. **Employment Opportunities**. Cadets in possession of NCC Certificates, especially 'B' and 'C' Certificates, are given incentives by several state governments. Most of the states have schemes to harness NCC cadets into state uniformed services like police, forest department, fire department, etc. Some states also provide benefits to the NCC cadets for entry into state civil services. These incentives range from providing additional marks/weightage in overall merit and earmarking certain seats for NCC cadets.

12. **Award by State Governments**. Several state governments have instituted awards for the NCC cadets. Some state governments also give cash awards to cadets who have excelled in NCC activities. These awards are for the following: -

(a) Attending prestigious camps like the Republic Day Parade Camp or *Thal/Vayu/Nau Sena* Camp.

(b) Cash incentives for excelling in NCC activities.

(c) Scholarships.

PART III : DUTIES AND RESPONSIBILITIES OF NCC CADETS

13. The NCC aims to be one of the most powerful unifying forces in our nation, bringing together youth from diverse regions and shaping them into unified, secular, and disciplined citizens. Any student who joins the NCC must understand their duties and responsibilities as a cadet and uphold the conduct expected of a trained youth leader in the country.

14. **The Cadet**. The term "Cadet" refers to a "trainee" and is typically used in a military context. Cadets are an essential part of the NCC and are categorized into two divisions: SD/SW (Senior Division / Senior Wing), which includes cadets from colleges and universities and JD/JW (Junior Division/Junior Wing), which consists of school students. The main benefits of being an NCC cadet are listed below:-

(a) Being part of the largest youth organisation in the world.

(b) Being shaped into a disciplined and motivated individual.

(c) Opportunity to participate in disaster relief activities.

(d) Chance to attend NCC camps.

(e) Wearing the uniform and adopting a lifestyle similar to military life.

(f) Opportunity to travel abroad as part of the Youth Exchange Program.

(g) Participation in social awareness campaigns.

(h) Preference for joining the armed forces and other uniformed services.

(j) Preference in higher education opportunities.

15. **Duties of Cadets**. Duties of NCC cadets during parades and camps are as under:

(a) Self-discipline.

(b) Punctuality during parade and roll call.

(c) Following the orders of higher ranks.

(d) Participate in camp activities with complete enthusiasm.

(e) Take proper haircuts and wear clean and correct patterns of uniform. Polishing of shoes, ironing of uniforms, and wearing of berets in the correct manner.

(f) Participate in the cultural activities organised by the NCC.

(g) Attend all NCC parades.

(h) Participate in the teamwork.

(j) Extend complete cooperation to the seniors.

(k) Pursue the adventure activities.

16. **Responsibilities of a Cadet**. An NCC cadet, by virtue of being an active member, carries additional responsibilities compared to his or her peers who are not part of the NCC. These responsibilities may not be explicitly stated, but they are inherent as a result of the cadet's training. In fulfilling these duties, the cadet aligns with the primary goals of the NCC, which include developing into a potential leader with strong character traits and becoming a responsible citizen. The cadet's responsibilities extend to his or her NCC unit, the organisation, the institution, society, and the nation. These include active involvement in social awareness campaigns, environmental issues, disaster relief, adventure and sports activities, and other nation-building efforts. The responsibility does not end with the completion of NCC training at the institution; it continues to be relevant throughout the cadet's life and future endeavours. Over time, the country will see former NCC cadets in leadership roles across various sectors, championing the noble values and objectives of the NCC.

17. **Cadets' Commandments**. Director General, NCC has given out a list of 'Cadets' Commandments' for all NCC cadets to follow in their lives. They are given below:-

(a) I will donate blood at least once every year.

(b) I will make only digital transactions wherever possible and motivate others for the same.

(c) I will plant a minimum of two trees in a year and care for the same.

(d) I will ensure garbage segregation in my house and within 100 m of my neighbourhood.

(e) I will undertake 100 hours of *shramdaan* for social service.

(f) I will help physically challenged persons to live their dreams.

(g) I will be a role model for gender sensitivity, secular outlook, and spirit of nationalism without any regional bias.

(h) I will rush to help any accident victim.

(i) I will always uphold the motto of NCC—'Unity and Discipline'. I will be equally disciplined when not under observation.

18. **Do's for NCC Cadets**.

(a) Lead by example through your actions and appearance.

(b) Strive to develop qualities that will shape you into a future leader.

(c) Be a source of positivity and encouragement for others.

(d) Maintain integrity in your behaviour both on and off the parade ground.

(e) Offer guidance and support to junior cadets as a mentor.

(f) Contribute your skills and volunteer for organised NCC events.

(g) Wear the uniform with honour and pride.

19. **Don'ts for NCC Cadets**.

(a) Don't engage in dishonesty, cheating, or manipulation, nor allow others to do so.

(b) Don't treat juniors unfairly or with disrespect.

(c) Don't skip parades or arrive late without a valid reason.

(d) Don't speak negatively about the organisation.

(e) Don't delay tasks or put things off.

(f) Don't accept or offer undue favours.

(g) Don't engage in discussions about politics or religion.

20. **Expectations from NCC Cadets**. NCC cadets are held to higher expectations than other children or citizens due to their commitment to discipline, leadership, and national service. As members of a prestigious organisation, cadets in moral integrity, responsibility,

and community service. They are expected to lead by example, uphold values of honesty and respect, and contribute positively to society. Their conduct, both on and off the parades, should reflect the standards of the NCC, making them role models for others. The qualities they develop are aimed at preparing them for leadership roles, thus demanding a higher level of dedication, responsibility, and self-discipline compared to the general populace.

CONCLUSION

21. NCC serves as a transformative platform for youth, shaping them into disciplined, responsible, and patriotic citizens. Through rigorous training and a focus on leadership, teamwork, and selfless service, NCC instils qualities that prepare cadets to become future leaders in various sectors, including the Armed Forces, government services, and civil society. The numerous benefits offered by the central and state governments, such as preferences in employment and educational admissions, along with financial assistance, ensure that NCC cadets are well-supported in their professional and academic pursuits, further motivating them to excel.

22. Being an NCC cadet is about more than just personal growth; it is about embracing the responsibilities that come with being a citizen of a diverse and democratic nation. The values upheld by the NCC, discipline, respect, and unity, guide cadets to become responsible citizens in society. As they progress in their careers and life paths, the lessons learnt, and the ethical standards instilled during their time in the NCC will continue to guide them in their pursuit of excellence.

SUMMARY

- Cadets holding a 'C' certificate can enter the Army, Navy, and Air Force without a written exam, through direct selection via the SSB interview.
- NCC Cadets receive additional marks for Agniveer recruitment, based on their NCC certificate grade, with extra marks for attending Republic Day Camp.
- The Cadet Welfare Society (CWS) provides financial assistance for injuries or fatalities during NCC activities and support for the next of kin.
- CWS also awards scholarships, including Rs 6000 for 1000 to academically brilliant Cadets and recognition for cadets at the Group level.
- States offer benefits to NCC Cadets for entry into academic institutions, including additional marks, reserved seats and fee relaxations.
- Benefits are provided for entry into polytechnics, universities, engineering colleges, and medical colleges in some states.
- Several states provide incentives for NCC Cadets to join state uniformed services such as the police, fire department, and civil services.
- State governments award Cadets for excelling in NCC activities, including attending prestigious camps and performing well in academic and physical tasks.
- NCC fosters unity among youth from diverse backgrounds, moulding them into disciplined, secular, and patriotic citizens committed to nation-building.
- NCC Cadets take on responsibilities such as social awareness, environmental work, disaster relief, and promoting national values, which they carry forward into their future roles in society.
- Cadets are expected to fulfil several duties, including maintaining self discipline and being punctual for parades. Regular attendance at parades and a cooperative attitude toward seniors are also essential duties.
- Being an NCC cadet comes with significant responsibilities. Cadets are not just students; they are expected to engage in nation building activities. This includes taking part in social awareness campaigns, environmental efforts, and disaster relief. They are also expected to contribute to the community and uphold the core values of the NCC in their personal and professional lives.

ASSESSMENT EXERCISE

Multiple Choice Questions

Q1. What is the primary benefit for NCC cadets holding a 'C' certificate in terms of military service?

(a) Benefits for entry into the Armed Forces

(b) Free educational scholarships

(c) Guaranteed promotion to higher ranks

(d) Free travel allowances

Q2. What is the minimum grading in the NCC 'C' Certificate Exam for being eligible for NCC Special Entry in the Army?

(a) 'A' Grading

(b) 'A' or 'B' Grading

(c) 'C' Grading

(d) Any Grading

Q3. What additional marks are awarded to NCC cadets with a 'C' certificate for recruitment as Agniveers in the Army?

(a) 05 Marks

(b) 10 Marks

(c) 20 Marks

(d) 25 Marks

Q4. How much financial assistance is provided by the Cadet Welfare Society for a fatality during high-risk NCC activities?

(a) Rs 4,50,000

(b) Rs 10,00,000

(c) Rs 1,75,000

(d) Rs 2,00,000

Q5. What type of financial aid does the Cadet Welfare Society offer for temporary disability during NCC activities?

(a) Up to Rs 5,00,000

(b) Up to Rs 4,50,000

(c) Up to Rs 1,75,000

(d) Up to Rs 50,000

Q7. Which of the following services offers officer entry for NCC 'C' certificate holders?

(a) Army only

(b) Navy only

(c) Air Force only

(d) All of the above

Q8. Which of the following is true about NCC cadet benefits for recruitment in the Central Armed Police Forces?

(a) Only ‘A’ certificate holders get benefits.

(b) ‘C’ certificate holders get 5% additional marks.

(c) ‘A’ certificate holders get 3% additional marks.

(d) ‘B’ certificate holders get 10% additional marks.

Q9. Which of the following is NOT a sector where NCC cadets are provided employment opportunities by state governments?

(a) Police

(b) Fire Department

(c) Forest Department

(d) Private sector companies

Q10. What are the state government awards that NCC cadets may receive?

(a) Cash prizes for attending school

(b) Awards for excelling in NCC activities and prestigious camps

(c) Guaranteed scholarships for higher studies

(d) Discounts on public transport

Q11. What is the primary aim of NCC’s Cadet Commandments?

(a) To prepare cadets for military life only

(b) To uphold the values of unity and discipline in cadets' personal lives

(c) To encourage cadets to focus only on academics

(d) To avoid participating in social services

Q12. How many trees is an NCC cadet expected to plant each year as per the Cadet Commandments?

(a) One tree

(b) Two trees

(c) Three trees

(d) Four trees

Q13. Which of the following is NOT a duty of an NCC cadet during parades and camps?

(a) Wearing the uniform correctly

(b) Participating in cultural activities

(c) Leading the entire parade without instructions

(d) Attending parades regularly

Q14. What is the main trait that NCC cadets are expected to maintain during their training?

(a) Intellectual abilities

(b) Self-discipline

(c) Financial independence

(d) Physical endurance

Q15. What is the motto of NCC that all cadets must uphold?

(a) Unity and Loyalty

(b) Unity and Discipline

(c) Discipline and Strength

(d) Strength and Unity

Short Questions

Q1. What benefits do NCC cadets receive for holding a ‘C’ certificate in terms of Armed Forces entry?

Q2. What are the additional marks allotted to NCC cadets for a ‘B’ certificate in Navy recruitment?

Q3. Which financial aid does the Cadet Welfare Society provide in case of permanent disability during NCC activities?

Q4. What are the responsibilities of an NCC cadet towards his/her institution?

Q5. Which incentives are offered by state governments to NCC certificate holders in various departments?

Long Questions

Q1. Explain the various incentives offered to NCC cadets by the Central Government related to Armed Forces recruitment.

Q2. Describe the financial assistance and scholarships provided by the Cadet Welfare Society and the types of incidents covered.

Q3. Discuss the duties and responsibilities of NCC cadets during parades and camps and how these contribute to their development.

NCC: BUILDING BLOCKS (SD/SW)

CHAPTER III : TRAINING CURRICULUM OF NCC

“One individual may die for an idea but that idea will after his death incarnate itself in a thousand lives”

Subhash Chandra Bose

Overcome all Barriers

TEACHING INSTRUCTIONS:

Period	**:**	**01 (One)**
Type	**:**	**Lecture**
Year	**:**	**SD/SW (Second Year)**
Conducting Officer	**:**	**ANO**
Training Aids	**:**	**Class room, OHP, Board and Chalk/Markers**

Time-plan

- Part I: Training Overview : 10 mins
- Part II: Certificate Exams : 05 mins
- Part III: Social Service and Community Development : 05 mins
- Part IV: Competitions : 05 mins
- Part V: Minimum Attendance : 02 mins
- Part VI: Adventure Activities : 03 mins
- Part VII: Activities in Air Force, Navy, and Remount and Veterinary : 02 mins
- Part VIII: Youth Exchange Program : 03 mins
- Conclusions, Summary, and Practice : 05 mins

INTRODUCTION

1. A structured training curriculum exists in the NCC with the overall objective of achieving the aims of NCC and also meeting the individual aspirations of the cadets. The training ranges from institutional training to attendance in camps. This apart, the cadets are encouraged to regularly participate in social activities to perform duties as model citizens. NCC also provides a platform for participation in various adventure activities.

Aiming for Excellence

2. NCC certificate exams are an indication of the level of proficiency achieved by the cadet during the NCC training. The cadet, on qualification of the certificates, is eligible to avail benefits offered by various governments and institutes.

PREVIEW

The lecture will be conducted in following parts:-

(a) Part I : Training Overview.

(b) Part II: NCC Certificate Exams.

(c) Part III : Social Service and Community Development.

(d) Part IV : Competitions.

(e) Part V : Minimum attendance

(g) Part VI : Adventure Activities.

(h) Part VII : Activities in the Air Force, Navy, and Remount and Veterinary.

(d) Part VIII : Youth Exchange Program.

LEARNING OBJECTIVES

- Cadets should have knowledge of the NCC training curriculum and information on various camps.
- Cadets should have a clear understanding of the eligibility and conduct of the 'A' Certificate exam.
- Cadets should have basic knowledge of social service and community development in NCC.
- Apprise cadets regarding various competitions in NCC.
- Cadets should have information regarding minimum attendance for certificate exams.
- Cadets should have information regarding adventure activities and training in the Air Force, Navy, and Remount and Veterinary.
- Inform cadets about the Youth Exchange Programs.

PART I : TRAINING OVERVIEW

3. Training activities of NCC can be broadly divided as under:-

(a) **Institutional Training**. Training organised in schools and colleges as parades.

(b) **Camp Training**. Formal training organised as camps of 10-12 days duration.

(c) **Attachment Training**. Formal training organised by attachment with Army/Naval/Air Force units or with officer training academies like Indian Military Academy (IMA) and Officers Training Academy (OTA).

4. **Institutional Training**. Training conducted in colleges and schools is called institutional training. It remains the primary means of training in the NCC. The aim of the training is to nurture core values, enhance awareness, and give exposure to basic military skills and knowledge. Emphasis is on practical training. Common subjects comprise about 70% of the periods, and specialised service subjects constitute 30%.

5. **Types of Camps**. Various types of camps conducted by NCC are enumerated in the succeeding paragraphs.

6. **Annual Training Camps / Combined Annual Training Camps (ATCs / CATCs)**. These camps are conducted for SD, SW, JD, and JW cadets with a duration of 10 days. The aim is to familiarise cadets with a disciplined and structured regimented life. The training during the camp focuses on providing cadets with extensive exposure to range drill, firing and specialised training. The emphasis is placed on community living, discipline, character development, confidence building, and first aid skills.

7. **Centrally Organised Camps (COC)**. These camps are planned at the HQ DGNCC. COCs have a duration of 12 days. The aim of these camps is to bring together cadets from different regions of the country, allowing them to experience and learn about the diverse cultures of various states. This helps foster 'Esprit de Corps' and promotes Unity in Diversity, all within the context of national integration. The various types of COCs are:

(a) **Leadership Camps**. These camps are organised on an all-India basis to develop leadership qualities in cadets and also provide SSB training to all wing cadets for induction into the Armed Forces.

DID YOU KNOW?

- Combined Annual Training Camp aims to provide a glimpse of regimental life to the cadets.
- It is organised for 400-600 cadets along with instructional staff.
- These camps are the stepping stone for the cadet to showcase the talent and subsequently get selected for Centrally Organised Camps.

(b) **Thal Sainik Camp**. The aim of this camp is to expose cadets to salient aspects of Army Wing training and generate a healthy competitive spirit by conducting Army Wing competitions. The competitions contribute towards the Prime Minister's Banner awarded during the Republic Day Parade. It is being conducted in Delhi at the DGNCC Camp.

(c) **Nau Sainik Camp**. The aim of this camp is to give exposure to salient aspects of Naval Wing training and generate healthy competitive spirit by conducting Naval Wing competitions. The competitions contribute towards the Prime Minister's Banner awarded during the Republic Day Parade.

Spirit of Competitions

(d) **Vayu Sainik Camp**. The aim of this camp is to give exposure to salient aspects of Air Wing training and generate healthy competitive spirit by conducting Air Wing competitions. The competitions contribute towards the Prime Minister's Banner awarded during the Republic Day Parade.

(e) **Republic Day Camp (RDC)**. The NCC Republic Day Camp is the highlight of all NCC training activities, held annually at the Garrison Parade Grounds in Delhi from 29 December to 30 January. Selected NCC cadets from all Directorates participate in the camp, based on vacancies allocated by HQ DGNCC each year. Directorates compete in various events to determine the Champion Directorate, which is awarded the Prime Minister's Banner.

DID YOU KNOW?

- All India Thal/Nau/Vayu Sena Camps are annual events.
- Service-specific professional competitions are conducted during these camps.
- Cadets undergo a rigorous selection process within the Directorates for nomination to these prestigious camps.

(f) **Ek Bharat Shreshtha Bharat Camp**. Ek Bharat Shrestha Bharat (EBSB) camp is an event aimed at promoting national integration and unity among cadets. The primary goal is to foster a sense of nationalism by providing cadets with the opportunity to interact with cadets from different states and cultures. The camp features a variety of activities such as presentations on the culture, traditions, and heritage of the participating states, folk dances and songs, and visits to local villages. EBSB camps are typically organised between paired states. The duration of the camp is 12 days for SD/SW and JD/JW.

Platform to Showcase Talent

(g) **SSB Screening Camp**. SSB screening camps for both SD boys and SW girls are conducted at Officers Training Academies and other centrally organised camps. The aim is to orient and prepare cadets for selection for induction into the armed forces.

(h) **Rock Climbing Camp**. Rock climbing camps are organised to introduce cadets to the fundamentals of rock climbing while fostering a spirit of adventure, leadership, teamwork, and camaraderie. These camps also aim to improve physical fitness by enhancing stamina and endurance among the cadets.

(j) **All India Treks**. These camps are conducted under the aegis of DGNCC. The treks are conducted by designated state directorates. The duration of these camps is 10 days. The aim of trekking camps is to cultivate a spirit of adventure, leadership, stamina, endurance, self-confidence, team spirit, and esprit de corps. Additionally, these camps focus on fostering environmental awareness, respecting local customs and culture, and promoting national integration.

8. **Military Attachment Camp**. These camps, of 12 days duration, are designed for Senior Division boys and Senior Wing girls. The objective of these camps is to immerse selected cadets in the Armed Forces environment, providing them with a taste of military training to build confidence and inspire them to consider joining the Armed Forces. Selected girl cadets are given exposure to the daily operations of military hospitals, offering insights into hygiene, sanitation, and patient management.

DID YOU KNOW?

- Firing competitions are prestigious events and are organised every year.
- Cadets get a chance to compete for Best Cadet Competitions every year.
- Cadets can showcase their talents in cultural events. Several competitions are conducted during the Republic Day camp

9. **Attachment Training IMA/OTA** These camps are conducted for duration of 12 days for SD/SW cadets. Detailed training programme is prepared with IMA/OTA. The aim of these training is 'to expose the cadets to the training imparted at IMA/OTA and to motivate them to join the Armed Forces as Commissioned Officers'.

PART II : NCC CERTIFICATE EXAMS

10. **Minimum Attendance**. The cadet must have attended a minimum of 75% of the total training periods laid down in the syllabus for the first and second years of Junior Division/Wing NCC (All Wings) to appear in certificate exams.

11. **Certificate 'A'**. .

(a) The cadet must have attended a minimum of 75% of total training periods laid down in the syllabus for the first and second years of Junior Division/Wing NCC (All Wings).

(b) The cadet must have attended one Annual Training Camp.

12. **Certificate 'B'**.

(a) A cadet possessing Certificate 'A' will be awarded 10 bonus marks.

(b) The cadet must have attended a minimum of 75% of total training periods laid down in the syllabus for the first and second years for Senior Division/Wing NCC (All Wings).

(c) The cadet must have attended one Annual Training Camp/EBSB/EBSB-SNIC/COC/RDC/Attachment with Army/Navy/Air Force.

13. **Certificate 'C'**.

(a) The cadet must be in possession of Certificate 'B'.

(b) The cadet must be in third year or later (extension cases) of Senior Division/Senior Wing NCC Training.

(c) The cadet must have attended a minimum of 75% of the periods of the third-year syllabus during the academic session.

(d) The cadet must have attended one ATC or any of the Centrally Organised Camps after obtaining a 'B' certificate (attending one ATC in SD/SW tenure is mandatory).

14. **Examination Schedule**.

S. No.	Date	Exam Schedule	If Exam Rescheduled	Absentee Exam
'A' Certificate Exam				
(a)	All (less Ladakh & Tawang Regions)	Jan—Mar	Jan—Mar	Apr
(b)	Ladakh & Tawang Regions	Jun—Aug	Jun—Aug	Sep
'B' Certificate Exam				
(c)	All (less Ladakh & Tawang Regions)	Jan—Mar	Jan—Mar	Apr
(d)	Ladakh & Tawang Regions	Jun—Aug	Jun—Aug	Sep
'C' Certificate Exam				
(e)	Tawang Regions	2nd Sunday of Feb	4th Sunday of Feb	3rd Sunday of Mar
(f)	Ladakh Regions	2nd Sunday of Feb	4th Sunday of Feb	3rd Sunday of Mar

15. **Exam Conduct**.

S. No.	Item	'A' Certificate Exam	'B' Certificate Exam	'C' Certificate Exam	Remarks
(a)	Exam Pattern	MCQ	MCQ	MCQ	(i) Bilingual (English & Hindi).
(b)	Duration	180 mins	180 mins	180 mins	
(c)	**Maximum Marks**				
	Written	350 (Common Subjects-240 & Special Subjects-110)	350 (Common Subjects-240 & Special Subjects-110)	350 (Common Subjects-240 & Special Subjects-110)	
	Practical	150 (Common Subject-110 & Special Subject-40)	150 (Common Subject 110 & Special Subject-40)	150 (Common Subject - 110 & Special Sub-40)	

PART III : SOCIAL SERVICE AND COMMUNITY DEVELOPMENT

16. **Social Service and Community Development**. Social service activities are designed to inspire and encourage cadets to voluntarily contribute to improving their physical and social environments and channelling their energies toward nation building. These activities include initiatives such as Swachh Bharat Abhiyan, tree plantation, anti-drug rallies, health awareness, disaster relief, blood donation, *Beti Bachao Beti Padhao*, AIDS awareness, care for the blind, traffic control, and other pertinent contemporary social issues. The objectives of social service are as follows:

(a) To instill in cadets the value of hard work and encourage an interest in constructive activities that benefit the community.

(b) To set an example of selfless service and teamwork.

(c) To take the lead in organised efforts, aiming to make the most of the available time, energy, and resources of our people, directing them toward various fields of social and economic development.

PART IV : COMPETITIONS

17. **Conduct of Competitions**. NCC cadets have the opportunity to participate in several competitions conducted at various levels. These competitions provide an excellent opportunity for cadets to showcase their talents. Details are enumerated in succeeding paragraphs.

18. **Prime Minister's Banner**. Each year the Hon'ble Prime Minister awards a banner to the best directorate. This award is decided based on various competitions held throughout the year. The important competitions that contribute towards the banner where cadets participate are:

(a) **Republic Day Parade Camp**. Cadets representing respective directorates participate in competitions like Drill, Guard of Honour, Flag Area Display, Line Area and Cultural Competitions.

(b) **All India Thal/Vayu/Nau Sena Camps**. Cadets participate in competitions like obstacle training, map reading, tent pitching, judging distance and field signals, health and hygiene, and firing competitions for the Army. Naval cadets participate in Boat Pulling, Ship Modeling, Seamanship and Drill. Similarly, Air Cadets participate in Microlite flying, Aeromodelling, Drill and Firing.

19. **Inter Directorate Sports Shooting Competition**. It is an annual competition conducted to test marksmanship. Both JD/JW and SD/SW cadets can participate in the event. The top-performing cadets from this event earn the opportunity to represent the NCC at the Pre-National level during the prestigious All India GV Mavlankar Shooting Championship.

20. **Best Cadet Competition**. The competition is conducted along with RDC for SD/SW and JD/JW Cadet. It tests cadets in a variety of disciplines, including Drill, Firing, Written Tests, Interviews, Group Discussions, and Briefing.

21. **Sports**. Cadets get the opportunity to represent NCC in several sports fields, like:

(a) NCC teams of boys and girls participate every year in the Subroto Cup Football Tournament.

(b) NCC teams of boys and girls also participate in the yearly Jawahar Lal Nehru Hockey Competition.

(c) Equestrian events.

(d) Sailing Regatta.

Spirit of Adventure

22. **Miscellaneous**. Cadets get several opportunities to participate in competitions. These are conducted by units, groups, and directorates also during various camps like CATC and Centrally Organised Camps. The events range from Drill, Painting, Quizzes, Debates, to Cultural Events, etc.

PART V : MINIMUM ATTENDANCE

23. **Minimum Attendance**. As highlighted in paragraph 11 regarding eligibility for certificate exams, the cadet must have attended a minimum of 75% of total training periods laid down in the syllabus (All Wings) for appearing in certificate exams.

PART VI : ADVENTURE ACTIVITIES

24. **Adventure Activities**. Adventure is the essence of youth, and the primary goal of these activities is to foster a spirit of exploration, curiosity, and achievement. Through these activities, cadets develop stamina, endurance, discipline, courage, determination, comradeship, and leadership, all contributing to the growth of self-confidence, team spirit, and a sense of unity within the NCC. Cadets are offered the chance to take part in various adventure activities such as mountain treks, expeditions, trekking, parasailing, sailing, scuba diving, kayaking, and camel safaris. These activities help cadets enhance their leadership abilities and build strong character. Those with exceptional potential are given opportunities to participate in more challenging expeditions that require higher levels of expertise and skill. Details of these activities are enumerated in the succeeding paragraphs.

25. **Expeditions, Safari and Rallies**.

(a) **Mountaineering Expeditions**. The NCC organises two mountaineering expeditions each year, one for girl cadets and one for boy cadets. A historic achievement was made when the NCC Mount Everest Expedition (Boys) successfully reached the summit of the world’s highest peak in two batches on 19

May and 20 May 2013. NCC Cadets successfully summited Mount Everest on 18th May 2025.

(b) **All India Trekking Expedition**. Several trekking expeditions are conducted annually with the participation of 14,500 cadets from all state NCC directorates.

(c) **Sailing Expedition**. NCC conducts sailing expeditions in state NCC directorates every year.

(c) **Camel Safari**. Camel safari is conducted by the Rajasthan Directorate in the deserts every year.

(e) **Cycle and Motor Cycle Rallies**. A number of cycle and motorcycle rallies are conducted by different State NCC Directorates to spread the message of peace, harmony, and national integration and educate the populace on health, community development, and the eradication of social evils.

26. **Para Basic Course**. Every year, 40 boy and 40 girl cadets attend the Para Basic Course at Para Training School, Agra, for a duration of 24 days.

27. **Attachment Camps**. Attachment camps with military units, as well as the Indian Military Academy and Officers Training Academy, have also been highlighted in Paragraphs 9 and 10 above.

PART VII : ACTIVITIES IN AIR FORCE, NAVY AND REMOUNT AND VETERINARY

28. **Activities for the Air Force and Navy**. The training curriculum of the Air Force and Navy offers several activities. These include

(a) **Naval Wing Activities**. Seamanship, Navigation, Communication, and other associated naval subjects are taught to cadets. Swimming, scubadiving and wind surfing are other training activities to which the cadets are exposed.

(b) **Air Wing Activities**. Airmanship, Aeromodelling, Navigation, Air Frames, Aero Engines, and Microlite Flying are taught to cadets.

29. **Remount and Veterinary Units**. NCC Remount and Veterinary Units offer the opportunity to learn horsemanship. NCC cadets can participate in equestrian training and horsemanship skills to experience adventure.

PART VIII : YOUTH EXCHANGE PROGRAM

30. Selected NCC cadets take part in the Youth Exchange Program (YEP), a cultural exchange between cadets from NCC or similar government/youth organisations of friendly countries. During this program, cadets engage in the NCC activities of the host country, fostering greater understanding and appreciation of each other's socio-economic and cultural contexts.

31. NCC has been conducting YEP with 11 countries. The exchange program yields several benefits not only for the youth organisation but also for fostering stronger ties between the countries. Needless to say, the cadets share a strong bond with the participating nations. More than 100 cadets proceed abroad on YEP annually. The selection process is notified every year.

CONCLUSION

33. The training activities of the NCC are designed to provide cadets with comprehensive exposure to various aspects of military life, leadership, and national integration. The training is categorised into institutional, camp, and attachment training, along with specialised activities in the naval and air wings, and remount and veterinary activities. Through these diverse programs, cadets gain practical experience and develop essential life skills such as discipline, teamwork, and physical fitness. Moreover, the NCC encourages participation in community service and social development, emphasising the importance of selfless service, environmental conservation, and awareness of social issues.

34. Camps play a pivotal role in the NCC training structure. From Annual Training Camps to Centrally Organised Camps and specialised training such as the *Thal Sainik* Camp, *Nau Sainik* Camp, and *Vayu Sainik* Camp, each provides cadets with opportunities to hone their military skills, foster leadership qualities, and embrace the spirit of adventure. The Republic Day Camp stands as the culmination of NCC activities, where cadets from across India come together to showcase their skills and compete in various military disciplines.

35. NCC's emphasis on adventure activities further enhances the cadets' personal growth by providing them with exciting challenges such as mountaineering expeditions, parasailing, camel safaris, and sailing. These activities not only build physical endurance and resilience but also instil qualities like courage, determination, and camaraderie. Additionally, the Youth Exchange Program (YEP) offers cadets a unique opportunity to engage with their counterparts from other countries, promoting international understanding and cultural exchange.

SUMMARY

- NCC emphasises rigorous and well-structured training as a key component of its operations.
- The training is categorised into Institutional Training, Camp Training, Attachment Training and activities specific to the Naval and Air Wings, as well as Remount and Veterinary activities.
- Institutional training takes place within schools and colleges, focusing on nurturing core values, awareness, and basic military skills.
- **Types of Camps**.
  - **Annual Training Camps (ATCs)**. 10-day camps focusing on regimental life.
  - **Centrally Organised Camps**. 12-day camps to promote unity in diversity and cultural exposure.
  - **Military Attachment and IMA/OTA Attachment**. Exposure to military life and motivation to join the armed forces.
  - **Other Camps**. Leadership, Thal Sainik, Nau Sainik, Vayu Sainik, RDC, Ek Bharat Shresth Bharat, SSB Screening, Rock Climbing, and All India Treks.
- **Certificate Examinations**.
  - **Certificate 'A'**. For Junior Division/Wing cadets with at least 75% attendance and one Annual Training Camp.
  - **Certificate 'B'**. 75% attendance and participation in at least one camp from Annual Training Camps, COCs, or attachments.
  - **Certificate 'C'**. For cadets who already hold Certificate 'B', are in their third year of training, and meet attendance and camp participation criteria.
- NCC provides an opportunity for cadets to participate in numerous competitions in several fields.
- NCC encourages cadets to engage in social service activities such as Swachh Bharat Abhiyan, tree plantation, anti-drug rallies, and disaster relief. These activities aim to foster a sense of selfless service, community involvement, and leadership.
- In order to promote the spirit of adventure, a large number of activities are organised by NCC.
- NCC provides an opportunity for selected cadets to represent the country in the Youth Exchange Program.

ASSESSMENT EXERCISE

Multiple Choice Questions

Q1. What is the primary aim of NCC training?

(a) To develop military skills

(b) To prepare cadets for Armed Forces induction

(c) To develop leadership, discipline, and social awareness

(d) To teach cadets about different cultures

Q2. Which of the following is NOT a type of NCC training?

(a) Institutional Training

(b) Camp Training

(c) Skill Development

(d) Attachment Training

Q3. What is the duration of a typical NCC Annual Training Camp (ATC)?

(a) 7-10 days

(b) 10 days

(c) 15 days

(d) 30 days

Q4. Which NCC certificate is awarded after completing training in the Junior Division/Wing?

(a) ‘A’ Certificate

(b) ‘B’ Certificate

(c) ‘C’ Certificate

(d) All of the above

Q5. For obtaining Certificate 'B', which of the following is a mandatory requirement?

(a) Cadet must have completed at least 2 years in NCC.

(b) Cadet must have attended two Annual Training Camps.

(c) The cadet must have passed the Certificate 'A' exam.

(d) All of the above

Q6. Which activity is included in the Air Wing NCC training?

(a) Horse Riding

(b) Aero Modelling

(c) Seamanship

(d) Tree Plantation

Q7. What is the aim of the *Ek Bharat Shreshth Bharat* Camp?

(a) To promote sports among cadets

(b) To foster national integration and unity in diversity

(c) To improve cadets' academic performance

(d) To train cadets for combat

Q8. Which type of camp is organised to expose cadets to military life and inspire them to join the Armed Forces?

(a) Leadership Camp

(b) Military Attachment Camp

(c) Nau Sainik Camp

(d) Rock Climbing Camp

Q9. What is the minimum attendance requirement for cadets to be eligible for the Certificate 'C' exam?

(a) 75%

(b) 70%

(c) 80%

(d) 60%

Q10. Which of the following is NOT a type of centrally organised NCC camp?

(a) Nau Sainik Camp

(b) Rock Climbing Camp

(c) Vayu Sainik Camp

(d) Annual Training Camp

Q11. What is the maximum mark for the written exam in the Certificate 'B' exam?

(a) 350 marks

(b) 240 marks

(c) 150 marks

(d) 110 marks

Q12. Which of the following is NOT a Social Service and Community Development activity?

(a) Beti Bachao Beti Padhao

(b) Swachhata Abhiyan

(c) Awareness of drug abuse

(d) Cultural activities

Q13. Which of the following is one of the objectives of NCC Social Service and Community Development activities?

(a) Skill development of cadets

(b) Encourage Cadets to join the Armed Forces

(c) To set an example of selfless service and teamwork.

(d) All of the above

Q14. Which of the following is NOT an adventure activity conducted by NCC?

(a) Mountaineering Expedition

(b) All India Trekking Expedition

(c) Hot Air Balloon Expedition

(d) Sailing Expedition

Q15. What is the full form of YEP?

(a) Youth Exchange Procedure

(b) Youth Exchange Program

(c) Youth Enlightenment Procedure

(d) Youth Enlightenment Program

Short Answer Questions

Q1. What are the eligibility conditions of the ‘B’ Certificate exam?

Q2. What is the duration of the Republic Day Camp (RDC)?

Q3. What certificate must a cadet have before being eligible for Certificate 'C'?

Q4. What are the types of adventure activities conducted by NCC?

Long Answer Questions

Q1. Describe the structure and objectives of the Combined Annual Training Camp (CATC).

Q2. Explain the role and importance of the Republic Day Camp (RDC) in the NCC training program.

Q3. Highlight various Centrally Organised Camps (COCs) within the NCC.

Q4. Analyse the role of social service and community development activities in the NCC and their impact on cadets and society.

Q5. What is the Youth Exchange Program of NCC?

NATIONAL INTEGRATION AND AWARENESS

2

CHAPTERWISE INDEX: NATIONAL INTEGRATION AND AWARENESS (SD/SW)

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NATIONAL INTEGRATION AND AWARENESS PROGRAMME (N-I) SD/SW

CHAPTER I: INTRODUCTION TO NATIONAL INTEGRATION, POSITIVES OF INDIAN DIVERSITY FACTORS STRENGTHENING NATIONAL UNITY, ROLE OF NCC IN FOSTERING UNITY

Today we prosper as a nation owing to National Integration! The secret of individual prosperity lies in National unity! The nation stays in motion; as long as we value our integration!

राष्ट्रीय एकता का हमें समझना होगा अर्थ, यह है वह शक्ति जो देश में पैदा करती है सामर्थ्य।

Anonymous

TEACHING INSTRUCTIONS:

Period	**:**	**01 (One)**
Type	**:**	**Lecture**
Year	**:**	**SD/SW (First Year)**
Conducting Officer	**:**	**ANO**
Training Aids	**:**	**Class room, OHP, Board and Chalk/Markers**

Time-plan

- Introduction : 03 Mins
- Part I: Introduction to National Integration : 08 mins
- Part II: Positives of Indian Diversity : 08 mins
- Part III: Factors Strengthening National Unity : 10 mins
- Part IV: Role of NCC in Fostering Unity : 08 mins
- Conclusion and Summary : 03 mins

INTRODUCTION

1. National Integration in India refers to the process of fostering unity and solidarity among the diverse cultural, linguistic, and religious groups within the country. Given India's vast diversity—over 1.4 billion people, hundreds of languages, and numerous religions—national integration is crucial for maintaining social harmony and political stability. National integration is essential for India to navigate its complexities and emerge as a cohesive nation.

2. This chapter provides a comprehensive understanding of national integration and positives of diversity in India to include geographical, cultural, religious and ethnic diversity. The cadets would also be apprised about various factors that contribute to strengthening the national unity and the positive role that NCC can play to foster the unity and discipline among youth.

मुट्ठी में जो शक्ति है
वह उंगलियों में नही...
रस्सी में जो ताकत है
वह धागे में नहीं...

PREVIEW

The lecture will be conducted in following parts:-

- Part I : What is National Integration
- Part II : Positives of Indian Diversity
- Part III : Factors that Strengthen National Unity
- Part IV : Role of NCC in Fostering Unity

LEARNING OBJECTIVES

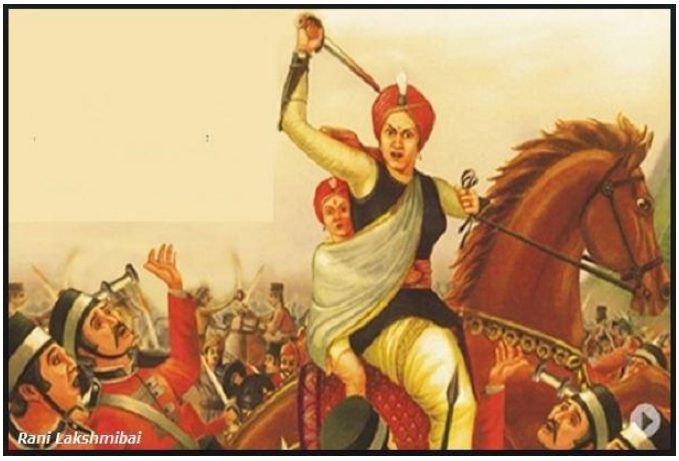
- Comprehensive understanding of the concept of National Integration.
- Illustrate positive aspects of Indian Diversity.
- Study various factors that strengthen National Unity.
- Study Role of NCC in Fostering Unity.

PART I: INTRODUCTION TO NATIONAL INTEGRATION

3. National Integration basically refers to the preservation of diverse cultures and while living harmoniously with each other. National integration is a positive concept which provides strength to the people to fight against all evil forces and keep the nation united.

4. **National Integration.** National integration involves creating a cohesive and unified national identity, where individuals from various regions, communities, and socio-economic backgrounds feel a sense of belonging to the nation. Key aspects of national integration include: cultural harmony, social unity, political cohesion and economic integration.

5. **Importance of National Integration.** National integration is crucial for maintaining the unity and stability of India, which is known for its immense cultural, religious, linguistic, and ethnic diversity. With over 1,600 distinct languages and numerous religious groups, fostering national integration helps bridge divides and promotes a shared sense of belonging among citizens. It nurtures social harmony, reducing tensions based on regional, caste, or communal lines, and fosters mutual respect and understanding.



Historical Context to National Integration

6. India's journey to independence is a testimony to the relentless efforts of countless leaders:-

(a) **Rani Lakshmibai of Jhansi.** Rani Lakshmibai led a determined resistance against British forces in Jhansi during the First War of Indian Independence (1857-1858). Her courage and leadership became symbols of resistance and patriotism.

(b) **Mangal Pandey.** A sepoy in the British East India Company's army, Pandey's actions and rebellion in 1857 are often seen as the

beginning that ignited the broader revolt against British rule.

(c) **Tatya Tope.** He was the leading commander during the first war of independence in 1857 and led Indian soldiers during the decisive battles of Kanpur and Gwalior. He continued his fight against British rule till 1859 even after the uprising of soldiers in 1857 was put down by the British army.

7. **Rise of Organized Nationalism (1885-1920)**

(a) **Dadabhai Naoroji.** He is known as the "Grand Old Man of India". He dedicated his life in raising awareness about economic exploitation of the country by the British.

(b) **Bal Gangadhar Tilak.** Often referred to as "Lokmanya" or "The People's Leader," Tilak was a fiery advocate for Indian self-rule. His famous slogan, "Swaraj is my birthright," laid the groundwork for more radical approaches to achieving independence.

8. **Indian National Congress and the Path to Independence.** Indian National Congress (INC) was founded in 1885 and quickly became the primary platform for nationalist activities. The key leaders include:-

(a) **Gopal Krishna Gokhale.** A mentor to Mahatma Gandhi and a moderate leader within the INC, Gokhale's advocacy for social reform influenced the direction of the early nationalist movement.

(b) **Mohandas Karamchand Gandhi.** Gandhi's arrival in India in 1915 marked a new chapter in the freedom struggle. His philosophy of nonviolent resistance or Satyagraha, transformed the movement. Key campaigns under his leadership, such as the Non-cooperation Movement (1920-1922), Salt March (1930) and the Quit India Movement (1942), mobilized millions and significantly pressured British authorities.

(c) **Sardar Vallabhbhai Patel.** Known as the "Iron Man of India," Patel's leadership in integrating princely states into the Indian Union was crucial for the consolidation of independent India.

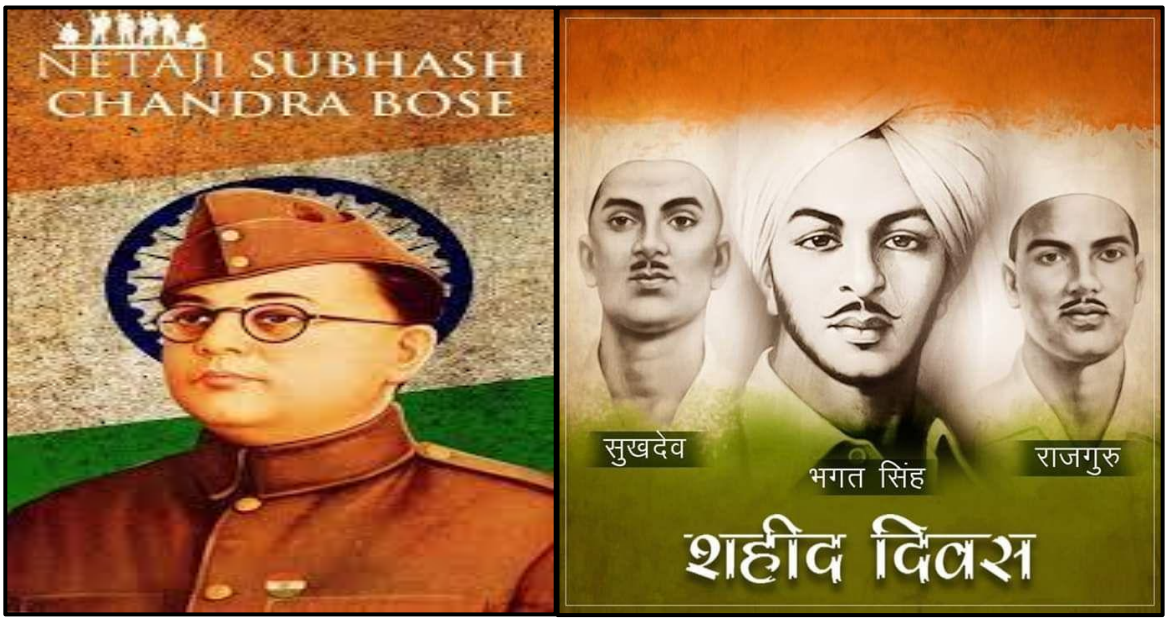
DID YOU KNOW?

- The freedom struggle of India in 1857 was the beginning of the long Independence struggle against the colonial oppression of the British rule in India.
- The 1857 freedom struggle displayed a unique blend of religious and cultural identities, as all religions and classes united against the British, overcoming any communal divisions in the society.

9. **Rise of Armed Resistance Movement.** Parallel to the nonviolent approach advocated by Mahatma Gandhi, several armed resistance movements also emerged, reflecting diverse strategies and ideologies within the freedom struggle. The key figures in the armed resistance movement includes:

(a) **Netaji Subhas Chandra Bose.** Bose raised the Indian National Army (INA) and his efforts to gain external support during World War II represented a military approach to achieving independence.

(b) **Bhagat Singh.** A revolutionary freedom fighter, Bhagat Singh's role in acts of defiance, such as the bombing of the Central Legislative Assembly, highlighted the radical side of the independence movement.



Heritage of India: Religions, Cultures, Festivals, and Important Days

10. **Religious Diversity.** India is a home to a wide array of religions, each contributing to the country's rich cultural fabric. The major religions in India include: Hinduism, Buddhism, Jainism, Sikhism, Islam and Christianity, Zoroastrianism, etc.

11. **Cultural Richness.** India's culture is a beautiful mix of languages, arts, cuisine, and traditional practices that reflect its historical and regional diversity. India is a linguistically diverse country with 22 officially recognized languages and several hundred dialects spoken across the country. Indian art and craft traditions include diverse forms such as painting, sculpture, pottery, textiles, and jewellery. Notable art forms include Madhubani paintings, Tanjore paintings and Kalamkari. Indian cuisine is characterized by its use of a wide range of spices and flavours. Each state/region has its own culinary traditions.

12. **Important Festivals.** India's festivals are vibrant celebrations that reflect the country's cultural and religious diversity. Some of the important festivals celebrated in India are Diwali, Holi, Durga Puja, Ganesh Chaturthi, Eid-ul Fitr, Bihu, Pongal, Christmas. In addition to religious festivals, Bihu and Pongal are the harvest festivals celebrated in various parts of the country. It involves cooking special dishes made from newly harvested rice and offering it to the god.

13. **Important Days.** India observes several significant days that commemorate historical events, leaders, and achievements, such as: Independence Day (August 15), Republic Day (January 26), National Unity Day (October 31) and Gandhi Jayanti (October 2).

Necessity of National Integration

14. National integration is vital for India due to its vast diversity in terms of culture, language, religion, ethnicity, and geography.

(a) **Promoting Unity Within Diversity.** India is home to a variety of ethnic groups, religions, languages, and cultures. National integration ensures unity in diversity. Despite differences, integration fosters a shared national identity, where people feel a sense of belonging to the country, beyond their regional or community identities.

(b) **Economic Development.** Economic growth is closely linked to social and political stability. National integration encourages inclusive development and promotes balanced economic development, where all areas of the country have access to resources, infrastructure, and opportunities.

(c) **Social Cohesion and Harmony.** National integration fosters social harmony by promoting understanding and respect among diverse groups. It also prevents communal and ethnic violence.

(d) **Strengthening National Security.** A united nation is better equipped to defend itself against both internal and external threats. National integration mitigates internal insurgencies. National integration helps address grievances and promotes a sense of national unity.

15. National integration is a vital component of a nation’s strength and stability. By fostering unity and solidarity among its diverse population, a country can achieve social cohesion, economic development, and political stability. Understanding and promoting national integration is essential for ensuring a country’s long-term prosperity and unity.

PART II: POSITIVES OF INDIAN DIVERSITY

16. India, with its vast land stretching from the snow-capped peaks of the Himalayas in the north to the tropical beaches of the south, is a magnificent landscape of diverse cultures, languages, religions, and traditions.

Geographical, Cultural, Religious and Ethnic Diversity in India

17. **Geographical Diversity.** The country's terrain includes towering mountain ranges, fertile plains, expansive deserts, dense forests, and long coastlines. **Northern Mountains:** The country is protected by the majestic Himalayan range in the north. **Northern Plains**: The Northern Plains region that stretches across states like Punjab, Haryana, Uttar Pradesh, Bihar, Assam and West Bengal. **Thar Desert:** The Thar Desert in the west, features unique ecosystems and cultural traditions. **Deccan Plateau:** The central and southern part of India consists of the Deccan Plateau, which is rich in minerals. **Coastal Regions**: India has an extensive coastline, with the Arabian Sea on the West and the Bay of Bengal on the East.

18. **Cultural Diversity**

(a) **Northern India.** Hindi-speaking heartland is known for its classical music, Kathak dance, architecture, and festivals like Diwali and Holi.

(b) **Southern India**. Widely known for Dravidian culture, and languages like Tamil, Telugu, Kannada, and Malayalam, classical dances such as Bharatanatyam and Kathakali, intricate temple architecture, and a cuisine rich in spices and coconut-based dishes.

(c) **Eastern India**. Includes states like West Bengal, Odisha, and Assam, boasts a rich literary heritage, classical music forms, and the vibrant festivals of Durga Puja and Bihu. The Northeast, with its diverse ethnic groups, has unique tribal cultures, customs, and festivals like Hornbill in Nagaland and Sangai in Manipur.

(d) **Western India.** Consists of Gujarat, Maharashtra, and Rajasthan, is known for its folk dances like Garba and Ghoomar, vibrant textiles, and festivals like Navratri and Ganesh Chaturthi.

(e) **Art and Craft**. Indian classical music includes the Hindustani and Carnatic traditions, each with its style, instruments, and compositions. Similarly, classical dance forms like Bharatanatyam, Kathak, Odissi, Manipuri, and Mohiniyattam express stories and emotions through intricate movements and expressions. Indian handicrafts such as Madhubani paintings, Pashmina shawls, Warli art, terracotta pottery, and Banarasi silk sarees represent regional craftsmanship.

19. **Religious Diversity.** India is a secular nation that embraces a multitude of religions. Hinduism, Buddhism, Jainism, Sikhism, Islam, Christianity, Zoroastrianism, and several other faiths are practiced by Indian people. Each religion has its festivals, rituals, and places of worship, contributing to India's cultural richness. The peaceful coexistence of these various religions within India demonstrates the nation's commitment to secularism and tolerance. Religious diversity is a living proof to India's values of inclusion and respect for different faiths.

20. **Ethnic Diversity in India.** India is one of the most ethnically diverse countries in the world. Its population is a complex mix of different ethnic groups, each with distinct languages, cultures, religions, and traditions. The main ethnic groups in India includes:

(a) **Indo-Aryan Ethnic Group.** The Indo-Aryans are believed to have migrated into the Indian subcontinent around 1500 BCE. It is the majority population in northern and central India. The Indo-Aryans have contributed to many aspects of Indian culture, such as Vedic traditions and Sanskrit literature.

(b) **Dravidian Ethnic Group.** Dravidian-speaking peoples are among the earliest known inhabitants of the subcontinent. They have a distinct linguistic and cultural heritage, which includes rich literary traditions, temple architecture, and classical music and dance forms like Bharatanatyam and Carnatic music.

(c) **Tibeto-Burman Ethnic Group.** Tibeto-Burman people migrated from Central Asia and Tibet to the northeastern and Himalayan regions of India. They

have unique cultural traditions, including distinct food, festivals, clothing, and a deep connection with nature.

(d) **Tribal Communities (Adivasis).** India is home to a large number of indigenous or tribal communities, collectively known as "Adivasis." Major tribes include the Gonds, Santhals, Bhils, Oraons, Nagas, Mizos, Garos, and Bodos. These communities have distinct cultures, languages, and traditions and are often closely connected to nature.

Benefits of Diversity

21. The coexistence of various cultures within the country brings numerous benefits, enriching society in several ways.

(a) **Creativity and Innovation**. Cultural diversity fosters creativity and innovation by bringing together different perspectives, ideas, and experiences. When people from various cultural backgrounds interact, they exchange knowledge, skills, and viewpoints, often leading to novel solutions and creative expressions. For example, Bollywood, India's prolific film industry, is a beautiful mix of diverse influences, resulting in movies that explore various themes, traditions, and storytelling methods.

(b) **Resilience and Tolerance**. Cultural diversity helps in the promotion of tolerance, empathy, and mutual respect among individuals. When people are exposed to various cultures, they learn to appreciate differences and develop an understanding of other perspectives. This fosters a culture of tolerance and coexistence, which is essential for maintaining social harmony.

(c) **Economic Benefits**. Cultural diversity also contributes to economic growth. India's diverse cultural heritage attracts millions of tourists each year, who visit to experience its historical monuments, art forms, festivals, and cuisine. Tourism generates revenue, creates jobs, and promotes local crafts and traditions. Additionally, cultural industries such as cinema, music, fashion, handicrafts, and cuisine benefit from the country's diversity.

22. India's ethnic diversity is vast and complex, shaped by millennia of migrations, conquests, and cultural exchanges. Despite challenges, this diversity contributes to the rich cultural, linguistic, and social fabric of the nation. India's ability to maintain unity while respecting its pluralism is one of its greatest strengths.

PART III: FACTORS STRENGTHENING NATIONAL UNITY

23. National integration in India is a critical issue due to the country's vast diversity in terms of language, culture, religion, and regional identities.

Factors affecting National Integration

(a) **Regionalism.** Regionalism arises when people prioritize the interests of their own region over national interests. It is often a result of perceived neglect by the central government or unequal distribution of resources. It can lead to demands for greater autonomy or even separate statehood. It undermines the concept of India as a unified nation and often fosters resentment against other regions.

(b) **Communalism.** Communalism refers to loyalty to one's religious community over national interests, often resulting in tensions between different religious groups. India has a long history of religious conflicts, Communalism can lead to riots, violence, and a weakening of social harmony, which directly hampers national integration.

(c) **Linguistic Conflicts.** Linguistic diversity often results in conflicts when language becomes a marker of identity. Language-based movements have sparked debates and tensions. For example: promotion of Hindi as an official language is often resisted in non-Hindi-speaking states, especially in the southern part of the country.

24. **Socio-Economic Disparities and Impact on National Unity**

(a) **Economic Inequality.** There is significant economic disparity between different regions, states, and social groups. Wealth and development are concentrated in some areas, particularly urban centres like Delhi, Mumbai, or Bangalore, while certain regions continue to rural and backward regions like Bihar, Odisha, and parts of Uttar Pradesh remain underdeveloped. These disparities create feelings of neglect and resentment among the underprivileged regions, leading to demands for economic justice.

(b) **Caste and Class Inequalities.** The caste system, despite legal protections and policies, continues to deeply influence Indian society. Similarly, there is a wide class divide between the rich and poor. Social and economic hierarchies cause divisions that hinder social integration. Economic marginalization of certain groups can lead to internal tensions, social unrest, and violent movements.

(c) **Access to Education and Healthcare.** Wide disparities exist in access to quality education and healthcare services across regions and communities in India. Some sections of society are at disadvantage due to poor access to education and health services. This affects their ability to participate fully in the nation's progress and creates divisions between those who benefit from development and those who are left behind.

Factors that Strengthen National Unity.

25. National unity in India is defined by various factors that promote harmony and a shared sense of identity among its diverse population.

(a) **Common Vision and Goals.** A unified vision for the country's future and common national goals act as binding force for its citizens. Movements like India's freedom struggle, which was based on the collective desire for independence, helped to forge a strong national identity. Today, national goals like economic growth, poverty reduction, technological advancement, and global standing unite people across regions, castes, and religions.

(b) **Role of Education.**
Education plays a fundamental role in promoting awareness, tolerance, and a sense of national unity among citizens. A well-designed educational system can instil values of patriotism, social harmony, and respect for India's diverse cultures. Education also helps reduce prejudices related to caste, religion and region by promoting a spirit of inclusiveness.

(c) **Government Policies.**
Effective government policies and programs that address regional disparities, promote equality, and strengthen democratic institutions contribute to national integration. Reservation policies for socially disadvantaged groups like SC/ST/OBC, and initiatives aimed at improving rural infrastructure and connectivity promote equitable development across regions and communities.

(d) **Role of Youth in Promoting a United India.** Youth, as the most dynamic and energetic section of the population, have the potential to drive change and foster

unity. The youth often engage in movements for social justice, environmental protection, and national service, through the National Cadet Corps (NCC), National Service Scheme (NSS), and other platforms. By participating in these initiatives, youth contribute to building a cohesive, forward-looking society.

(e) **Economic & Social Development of the Nation.** Economic and social development that benefits all regions and communities helps reduce inequality and fosters social cohesion. National unity is reinforced when all citizens have equal opportunities for economic growth and social mobility. Government initiatives aimed at poverty alleviation, employment generation, and rural development help integrate marginalized regions and communities into the national mainstream.

(f) **Understanding and Respecting Different Cultures.** Cultural diversity is one of India's strengths, and the appreciation of this diversity plays a crucial role in fostering national unity. Promoting intercultural understanding and celebrating diversity through festivals, literature, music, and cinema helps break down barriers between communities.

26. Factors such as, economic inequality, cast and class inequality and access to good education and healthcare, if not addressed adequately, continue to threaten India's national integration. For the country to progress as a united entity, there needs to be an equitable distribution of resources, inclusive growth policies, and efforts to reduce cultural and religious divides.

PART IV : ROLE OF NCC IN FOSTERING UNITY

27. The National Cadet Corps (NCC) plays a significant role in fostering national unity and discipline among the youth of India. As one of the largest uniformed youth organizations in the world, the NCC contributes to nation-building by cultivating values like discipline, leadership, and social responsibility among its cadets. The key areas NCC helps in fostering unity are:

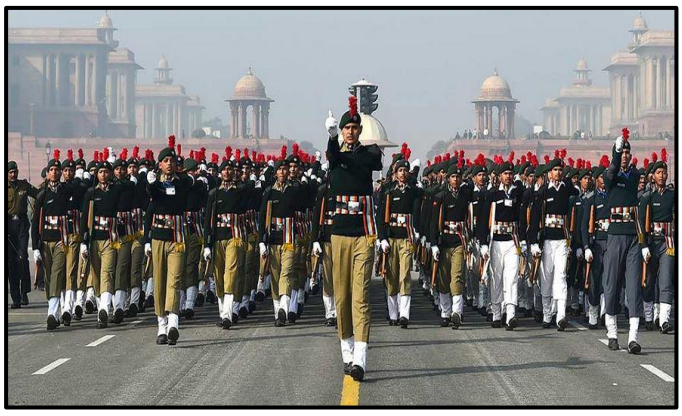
(a) **Contribution in Fostering Unity and Discipline Among Youth.** NCC is designed to instil discipline, a sense of responsibility, and leadership qualities in young people from diverse backgrounds. By bringing together students from different regions, languages, castes, and religions, the NCC promotes unity and helps break down social and cultural barriers. Through regular drill, physical training, and outdoor activities like trekking and parades, cadets develop a spirit of camaraderie and team cohesion. The NCC also inculcates a strong sense of self-discipline, which is essential for maintaining social harmony and collective national well-being.

(b) **Cultural Exchange and Understanding through Inter-State Camps and National Events.** NCC conducts several inter-state and national camps, which bring cadets from all over the country together. These camps, such as the National Integration Camps (NIC), Republic Day Camps (RDC), and Ek Bharat Shreshtha Bharat Camps, provide a platform for young people from different states and backgrounds to interact, share their cultures, and gain a deeper understanding of India's diversity. Cadets are exposed to different languages, customs, traditions, and ways of life, fostering mutual respect and cultural harmony. By living and working together during these camps, cadets gain a sense of unity and shared identity despite their varied backgrounds, contributing to the broader goal of national integration.

DID YOU KNOW?

- NCC cadets are also trained in disaster management and relief operations, promoting unity as they work together to serve communities during emergencies.
- Through activities like trekking, camping, and sports, the NCC encourages teamwork and collaboration, helping cadets' bond together irrespective of their differences.
- NCC actively encourages female participation, promoting gender equality and integrating women into national service.

(c) **Promotion of National Pride and Patriotic Values.** NCC emphasizes the importance of patriotism and national service in its training programs. Cadets are actively involved in participating in national celebrations like Independence Day and Republic Day, where they showcase their skills and pay tribute to the country's heritage. Through drills, flag hoisting ceremonies, and participation in parades, the NCC fosters a strong sense of national pride among its members. The organization encourages cadets to be proactive citizens through disaster relief operations, social welfare programs, and environmental initiatives.



CONCLUSION

28. National integration is essential for India to foster economic growth, promote social harmony, and safeguard its national security. It ensures that the country's vast diversity is a source of strength, rather than a cause of division. By fostering unity and a shared sense of purpose, national integration allows India to continue its journey toward becoming a stable, prosperous, and inclusive nation.

29. Diversity is a key strength for India, offering numerous benefits in terms of creativity, resilience, tolerance, and economic opportunities. It enhances the nation's cultural richness, fosters innovation, and promotes social harmony. By embracing diversity, India ensures that all its citizens can contribute to and benefit from the country's progress, making it a vibrant and inclusive society.

30. National unity in India is strengthened by a combination of shared goals, educational reforms, equitable development, and respect for the country's diverse cultural heritage. A focus on youth involvement, government initiatives, and mutual understanding between communities fosters a sense of belonging and a unified national identity. India's diversity, far from being a liability, is its strength when approached with policies and attitudes that promote inclusion and integration.

31. The NCC plays a pivotal role in promoting national unity by engaging the youth in activities that build discipline, foster mutual understanding through cultural exchange, and nurture patriotism. Its programs and camps act as bridges across India's diverse population, helping to shape a cohesive and united national identity. Through the NCC, young people gain a sense of belongingness to the country while learning the importance of unity in diversity.

SUMMARY

- National integration involves creating a unified national identity, where individuals from various regions, communities, and socio-economic backgrounds feel a sense of belongingness to the nation.
- National integration in India has emerged with the early resistance to colonial rule in the 18th century by way of regional revolts and the rise of nationalist sentiment.
- **Important leaders of National Integration**. Rani Lakshmibai of Jhansi, Mangal Pandey, Tatya Tope, Dadabhai Naoroji, Lokmanya Bal Gangadhar Tilak, Gopal Krishna Gokhale, Mohandas Karamchand Gandhi, Netaji Subhas Chandra Bose, Bhagat Singh, Sardar Vallabhbhai Patel.
- **Important National Days**. Independence Day (August 15), Republic Day (January 26), Gandhi Jayanti (October 2).
- **Necessity of National Integration**: Promoting unity amongst diversity, economic development, social cohesion and harmony, strengthening national security.
- National integration is a positive concept which provides strength to the people to fight against all evil forces and keep the nation united.
- **Geographical Diversity in India**: Northern Mountains, Northern Plains, Thar Desert, Deccan Plateau and Coastal Regions.
- **Cultural Diversity**: Various languages, literature and religious/harvest festivals celebrated in different parts of the country significantly contributes to the cultural diversity of India.
- **Religious Diversity**: Hinduism, Buddhism, Jainism, Sikhism, Islam, Christianity.
- **Ethnic Diversity**: Indo-Aryan Ethnic Group, Dravidian Ethnic Group, Tibeto-Burman Ethnic Group and Tribal Communities (Adivasis).
- **Benefits of Diversity**: Creativity and innovation, resilience and tolerance, economic benefits.
- **Factors affecting National Integration**: Regionalism, communalism and linguistic conflicts.
- **Socio-Economic Disparities and its Impact on National Unity**: Economic inequality, caste and class inequalities, access to education and healthcare.
- **Factors that Strengthen National Unity**: Common vision and goals, education, Government policies, role of youth in promoting a united India, economic and social development, respecting different cultures.
- The National Cadet Corps (NCC) plays a significant role in fostering national unity and discipline, cultural exchange and understanding, promotion of national pride and patriotic values among the youth.

ASSESSMENT EXERCISE

Multiple-Choice Questions (MCQs)

Q1. Which of the following plays a significant role in promoting national integration in India?

(a) Promoting regionalism and division

(b) Celebrating national festivals like Republic Day and Independence Day

(c) Encouraging only one language for communication

(d) Focusing solely on individual state issues

Q2. What is one of the primary challenges to national integration faced by India today?

(a) Globalization

(b) Climate change

(c) Regionalism and separatism

(d) Economic growth

Q3. What does "Unity in Diversity" refer to in the context of India?

(a) Cultural uniformity

(b) A lack of social harmony

(c) The coexistence of various cultures and traditions

(d) Economic disparities

Q4. Which of the following statements best describes "Unity in Diversity" in India?

(a) Diverse groups can live together harmoniously

(b) Different groups should become the same.

(c) Unity is more important than diversity.

(d) Diversity leads to conflict.

Q5. Which of the following factors contributes to India's "Unity in Diversity"?

(a) Linguistic diversity

(b) Religious plurality

(c) Cultural variations

(d) All of the above

Q6. Which of these is a major factor that strengthens national unity in a diverse country like India?

(a) Respect for diverse cultures and traditions

(b) Religious differences

(c) Political conflicts

(d) Caste-based divisions

Q7. What is one of the positive effects of India's religious diversity?

(a) It leads to frequent social unrest

(b) It promotes cultural harmony

(c) It creates regional conflicts

(d) It fosters tolerance, mutual respect, and peace

Q8. Who gave the inspiring slogan "Inquilab Zindabad," which became a rallying cry for revolution during India's freedom struggle?

(a) Chandrashekhar Azad

(b) Lala Lajpat Rai

(c) Subhas Chandra Bose

(d) Bhagat Singh

Q9. "Give me blood, and I shall give you freedom" was a famous rallying call by which revolutionary leader?

(a) Subhas Chandra Bose

(b) Bhagat Singh

(c) Sardar Patel

(d) Chandrashekhar Azad

Q10. How does the India’s education system contribute to national integration?

(a) By focusing only on regional history and culture

(b) By promoting diverse cultures, languages, and histories of India

(c) By ignoring the cultural diversity of India

(d) By encouraging students to study abroad only

Q11. What role do government policies and schemes play in national integration in India?

(a) Promote regional divisions for better governance

(b) Create awareness about the importance of unity in diversity

(c) Discourage participation from different communities

(d) Focus only on economic development

Q12. Which of the following is a key role of the NCC in promoting national unity?

(a) Encouraging regional disparities

(b) Promoting caste-based identities

(c) Fostering a sense of discipline, patriotism, and unity among youth

(d) Focusing solely on physical fitness

Q13. How does the NCC contribute to fostering national unity among youth?

(a) By focusing only on local issues and challenges

(b) By organizing camps to bring cadets from different regions together

(c) By limiting interaction between cadets from different states

(d) By promoting only regional languages and traditions

Q14. Which of the following activities in the NCC helps to promote a sense of unity among cadets?

(a) Joint training programs and national integration camps

(b) Regional competitions and events

(c) Encouraging cadets to focus only on their local culture

(d) Limiting cadet interaction to their own states

Q15. The NCC helps instil the values of national unity and social harmony by:

(a) Encouraging individualism

(b) Promoting communal segregation

(c) Conducting community service activities and promoting teamwork

(d) Limiting participation to only one region

Short Answer Questions

Q1. What is national integration, and why is it important for India?

Q2. How do national festivals like Republic Day and Independence Day contribute to promoting national integration in India?

Q3. How do cultural events and festivals such as Diwali, Eid, and Christmas help in strengthening national integration?

Q4. How does cultural diversity in India pose a challenge to national integration?

Q5. What role do educational institutions play in promoting "Unity in Diversity"?

Long Answer Questions

Q1. Highlight the challenges and solutions for promoting unity in a country like India, with its vast diversity in terms of language, religion, and culture.

Q2. Analyse the challenges India faces in maintaining "Unity in Diversity" in the contemporary era.

Q3. How does the slogan "Ek Bharat, Shreshtha Bharat" reflect modern India's vision for unity?

Q4. Discuss the role of the National Cadet Corps (NCC) in building a unified India.

NATIONAL INTEGRATION AND AWARENESS PROGRAMME (N-II) SD/SW

CHAPTER II: KEY ATTRIBUTES OF NATIONAL SECURITY, CHALLENGES TO NATIONAL SECURITY, SCOPE FOR CONTRIBUTION OF A CITIZEN TOWARDS NATIONAL SECURITY

We have our own territories, our own people, our own identities, but to defend them, we must always be united as a nation

भारत की एकता और अखंडता ही हमारी सबसे बड़ी ताकत है, और इसकी सुरक्षा के लिए हमें हर चुनौती का सामना करना होगा।

Anonymous

TEACHING INSTRUCTIONS:

Period	**:**	**01 (One)**
Type	**:**	**Lecture**
Year	**:**	**SD/SW (Second Year)**
Conducting Officer	**:**	**ANO**
Training Aids	**:**	**Class room, OHP, Board and Chalk/Markers**

Time-plan

- Introduction : 03 Mins
- Part I: Key Attributes of National Security : 12 mins
- Part II: Challenges to National Security : 12 mins
- Part III: Contribution of a Citizen Towards National Security : 10 mins
- Conclusion and Summary : 03 mins

INTRODUCTION

1. National security in India is a multilayered concept that encompasses the protection of the nation's sovereignty, territorial integrity, and the well-being of its citizens. As one of the world's largest democracies, India faces a unique set of security challenges, both traditional and non-traditional. These challenges range from safeguarding its borders against external aggression to addressing internal threats such as terrorism, insurgency, and cyberattacks. National security also extends beyond military concerns to include economic stability, energy security, and environmental sustainability, all of which are critical for ensuring the long-term stability and development of the country.

2. This chapter provides a comprehensive understanding of the national security and various challenges being faced by India to safeguard its national security. The cadets would also be apprised about the role every citizen can fulfill and contribute to strengthen the national security.

PREVIEW

The lecture will be conducted in following parts:-

- Part I: Key attributes of national security.
- Part II: Challenges to National Security.
- Part III: Role of a Citizen Towards National Security.

LEARNING OBJECTIVES

- Analyse key attributes of national security.
- Identify challenges to National Security.
- Scope for contribution of a Citizen Towards National Security.

PART - I: KEY ATTRIBUTES OF NATIONAL SECURITY

3. **Introduction.** India's national security strategy focuses on several key attributes, which are vital for maintaining sovereignty and stability. Some of the primary attributes of national security are discussed in this section.

4. **Territorial Integrity.** Territorial integrity is a fundamental aspect of national security that refers to the protection and maintenance of a country's borders and sovereignty.

(a) **Border Security**

- **Geographical Challenges**: India shares borders with several countries, including Pakistan, China, Bangladesh, and Nepal, each presenting unique security challenges like diverse terrain, ranging from mountains to deserts to dense forests that complicate border management.
- **Cross-Border Issues:** Addressing challenges like illegal immigration, smuggling, and trafficking also undermine territorial security.

(b) **Deployment of Forces**

- Indian Armed Forces, particularly Indian Army, the Border Security Force (BSF), Indo-Tibet Border Police(ITBP), Assam Rifles and Sashastra Seema Bal (SSB) play a crucial role in patrolling and securing Indian borders.

5. **Internal Security.** Internal security is a critical aspect of national security that focuses on maintaining peace, order, and stability within a country.

(a) **Terrorism**

- **Counterterrorism Operations.** India faces threats from various domestic and international terrorist groups. Our security forces conducts intelligence operations and military actions to thwart attacks and dismantle terror networks.

- **Legislative Measures.** Laws such as the Unlawful Activities (Prevention) Act (UAPA) empower security forces to take decisive action against terrorism.

(b) **Insurgency and Separatism**

- **Conflict Zones.** Regions like Jammu and Kashmir and parts of the northeastern states have witnessed separatist movements and insurgency in the past decades posing significant internal security challenges.

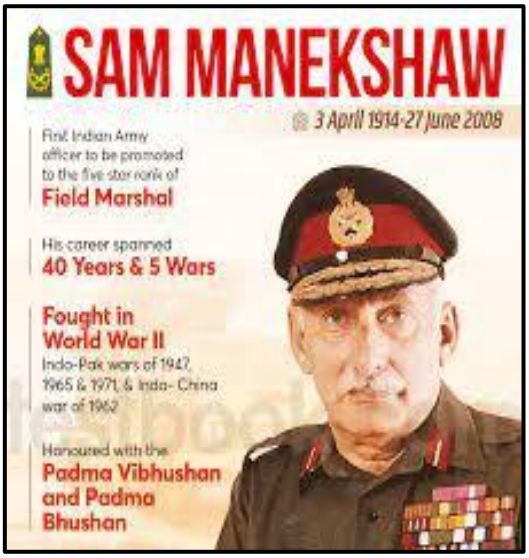
- **Engagement and Development.** Efforts to address grievances through dialogue, economic development, and community engagement are vital for reducing support for insurgent groups.

(c) **Social Unrest**

- **Communal Violence:** India is a diverse country, and communal tensions can lead to violence. Local community dialogues and conflict resolution initiatives are essential to maintain harmony.

- **Protests and Movements:** Civil society movements can sometimes escalate into unrest. Managing protests through dialogue while respecting democratic rights is a balancing act for authorities.

6. **Defence Capabilities.** Defence capabilities are vital for a nation's security, especially for a country like India, which faces a range of security challenges.



(a) **Military Structure**

- **Army, Navy, Air Force:** India has a well-structured military with three main branches. The Indian Army is primarily responsible for land operations, the Indian Navy secures maritime borders, and the Indian Air Force protects Indian airspace and conducts aerial operations. India has also developed nuclear capabilities with the Strategic Forces Command (SFC) that controls all nuclear arsenal.

- **Paramilitary Forces:** Additional paramilitary forces like the Border Security Force (BSF), Central Reserve Police Force (CRPF), and others contribute to internal security and border management.

(b) **Modernization and Equipment**

- **Indigenous Production:** India has

DID YOU KNOW?

- India has the third-largest military force in the world, after the United States and China. Indian Armed Forces consist of over 1.4 million active personnel and 2.1 million reserve personnel.
- Indian Army is the world's largest volunteer army, meaning it does not rely on conscription (mandatory military service). All soldiers serve voluntarily, which reflects the high level of patriotism in the country.
- India's space program, led by the Indian Space Research Organisation (ISRO) has developed several satellites including the GSAT-7A for military communication and the Cartosat series for surveillance and intelligence gathering.

invested in developing its own military hardware through initiatives like "Make in India," enhancing self-reliance in defence manufacturing.

- **Advanced Weaponry:** The military is equipped with modern tanks (e.g., Arjun), artillery systems, naval vessels (such as aircraft carriers and submarines), and fighter jets (like the Su-30MKI and indigenous Tejas).

7. **Intelligence & Surveillance.** Intelligence and surveillance are critical components of national security that enable countries to anticipate, detect, and respond to threats.

(a) **Intelligence Agencies**

- **Research and Analysis Wing (R&AW):** Responsible for external intelligence, R&AW gathers information from foreign nations to protect India's interests.

- **Intelligence Bureau (IB):** Primarily focuses on internal security and domestic intelligence, monitoring activities that could threaten national stability, including terrorism and insurgency.

- **Military Intelligence (MI):** Operates within the armed forces, focusing on threats related to military operations and providing strategic assessments.

(b) **Surveillance Technologies**

- **Satellite Systems:** India employs a network of satellites for surveillance and reconnaissance, enabling monitoring of borders, military installations, and critical infrastructure.

- **Drones and Unmanned Aerial Vehicles (UAVs):** Drones are used for real-time surveillance, particularly in border areas and conflict zones, providing intelligence without risking personnel.

- **Ground-Based Surveillance:** Technologies such as radars, motion sensors, and CCTV systems are deployed for monitoring critical areas, enhancing situational awareness.

8. **Cyber security.** India, is increasingly reliant on digital infrastructure and hence cyber-security is very important for protection of digital systems and data from cyber-attacks and unauthorized access.

(a) **Cybersecurity Agencies**

- **Indian Computer Emergency Response Team (CERT-In):** The agency serves as the national nodal agency for responding to cyber-security breach incidents by providing timely alerts.

- **National Cyber Security Coordinator (NCSC):** The role coordinates efforts among various ministries, agencies, and state governments to enhance cybersecurity.

Fig 3: CERT-IN
Source: Linkedin India

(b) **Legislative Framework**

- **National Cybersecurity Policy 2013:** The Policy outlines India's approach to protecting its cyberspace, emphasizing the importance of securing critical information infrastructure (CII).

- **Information Technology Act, 2000:** Provides the legal framework for cybercrime and electronic commerce, establishing guidelines for cybersecurity and addressing offenses related to computer systems.

- **Data Protection Legislation:** The Personal Data Protection Bill aims to regulate how personal data is collected, processed, and stored, enhancing privacy and security for citizens.

(c) **Awareness and Education**

- **Cybersecurity Awareness Campaigns**: Educating citizens about online safety, phishing, and secure practices helps create a culture of cybersecurity awareness.

- **Cybersecurity in School Education:** Integrating cybersecurity education in schools and universities helps cultivate a generation that is more aware of digital threats.

9. **Economic Security.**

(a) **Definition.** Economic security refers to the ability of a nation to sustain economic growth, maintain employment, ensure equitable distribution of resources, and protect its citizens from economic vulnerabilities.

(b) **Key Components of Economic Security**

- **Stable Growth:** Ensuring consistent economic growth through policies that promote investment, productivity, and innovation.
- **Employment Security:** Creating jobs and reducing unemployment rates to ensure that citizens have stable incomes and livelihoods.
- **Resource Management:** Efficient management and sustainable use of natural resources, including water, minerals, and energy, to prevent shortages and conflicts.
- **Promoting Indigenous Production:** Initiatives like "Make in India" aim to enhance domestic manufacturing capabilities, reduce dependency on imports, and create jobs.

(c) **Infrastructure Development**

- **Transportation and Connectivity.** Developing efficient transportation networks (roads, railways, ports) to facilitate trade and economic activities.
- **Digital Infrastructure.** Investing in digital technologies to enhance connectivity, improve services, and enable economic participation.

10. **Energy Security**

(a) **Definition.** Energy Security involves promoting sustainable energy practices and ensuring stable supply of energy at affordable prices. Energy security reinforces economic stability, supports industrial growth, and enhances national defence capabilities.

(b) **Diverse Energy Sources**

- **Fossil Fuels:** India relies significantly on coal, oil, and natural gas which are mostly imported from foreign countries.

- **Renewable Energy:** Increasing investments in solar, wind, hydro, and nuclear energy are essential for reducing dependency on fossil fuels and promoting sustainability.

(c) **Energy Infrastructure Development**

- **Transmission and Distribution:** Upgrading and expanding transmission networks to ensure efficient energy distribution and minimize losses.

- **Storage Solutions:** Investing in energy storage technologies, such as battery systems, to manage supply and demand effectively, especially for renewable sources.

(d) **Public Awareness and Engagement**

- **Consumer Awareness:** Educating the public on energy conservation practices and the benefits of renewable energy sources.

- **Community Participation:** Encouraging local communities to participate in renewable energy projects, promoting grassroots involvement in energy security efforts.

11. India's national security is a comprehensive blend of traditional defence measures and modern strategies in areas such as cyber defence, energy sustainability, and economic resilience. Each of these areas plays a crucial role in protecting India's interests in an increasingly complex global environment.

PART II: CHALLENGES TO NATIONAL SECURITY

Terrorism is a threat that respects no borders, and we must tackle it with international cooperation and strong national resolve.

किसी राष्ट्र की ताकत केवल उसकी सैन्य क्षमता से नहीं, बल्कि उसकी आर्थिक सुरक्षा से भी आंकी जाती है, क्योंकि कमजोर अर्थव्यवस्था देश को अंदर और बाहर से कमजोर बनाती है।

Anonymous

12. India, as one of the largest democracies and a rapidly growing economy, faces many national security challenges. This section provides an overview of the major challenges to India’s national security and methods to address these challenges for safeguarding India’s sovereignty, stability, and long-term prosperity.

13. **Border Disputes.**

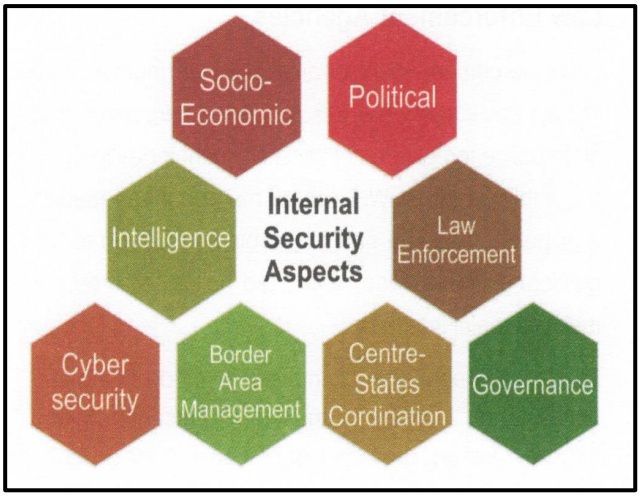
(a) **China.** China’s aggressive infrastructure development and military build-up along the LAC continue to be a major challenge for India’s security forces. The Line of Actual Control (LAC) in the Ladakh region has witnessed several military standoffs, including the deadly Galwan Valley clash in 2020.

(b) **Pakistan.** The long-standing illegal claim on Kashmir by Pakistan continues to be a flashpoint for conflict. Cross-border terrorism, frequent ceasefire violations along the Line of Control (LoC), and proxy wars waged by terrorist groups backed by Pakistan, leads to serious security risks.

(c) **Nepal and Bangladesh.** While relations with Nepal and Bangladesh are largely amicable, occasional disputes over demarcation lines and illegal migration create friction. India has always made extraordinary efforts to resolve our border issue with friendly neighbours with peaceful negotiation.

14. **Internal Security Threats.**

(a) **Naxalism.** The Maoist insurgency, also known as Naxalism, poses a serious internal security challenge in central and eastern India, affecting states like Chhattisgarh, Jharkhand, Odisha, Bihar, and parts of Maharashtra. Naxalite groups exploit local grievances related to land rights, poverty, and lack of development to fuel anti-state activities.



(b) **Insurgency in the Northeast.** Insurgencies in India's northeastern states are driven by ethnic divisions, demands for autonomy, and perceived neglect by the central government. Although peace accords have been signed with some rebel groups, others remain active, challenging state authority through armed struggle and violence.

(c) **Communal Violence and Regional Tensions.** Ethnic and religious tensions have also fuelled internal security threats. Communal violence and regional movements threaten to destabilize internal peace and security. These conflicts can also be exploited by external actors to sow discord.

15. **Terrorism.** Terrorism remains a persistent and evolving threat to India's national security. India has faced numerous terror attacks over the years, primarily originating from external actors but also from domestic radicalized elements.

(a) **Cross-border Terrorism.** Pakistan-backed terror groups such as Jaish-e-Mohammed (JeM) and Lashkar-e-Taiba (LeT) continue to pose a grave threat, particularly in Jammu and Kashmir. These groups carry out suicide bombings,

armed infiltrations, and attacks on military installations with the aim of destabilizing the region and inciting communal tensions.

(b) **Domestic Radicalization.** The rise of extremist ideologies, both religious and political, has led to homegrown terrorism. Radicalization through online platforms, extremist preachers, and international terrorist networks like ISIS are significant security challenges. The spread of misinformation and hate propaganda further inflames communal tensions, potentially leading to violence.

DID YOU KNOW?

- India has one of the world's longest coastlines, covering over 7,500 kilometres. The Indian Coast Guard and the Indian Navy play crucial roles in securing India's maritime borders from piracy, smuggling, and illegal fishing activities.
- The Indian Ocean is of immense strategic importance to India, as it controls major international shipping routes and energy supply chains.

16. **Cybersecurity Threats.**

(a) **State-sponsored Cyber-attacks.** India is frequently targeted by state-sponsored cyber-attacks, particularly from countries like China and Pakistan. Such attacks target government institutions, defence networks, power grids, financial systems, and transportation networks.

(b) **Cybercrime.** Cybercriminals pose a growing threat to individuals, businesses, and government entities. The rise of digital banking and e-governance platforms has made financial institutions vulnerable to hacking, fraud, and data theft.

(c) **Information Warfare.** The rise of misinformation, fake news, and online propaganda campaigns aimed at polarizing public opinion is another dimension of cyber threats. Such campaigns can create social unrest, deepen communal divisions, and weaken democratic institutions, further undermining national security.

17. **Threats to the Economy.**

(a) **Economic Espionage.** India is increasingly vulnerable to economic espionage, particularly from competitors like China. Such actors mainly indulge in theft of intellectual property, trade secrets, and sensitive data from key sectors such as technology, pharmaceuticals, and defence.

(b) **Supply Chain Vulnerabilities.** India's reliance on imports for essential goods, including energy, electronics, and defence equipment, creates supply chain

vulnerabilities. Disruptions in global trade, economic sanctions, or geopolitical tensions could significantly impact India's economy and security.

(c) **Energy Dependency.** India's heavy dependence on imported oil and natural gas makes it vulnerable to fluctuations in global energy markets and geopolitical conflicts in oil-producing regions. Disruptions in energy supplies could lead to economic shocks, inflation, and even political instability.

18. **Threats to Environmental Security.**

(a) **Climate Change.** India is one of the countries most vulnerable to the impacts of climate change, including rising sea levels, unpredictable monsoons, extreme weather events, and shrinking water resources. These changes threaten food and water security, public health, and livelihoods, particularly in rural and coastal areas.

(b) **Natural Disasters.** Frequent natural disasters, such as floods, cyclones, and earthquakes, pose direct threats to the safety of Indian citizens and the country's infrastructure.

(c) **Pollution and Resource Depletion.** Air and water pollution are major environmental security threats in India. Rapid industrialization, deforestation, and unsustainable agricultural practices contribute to the depletion of natural resources.

19. India's national security is shaped by ongoing border disputes and internal insurgencies to the growing menace of terrorism, cyber threats, and economic vulnerabilities. Additionally, environmental degradation and climate change are emerging as major challenges that could destabilize the region if not addressed proactively. Strengthening defence capabilities, fostering international partnerships, and promoting socio-economic development are essential components of India's long-term security strategy.

PART III: ROLE OF A CITIZEN TOWARDS NATIONAL SECURITY

राष्ट्रीय सुरक्षा केवल सेना का कार्य नहीं है; हर नागरिक की ज़िम्मेदारी है कि वह कानून का पालन करे और देश की एकता को बनाए रखे।

Anonymous

20. National security is traditionally associated with the military, intelligence agencies, and law enforcement. However, in a democratic country like India, citizens play an equally crucial role in ensuring the safety and stability of the nation. The participation of ordinary people is essential for creating a secure environment where threats can be identified, mitigated, and neutralized before they escalate. This section explores the ways in which citizens can contribute to national security.

21. **Awareness and Vigilance.**

(a) **Identifying Suspicious Activities.** Citizens can act as the eyes and ears of law enforcement agencies by reporting suspicious activities in their neighbourhoods. Whether it's unfamiliar people loitering around sensitive areas, unattended bags in public places, or unusual online activities, timely information can prevent larger security incidents.

(b) **Public Awareness Campaigns.** Engaging with government awareness campaigns such as the "Say No to Terror" campaign, which encourages citizens to report suspicious activities, or cybersecurity initiatives, can enhance the collective awareness of security risks.

22. **Community Engagement**.

(a) **Neighbourhood Watch Programs.** Community-based watch programs can help deter criminal activities and ensure that local security issues are reported to authorities promptly.

(b) **Community Policing.** Collaborating with local law enforcement through community policing initiatives allows citizens to help maintain law and order.

23. **Promoting Social Harmony**

(a) **Combating Hate Speech.** Citizens can help combat online hate speech, misinformation, and divisive narratives by timely reporting any such incidents which can be exploited by terrorist organisations.

(b) **Encouraging Dialogue.** Engaging in open dialogue with people from diverse communities can reduce hatred and build stronger social ties.

(c) **Support for Marginalized Groups.** By extending support to marginalized or vulnerable communities, citizens can help address grievances that, if left unaddressed, may lead to extremism or separatism.

24. **Civic Responsibility and Legal Awareness.**

(a) **Adherence to the Rule of Law.** Citizens can contribute to security by abiding to the laws of the land and encouraging others to do so. Whether it's paying taxes, following traffic rules, or complying with environmental regulations, these actions contribute to a more orderly and secure society.

(b) **Legal System.** Citizens who understand legal rights and responsibilities are more likely to engage with the legal system in a positive way, contributing to the stability of the country.

25. Citizens are at the heart of national security in India. Through awareness and vigilance, community engagement, promoting social harmony, and a strong sense of civic responsibility, every individual can contribute to a safer, more secure, and prosperous India.

CONCLUSION

26. India's national security strategy is built on safeguarding borders, strengthening defense capabilities, fostering economic growth, and ensuring internal peace and unity. National security mainly encompasses a multidimensional approach that integrates military strength, economic resilience, political stability, and social cohesion.

27. India faces a range of challenges to its national security, both from external and internal sources. Border conflicts with neighbouring countries along with the rise of cross-border terrorism, cyber threats, communal tensions, insurgencies, and socio-economic disparities can undermine national unity and stability. Addressing these challenges requires a holistic approach, involving robust defense strategies, enhanced intelligence and cybersecurity measures, socio-economic development, and effective governance.

28. Contribution of a citizen towards national security is pivotal in ensuring the overall safety and stability of the country. Every individual plays a role by fostering social harmony, adhering to the law, and promoting a sense of national unity. Citizens can also contribute by being vigilant, reporting suspicious activities, and supporting government initiatives aimed at enhancing security. Ultimately, national security is not just the responsibility of the government or the military, but of every citizen committed to the well-being and progress of their country.

SUMMARY

- **Territorial Integrity:** Important issues involve border security and deployment of forces such as Indian Army and Border Security Force.
- **Internal Security:** Terrorism, insurgency and separatism, and social Unrest.
- **Defence Capabilities:** Military structure, nuclear capabilities modernization and latest equipment.
- **Intelligence & Surveillance:** Intelligence gathering, Intelligence Agencies and surveillance technologies.
- **Cyber security:** National Cyber security Policy, Indian Computer Emergency Response Team (CERT-IN), Information Technology Act, 2000, Data Protection Legislation, user awareness and education.
- **Economic Security:** Economic security refers to the ability of a nation to sustain economic growth for a long time. Key Components of Economic Security are Stable growth, employment security, resource management, financial stability, strategic industries, and infrastructure development.
- **Energy Security:** Energy security involves ensuring a stable supply of energy at affordable prices. Key components of energy security include: diverse energy sources, reducing dependency on imports, energy infrastructure development.
- **Border Disputes:** Border disputes with China, Pakistan, Nepal and Bangladesh.
- **Internal Security Threats:** Arising out of Naxalism, insurgency in J & K and Northeast, communal violence and regional tensions.
- **Terrorism:** Cross-border terrorism and domestic radicalization.
- **Cybersecurity Threats:** State-sponsored cyber-attacks, cybercrime and Information Warfare (IW).
- **Threats to Economy:** Economic espionage, supply chain vulnerabilities and Energy Dependency.
- **Threats to Environmental Security:** Climate change, natural disasters, pollution and resource depletion.
- **Awareness and Vigilance:** citizens can play a crucial role in contributing to national security by identifying and timely reporting suspicious activities.
- **Community Engagement:** Neighbourhood watch programs, disaster preparedness and community policing.
- **Promoting Social Harmony:** Combating hate speech, encouraging dialogue and support for marginalized groups.
- **Civic Responsibility and Legal Awareness:** Adherence to the Rule of Law, reporting crime at the earliest, participation in democratic processes and National Integration Programs.

ASSESSMENT EXERCISE

Multiple-Choice Questions (MCQs)

Q1. Which of the following regions is a major point of conflict between India and China?

(a) Jammu and Kashmir

(b) Punjab

(c) Rajasthan

(d) Arunachal Pradesh

Q2. Which internal security threat is primarily active in central and eastern India?

(a) Insurgency

(b) Naxalism

(c) Terrorism

(d) Cybercrime

Q3. What is the primary focus of India's cybersecurity agencies?

(a) Surveillance on borders

(b) Counter-terrorism

(c) Defense against cyber attacks

(d) Industrial espionage

Q4. What is one of the primary ways citizens can contribute to national security?

(a) Being vigilant and reporting suspicious activities

(b) Ignoring suspicious activities

(c) Relying only on the government for security

(d) Staying disengaged from community issues

Q5. Which of the following is a key element of India's defense strategy to ensure national security?

(a) Relying only on diplomatic solutions

(b) Maintaining a robust and modernized military

(c) Focusing solely on nuclear weapons development

(d) Reducing military spending to focus on economic growth

Q6. What is the significance of the Indian Navy in India's defense capabilities?

(a) It plays no role in defense and is mainly for trade purposes

(b) It serves as a diplomatic arm with no combat role

(c) It ensures security of India's maritime borders and vital trade routes

(d) It is focused only on providing humanitarian aid

Q7. Which of the following initiatives has India undertaken to strengthen its defense capabilities?

(a) Reducing defense investments and relying on foreign assistance

(b) Developing defense technologies such as missiles and aircraft

(c) Limiting defense research and focusing on other sectors

(d) Disbanding the armed forces in Favor of diplomatic measures

Q8. Which of the following is a simple act through which citizens can contribute to cybersecurity in India?

(a) Using weak passwords for online accounts

(b) Sharing personal information freely online

(c) Ignoring cybersecurity threats

(d) Regularly updating software and practicing safe online behaviour

Q9. Which of the following is considered a key factor in ensuring national energy security?

(a) Dependence on a single energy source

(b) Diversification of energy supply sources

(c) Limited investment in renewable energy

(d) Reducing energy efficiency

Q10. Which of the following is considered a major threat to environmental security?

(a) Overfishing and depletion of marine ecosystems

(b) Increase in renewable energy use

(c) Enhanced forest conservation efforts

(d) Reduction in global population growth

Q11. Which of the following is considered one of the major internal security threats in India?

(a) Cyber-attacks on critical infrastructure

(b) Nuclear proliferation

(c) Global warming

(d) Rising trade barriers

Q12. Which of the following measures is crucial for ensuring economic security in India?

(a) Relying solely on foreign investments

(b) Fostering self-reliance in key sectors such as agriculture and manufacturing

(c) Focusing only on urban development

(d) Reducing government spending in infrastructure

Q13. Which of the following is a key challenge related to internal security in India?

(a) The expansion of global trade

(b) Increased foreign investments

(c) Development of renewable energy technologies

(d) Left-wing extremism (Naxalism)

Q14. What role does the Indian government's economic policies play in ensuring national economic security?

(a) Focus solely on import policies

(b) Aim to reduce poverty and inequality while promoting sustainable economic growth

(c) Prioritize the interests of only multinational corporations

(d) Discourage foreign trade and investment

Q15. Which of the following best describes a citizen's civic responsibility in enhancing national security?

(a) Upholding the law and respecting the Constitution

(b) Avoiding participation in legal processes

(c) Supporting only regional security efforts

(d) Neglecting environmental conservation efforts

Short Answer Questions

Q1. What are the two major external border disputes India faces?

Q2. How can terrorism be a challenge to India's national security?

Q3. Why is cybersecurity considered a national security challenge for India?

Q4. Why is economic security important for national security?

Long Answer Questions

Q1. Analyse the internal security threats posed by Naxalism and insurgencies in northeastern India.

Q2. Examine how terrorism, both domestic and cross-border, poses a continuous threat to India's security.

Q3. Examine the growing threat of cyberattacks to India's national security. What steps is the government taking to strengthen its cybersecurity infrastructure?

BORDER & COASTAL AREAS

3

CHAPTERWISE INDEX: BORDER & COASTAL AREAS (SD/SW)

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BCA – I (SD/SW)

CHAPTER I : HISTORY, TOPOGRAPHY & DEMOGRAPHY OF BORDER AND COASTAL AREAS

TEACHING INSTRUCTIONS

Period(s)	**:**	**02**
Type	**:**	**Lecture**
Year	**:**	**SD/SW (First Year)**
Training Aids	**:**	**Power Point Presentation, Map of India**

Time-plan:

- Introduction : 04 mins
- Part I: Borders of India. : 10 mins
- Part II: The historical processes that have shaping India's current borders. : 10 mins
- Part III: Topography of border areas : 10 mins
- Part IV: Diverse geographical features of India's borders. : 10 mins
- Part V: Population Density and Distribution. : 10 mins
- Part VI: Literacy and Education. : 08 mins
- Part VII: Occupational Structure. : 08 mins
- Conclusion : 05 mins
- Question answer session : 05 mins

INTRODUCTION

1. A nation's identity is often defined by its geographical boundaries as represented on a political map. Similarly, the individuals living within these boundaries are identified as its citizens. History reveals that these borders are not static; they have evolved significantly over time. India, a country with a diverse and extensive boundary, shares its borders with several nations, many of which have been marked by disputes, differences, and historical conflicts. This underscores the importance of understanding the history, geography, and topography of our borders, as well as the lives, cultures, and challenges faced by the people living in these border and coastal areas.

OVERVIEW

The subject will be covered in the following parts:-

(a) Part I: Borders of India

(b) Part II: Historical Processes Shaping India's Current Borders

(c) Part III: Topography of Border Areas

(d) Part IV: Diverse geographical features of India's borders.

(e) Part V: Population Density and Distribution

(f) Part VI: Literacy and Education

(g) Part VII: Occupational Structure

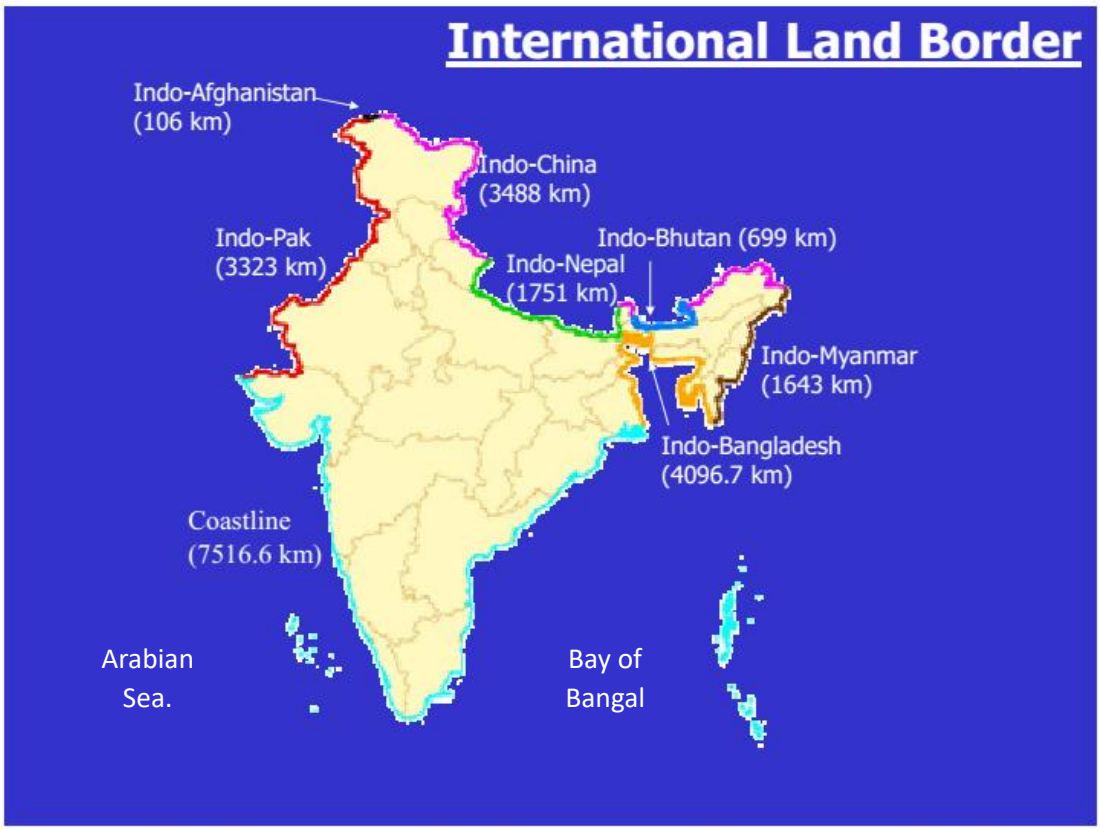
LEARNING OBJECTIVES

- Border states of India and neighbouring countries.
- Historical Perspective of the historical events that have shaped India's current borders
- Topography of the border areas
- The diverse geographical features of India's borders, including mountains, rivers, deserts and forests.
- Population Density and Distribution.
- Literacy and Education.
- Occupational Structure.

PART I : BORDERS OF INDIA

Land Borders

2. India shares its land borders with seven neighbouring countries. This includes Afghanistan, China, Bhutan, Nepal, Pakistan, Bangladesh, and Myanmar. As a peace-loving democratic country, India has always tried to maintain friendly foreign relations with its neighbors. India shares borders with the countries as below:-



(a) **Bangladesh.** 4096.70 kms running along West Bengal, Assam, Meghalaya, Tripura and Mizoram.

(b) **Pakistan**. 3323 kms running along Gujarat, Rajasthan, Punjab, Union Territory of Jammu & Kashmir and Union Territory of Ladakh.

(c) **China.** 3488 kms running along Arunachal Pradesh, Sikkim, Uttarakhand, Himachal Pradesh and Union Territory of Ladakh.

(d) **Nepal.** 1751 kms running along Uttarakhand, Uttar Pradesh, Bihar, West Bengal and Sikkim.

(e) **Bhutan**.699 kms running along Sikkim, West Bengal, Assam and Arunachal Pradesh.

(f) **Myanmar.** 1643 kms running along Arunachal Pradesh, Nagaland, Manipur and Mizoram.

(g) **Afghanistan**. 106 kms running along Union Territory of Ladakh

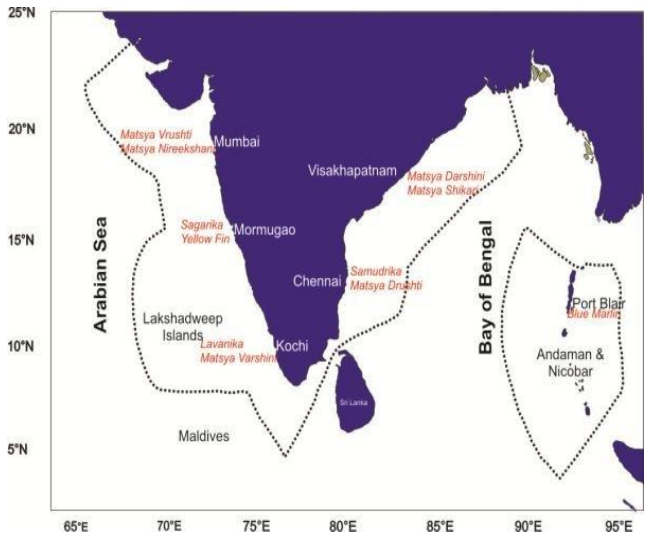
Maritime Borders

3. India's coastline spans over 7,516.5 km, including its island territories, making it the 15th longest in the world. India shares its maritime borders with seven countries: Bangladesh, Indonesia, Myanmar, Thailand, Sri Lanka, the Maldives, and Pakistan. This extensive coastline underscores India’s strategic importance and the necessity to manage

its marine resources and coastal communities effectively. India's maritime boundaries include:

(a) 12-nautical-mile Territorial Zone

(b) 200-nautical-mile Exclusive Economic Zone (EEZ)



4. Protection of Maritime Borders and the Strategic Deployments for the same is of utmost importance for any country. India places significant emphasis on safeguarding its maritime borders, Territorial Maritime Zone, and Exclusive Economic Zone (EEZ). Ensuring open and secure International Sea Lanes of Communication (SLOC) is vital for trade and logistics. The Indian Navy along with Indian Coast Guard equipped with mission-ready ships, submarines and aircrafts, maintains a strong presence in these areas, particularly at key choke points in the Indian Ocean Region (IOR). These deployments are designed to address a wide spectrum of operations to ensure safety and sovereignty of our maritime borders. Apart from domination and protection of our IOR, some other operations that are carried out, includes anti-maritime terrorism/piracy operations and humanitarian aid and disaster relief (HADR) missions.

SOME INTERESTING FACTS

- The ocean covers 71% of the Earth's surface.
- The Barren Island, India's only active volcano lies in the Andaman Island group.
- The southernmost tip of India, **Indira Point** was submerged in 2004 Tsunami, is part of the Great Nicobar Islands Group.

Aerial Borders

5. These cannot be physically demarcated. It is an imaginary line, generally contiguous and vertically above in space to a country's land and maritime borders and is commonly referred to as 'Air Space'. During peacetime passenger and cargo air flights of friendly countries with which the host country has an agreement are permitted to use each-other's airspace. However, use of air space by certain types of aircrafts like military aircrafts are not permitted unless and until special permission is taken. In such cases the use of air space by hostile country aircraft or military aircraft (without permission) is called an infringement and is termed as an 'Air violation'.

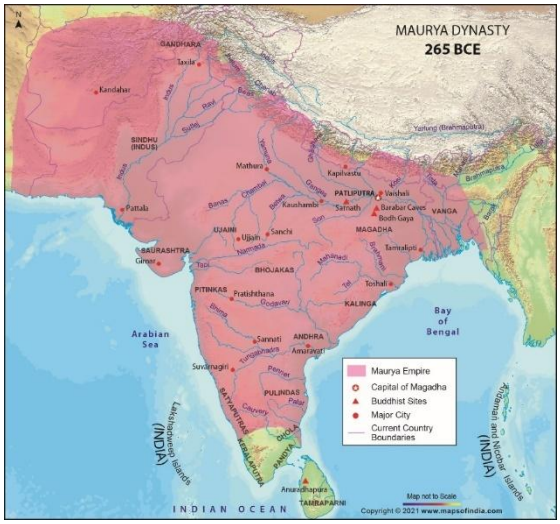
PART II : HISTORICAL PROCESSES SHAPING INDIA'S CURRENT BORDERS

6. Numerous historical events and processes have shaped India's current borders. Various dynasties ruled over vast areas of India in the past, some of these areas are now

outside present political borders of the country. Later, decline of the Mughal Empire and subsequent colonization of India in pre-modern period by the European countries also played a significant role in the shaping of our present political boundaries.

7. These historical events and processes have shaped our perception of a country (Greater India/ *Vrihattar Bharat*). Some of the important periods having significant impact are as under:

(a) **Mauryan Empire (322–185 BCE).** The Mauryan Empire is considered the first empire of India. Its rulers unified much of the Indian subcontinent. The presence of Ashokan edicts in modern Afghanistan, Pakistan, Nepal and Bangladesh indicates the reach of Mauryan power in a wider and diverse landscape of South Asia. Ashoka's efforts for the propagation of *Dhamma* led to the strengthening of India's cultural ties with various countries of Asia.



(b) **The Kushan Empire.** Emerging from present-day Afghanistan, the Kushans expanded into the northwest of the Indian subcontinent during the mid-1st century CE. Under Emperor Kanishka, the empire encompassed Afghanistan and northern India, fostering trade along the Silk Road and maritime routes of the Indian Ocean. This era witnessed the flourishing of Gandhara and Mathura art, influenced by the cultural exchanges facilitated by long-distance trade.

(c) **The Chola Empire and Naval Expansion.** The Cholas were the first rulers to establish a formidable navy, which they used to expand their influence overseas. Vijayalaya Chola began the dynasty's rise by defeating the Pallavas and capturing Thanjavur. During the reign of Rajaraja Chola and his son Rajendra Chola I, the empire conquered territories across India and extended its reach to Sri Lanka, Java, Sumatra, and Malaya through naval expeditions, exemplifying their maritime prowess.

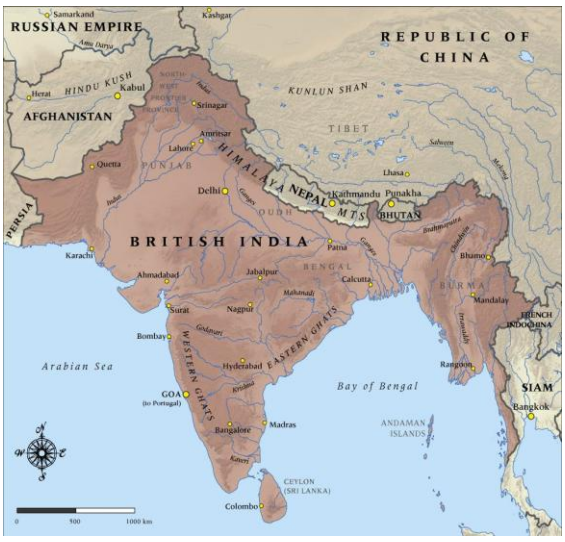
(d) **Early Islamic Invasions and Delhi Sultanate.** In 712 CE, Muhammad bin Qasim led the Arab conquest of Sindh, establishing the first Islamic foothold in the Indian subcontinent. However, subsequent Arab campaigns were repelled by Indian rulers, such as the Pratiharas and the Chalukyas, restricting Arab control to Sindh. Later, raids by Mahmud of Ghazni and Mohhammed Ghauri paved the way for the formation of Delhi Sultanate. The Delhi Sultanate, established in 1206 CE, resisted several Mongol invasions during the Khalji dynasty. Zafar Khan, a general under Alauddin Khalji, notably defeated Mongol forces near Jalandhar in 1297 CE. The Sultanate marked the beginning of centralized Muslim rule in northern India. Malik

Kafur's campaigns in Indian peninsula increased the reach of the Delhi Sultanate. However soon the region witnessed the rise of Vijayanagar empire which exercised political controlled over Deccan and far South for substantial period.

(e) **The Mughal Empire.** The Mughal Empire, founded by Babur in 1526 CE after defeating Ibrahim Lodi, introduced gunpowder artillery to South Asia. At its peak, the empire spanned over 4 million sq. km, stretching from Bengal to Kabul and Kashmir to the Kaveri basin. The Mughal era saw cultural and administrative advancements, particularly under Akbar. The Mughal empire attained its maximum boundaries during the period of Aurangzeb. However, Auranzeb's death in 1707 was followed by the weakening of the Mughal control and the emergence of several successor states.

(f) **Maratha Empire.** The fragmentation of Mughal empire led to the emergence of various successor states. Many of them were overwhelmed by Marathas. Marathas reduced Mughal emperors to titular status and effectively controlled their administration. Maratha *sardars* presented stiff resistance to British East India Company's expansion commonly referred to as Anglo-Maratha wars. Maratha Empire is also known for its maritime dominance along the western coast of India, which ensured the protection of coastal trade routes and effectively countered European naval powers in the 18th century.

(g) **Sikh Empire.** Maharaja Ranjit Singh united various Sikh factions (*mis*ls). They were organized into a powerful state. At its prime in the mid-19th century, Sikh Empire extended from Gilgit and Tibet in the north to the deserts of Sindh in the South and from the Khyber Pass in the west to the Sutlej in the east. Anglo-Sikh wars brought an end to this empire marking the completion the conquest of India by East India Company.



(h) **Colonial Rule and Partition.** The weakening of Mughal control, facilitated in the colonization of Indian subcontinent by European powers, aided and abetted by their better seafaring and technological capabilities. The British officials exploited the prevailing political situation which was punctuated by small fragmented political entities or princely states, cunningly using the policy of 'divide and rule'. The British colonial period saw significant changes to India's borders. The Partition of Bengal in 1905 into East Bengal and West Bengal by British government created religious divisions for the first time that deepened thereafter. In 1947, the British Government conceded to the demand of Muslim League, led by Jinnah, and created Pakistan out of the entire Indian territories under British control, based on religious lines.

Independent India inherited its borders from British period. At the time of the British withdrawal, 565 princely states were officially recognized in the Indian sub-continent, apart from thousands of Jamindari estates and Jagirs. Under the dynamic leadership of Sardar Vallabh Bhai Patel, the Iron Man of India, almost all princely states willingly agreed to sign the instrument of accession and joined Union of India. However, at the time of independence, some of the princely states which did not sign the instrument of accession were the Nizams of Hyderabad, Nawab of Junagarh, and Maharaja of Jammu and Kashmir. Subsequently with the invasion *Kabayailis* led by Pakistan Army, Maharaja Hari Singh willingly signed the instrument of accession on October 26, 1947 to safeguard the life and property of the innocent subjects of his princely state.

(j) **Post-Independence Territorial Adjustments.** The feeling of nationalism had lasting impact on the local populace of those princely states that had not acceded to India at the time of independence. These nationalistic sentiments led to the local movements which were later supported by the Indian Government. The follow up political and police action by the Indian Government resulted in the accession and integration of the princely states of Junagarh and Hyderabad. Subsequently, in 1961, Portuguese were forced to accede its territories – Goa, Daman, Diu, Dadra and Nagar Haveli to India. Pondicherry, Chandernagore, and other smaller French enclaves were integrated through referendums in 1970. Sikkim joined India through a similar process in 1975, it became the last state to merge with the Union of India.

HISTORICAL TRIVIA

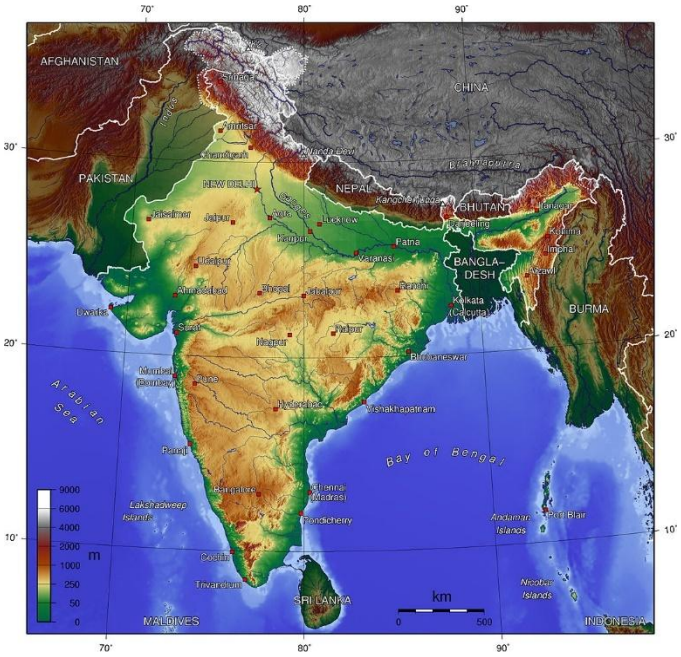
- One of the earliest surviving representations of the Indian peninsula is in the "Tabula Peutingeriana", a 12th Century version of a Roman map from the 4th Century CE detailing circuits through Europe, the Far East, and South Asia.
- The British established the Survey of India. Major James Rennell was appointed as the first Surveyor General of India. The Survey of India traces its birth to the appointment of Major James Rennell as Surveyor General of Bengal, by Lord Robert Clive and his council, on the first of January 1767.
- The McMahon Line generally demarcates the northern borders of India with China. It was proposed by Sir Henry McMahon, the foreign secretary of British India at the 1914 Simla Convention.

PART III : TOPOGRAPHY OF BORDER AREAS

8. **Northern Borders.** The terrain of Jammu and Kashmir is highly diverse, encompassing mountains, valleys, rivers, plateaus, and glacial regions. The region is geographically divided into four distinct zones:

(a) **Kandi Belt and Shivalik Hills (Jammu Region)**: The southern Jammu region features mountainous terrain, including the Shivalik hills and fertile plains in the southwest. Important rivers in this area include the Chenab, Tawi, and Ravi.

(b) **Kashmir Valley and Pir Panjal Range**: Enclosed by the Pir Panjal range to the west and south, the valley lies to the leeward of the Himalayas, which form its northeastern boundary. The Jhelum River is the primary waterway traversing the Kashmir Valley.



(c) **Tibetan Tract (Ladakh and Kargil)**: Characterised by high-altitude plateaus and arid conditions, this region is distinct in its topography and climate.

(d) **Valleys**: Significant valleys include the Kashmir Valley, Tawi Valley, Chenab Valley, Poonch Valley, Sind Valley, and Lidder Valley.

9. The region's climate varies with altitude and geographical location. The southern and southwestern areas experience a subtropical climate with hot summers, cool winters, and monsoon rains. In contrast, the Kashmir Valley and high-altitude regions experience cold winters with sub-zero temperatures and snowfall, while summers are generally pleasant. Precipitation in the valley is largely influenced by Western Disturbances during the spring.

10. **North Eastern Borders.** Northeast India (consist predominantly hilly, with valleys and plains interspersed between its varied terrain. The region’s elevation ranges from sea level to peaks as high as 7,000 meters above sea level.

(a) **Topography**. The topography of Northeast India includes plains and valleys, which include the Brahmaputra, Barak and Imphal valleys, along with flatlands in Meghalaya and Tripura. The surrounding hill ranges include the Garo, Khasi-Jaintia, Dimasa, Karbi, Naga, Arunachal, and Bhutan hills. Also, the rainforests in the region support rich biodiversity and unique ecosystems.

(b) **River Systems**. The region is dominated by the Brahmaputra and Barak river systems and their tributaries. It has high rainfall, averaging over 10,000 mm annually, which contributes to frequent floods and high seismic activity.

(c) **Climate**. States like Arunachal Pradesh and Sikkim have a cold climate with snowy winters and mild summers. The remaining states experience hot, humid summers, severe monsoons, and mild winters.

(d) **Strategic and Ecological Importance.** The Northeast is India's gateway to Southeast Asia and serves as a land bridge to Myanmar, positioning it at the forefront of India's Act East Policy. The region is rich in natural resources in terms of Hydropower Potential, Biodiversity and Ecological aspects. The hydropower potential is estimated at 50,000 MW, offering a significant energy resource. Part of the Indo-Burma Biodiversity Hotspot, it boasts one of the highest avian and plant diversities in the Indian subcontinent. The region has ecological significance as it is home to all bear species found in India and several endemic species, supported by its unique ecosystems and rainforests. With abundant natural resources, ecological significance, and strategic location, the Northeast plays a crucial role in India's environmental, economic, and geopolitical landscape.

PART IV : DIVERSE GEOGRAPHICAL FEATURES OF INDIA'S BORDERS

11. **Desert Terrain/ Riverine Terrain/ Plains.** The international border of India and Pakistan is a mix of all type of terrain. It partially has dessert, riverine, plains and mountainous terrain. Each type of terrain pose a different type of threat and requires different means of surveillance. Thus, forces designated to guard these have to prepare for various type of challenges and warfare as per terrain. Desserts are vast and open. There is lack of roads and vehicles cannot move on loose sand. Similarly the plains of Punjab and Jammu region have a number of rivers and *nallahs* where movement of troops guarding the borders is difficult. These terrain impose a challenge of effectively patrolling the border areas and increase the risk of illegal activities across the border.

12. **Mountainous Terrain.** Mountainous terrain as the name suggest has mountains of varying heights, which in case of India range from 9,000 ft to about 20,000 ft. The terrain in mountains is rugged and inhospitable and weather is inclement. It poses a challenge for construction, development of means of transportation and communication. Difficulty in holding ground, surveillance, logistics and requirement of special clothing and equipment further aggravates the complexity. India shares mountainous border with Pakistan, China, Nepal, Bhutan, and Myanmar.

13. **Snow Clad and Glaciated Terrain.** Snow clad mountains are areas in Greater Himalayas which experiences snowfall and has snow cover for several months in the year. Such mountains are found in UT of J&K, Ladakh and state of Himachal Pradesh, Uttarakhand, Sikkim and Arunachal Pradesh. The Siachen Glacier is located in the Eastern

Karakoram range of the Himalayas and has permanent snow cover throughout the year. The Siachen Glacier is located in the UT of Ladakh. It is also known as the highest battlefield in the world.

14. **Jungle Terrain.** Such a terrain has serious challenges in construction of means of transportation and communication, and as a result, the border area remains sparely populated with limited economic development. Absence of roads, communication links and other border-guarding infrastructure also adversely affect border management as the hamper the easy and rapid movement of the border guarding management as they hamper the easy and rapid movement of the border guarding forces along the border. Such terrain denies the advantage of aerial surveillance. Densely forested areas are difficult to inhabit for the state and have an overall decreased police and military presence.

15. **Geography of Coastal India.** Coastal geography is the study of the constantly changing region between the ocean and the land, incorporating both the physical geography (i.e. coastal geomorphology, geology and oceanography) and the human geography (sociology and history) of the coast. It includes understanding coastal weathering processes, particularly wave action, sediment movement and weather, and the ways in which humans interact with the coast. India has a coastline of 7516.6 km which touches Nine Indian states and Two Union Territories.

DO YOU KNOW

- Indian Ocean covers 20% of the Earth surface.
- 40% of the world's offshore Crude Oil comes from Indian Ocean-mainly from SE Asian & Persian Gulf Oilfields.
- Kolkata is the only Inland Riverine Port in India.

16. India has a coastline of 7516.6 km in which 5422.6 km of mainland coastline and 1197 km of Indian islands. Indian coastline touches nine states namely Gujarat, Maharashtra, Goa, Karnataka, Kerla, Tamil Nadu, Andhra Pradesh, Odisha, West Bengal and two union territories – Daman and Diu and Pondicherry. The two island territories of India are Andaman and Nicobar Islands in Bay of Bengal and Lakshadweep Islands in the Arabian Sea.

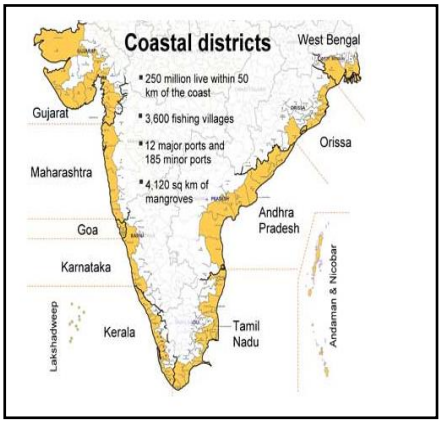
PART V : POPULATION DENSITY AND DISTRIBUTION

17. Population Distribution and Density in Border and Coastal Areas of India are uneven due to various factors, eg terrain, accessibility, infrastructure development, availability of resources, etc. Certain data is given below to understand the distribution of the population.

(a) **Jammu and Kashmir**. As per the 2011 Census, the total Population of J&K is 12.27 million out of which Scheduled Castes (SCs) are 7.54% (primarily in the Jammu region) and Scheduled Tribes (STs) are 10.39% (mainly Gujjars, Bakarwals, and Gaddis). The religious composition includes Muslims, who are in the majority,

Hindus (Minority), who are predominantly in the Jammu region and the Small communities of Sikhs and Christians. The overall Population Density is 124 persons per sq. km, with the highest in Srinagar (2,860 persons per sq. km) and the lowest in Leh (3 persons per sq. km).

(b) **Northeast Region**. The Northeast exhibits a mix of hilly terrain and valleys, resulting in dispersed populations. The Challenges in this region are remoteness, lack of infrastructure and economic development.



(c) **Coastal India**. Population and Density in coastal areas showcase higher population concentrations driven by favourable geography and economic opportunities, contrasting sharply with the sparsely populated and challenging terrain of India's land borders of hilly/mountainous areas.

(d) **Western Coastal Areas**: On the **western coast**, Gujarat has nine coastal districts with a population of 60.38 million and a density of 308 persons per sq. km. Maharashtra has a Coastal Population of 28.62 million (25% of the state's total) and 7,141 persons per sq. km (Mumbai Suburban: 20,925 persons per sq. km). The Coastal Population of Karnataka is 4.7 million with a density of 250 persons per sq. km. It's coastal districts are Uttara Kannada, Udupi and Dakshina Kannada. Goa has a population of 1.46 million and density of 394 persons per sq. km.

(e) **Southern Coastal Areas**: In the **Southern coast**, Kerala has coastal population of 25.4 million with density of 1,111 persons per sq. km (Thiruvananthapuram: 1,509 persons per sq. km). In Tamil Nadu, the coastal population is 33.37 million with the density at 2,655 persons per sq. km (Chennai: 26,903 persons per sq. km). This state is vulnerable to tropical cyclones, tsunamis, and coastal erosion. Andhra Pradesh has a coastal population of 34.2 million and density of 368 persons per sq. km.

(f) **Eastern Coastal Areas**: In Eastern Coast, Odisha has coastal population of 11.6 million and density of 531 persons per sq. km. This state is also vulnerable to cyclones, storm surges, and tsunamis. Lastly, The state of West Bengal has coastal population of 23.33 million and density of 1,449 persons per sq. km. It has macro-tidal environment with tidal ranges of 5–6 m.

(g) **Islands**: Apart from above mentioned states, the Island territories of Lakshadweep and Andaman & Nicobar has population of 64,429 and 343,000 respectively. The density Lakshadweep is 2,013 persons per sq. km and of Andaman & Nicobar Island is 55 persons per sq. km.

18. It is clearly understood from the above information that coastal areas have higher population densities due to better livelihoods, infrastructure, and amenities in comparison to land border areas (Jammu & Kashmir and Northeast) which are characterized by remoteness, limited development, and connectivity challenges.

PART VI: LITERACY AND EDUCATION

19. As per the National overview, Average Literacy Rate is 73% (Men: 84.7% & Women: 70.3%). There is a significant gender disparity though narrowing due to faster growth in female literacy (11.8%) compared to male literacy (6.9%) between 2001–2011. Some of the border and coastal areas have performed exceptionally well. As per the census (2011) Kerala (94%) (highest, coastal state), Mizoram: (91.58%), Tripura (88%), Lakshadweep Islands (92%) and Andaman & Nicobar Islands (87%) have done well. However, the literacy rates in certain border areas are far below national average and a matter of concern. The literacy rates among some of the low performing border and coastal areas are as follow: Assam (72%), Andhra Pradesh and Telangana (67%), Jammu & Kashmir (67%), Arunachal Pradesh (65%), Bihar (62%).

20. Amongst Northeastern States, except Arunachal Pradesh (65%), most northeastern border states exhibit higher literacy rates, indicating better educational outcomes in these regions. The Northern and Western Border States show significant variation, with Himachal Pradesh performing admirably (Bihar lagging significantly (62%). The coastal states generally perform well, with Kerala leading the country in literacy. Exceptions include Andhra Pradesh and Telangana (67%), which align more closely with hinterland states in literacy performance.

21. The implications of the above-mentioned are as under:-

(a) **Education Awareness**. Despite challenges in infrastructure, border and coastal states show better literacy outcomes compared to hinterland states.

(b) **Female Literacy Growth**: Faster growth rates for female literacy point to positive social trends, which could further reduce the gender

DO YOU KNOW

- India has the second largest arable land in the world, after the United States.
- India has the largest herds of buffalo and Cattles in the world.
- India is the world's largest producer of Milk. Anand Milk Union Limited or AMUL was formed in 1946; as a Dairy cooperative in Anand, Gujarat owned by 2.6 million milk producers. It pioneered the White Revolution in India that made India the largest milk producer in the world. The mascot is a hand-drawn cartoon of a young Indian girl dressed in a polka-dotted frock with blue hair and a half-pony tied up.

disparity in the coming years.

(c) This data underscores the importance of targeted interventions to bridge regional and gender disparities in literacy while leveraging the educational momentum in border and coastal areas.

PART VII : OCCUPATIONAL STRUCTURE

22. There are a large number of challenges in border areas. The basic challenge is of Geographical and Climatic Constraints, which include Harsh climatic conditions in regions like Ladakh, Rajasthan, and Arunachal Pradesh and also the dense jungles in the Northeast and deserts in Rajasthan & Ladakh limit agricultural and industrial activities. There is also the existence of Infrastructure Deficiency, i.e., poor surface communications and transportation networks, limited industrialization, and restricted means of livelihood. Also, vast natural and human resources remain untapped due to isolation and inadequate infrastructure. The population density is also low in High-altitude areas (e.g., Ladakh, North Kashmir), deserts (Rajasthan), and dense forests (Northeast), showing sparse population densities.

23. At the same time, there are certain advantages in coastal regions. These are given as below:-

(a) **Economic Opportunities**. Access to oceans enables navigation, fisheries, tourism, and recreation. The ports facilitate trade, commerce, and the influx of products and money.

(b) **Climate and Resources**. Equitable climate supports agricultural and industrial activities. The availability of food in plenty and access to raw materials promote economic growth.

(c) **Urbanisation and Industrialisation.** Higher population and urbanization provides diverse service oriented job opportunities in these areas.

24. **Comparison of Border and Coastal Areas**

Factors	Border Areas	Coastal Areas
Climate	Extreme (mountains, deserts, jungles)	Equitable, favourable for agriculture
Economic Activities	Agriculture-dominated; limited diversification	Industrialised: fisheries, tourism, ports
Infrastructure	Poor communication and transportation networks	Well-developed ports, roads, and industries
Population Density	Sparse (except plains of Punjab, Assam, West Bengal)	High due to urbanisation and job availability
Resource Utilization	Underutilised natural and human resources	Efficient use of raw materials and labour

25. The key derivatives from the above comparison are:-

(a) Coastal regions demonstrate a more dynamic and diversified occupational structure due to favourable geography and resource accessibility.

(b) Border regions, despite immense potential, lag due to infrastructural and climatic constraints, necessitating focused interventions to improve livelihoods and resource utilisation.

26. Certain actions may be taken to develop the border areas, which are as follows:

(a) **Infrastructure Development**. Build roads, communication networks, and transport facilities to enhance connectivity.

(b) **Industrialisation**. Establish small-scale industries tailored to local resources and needs.

(c) **Resource Management**. Tap into natural resources through sustainable practices.

(d) **Skill Development**. Train the local population in alternative livelihoods to reduce overdependence on agriculture.

27. Investments in these areas can bridge the disparity between border and coastal regions, fostering balanced regional development.

PART VIII : CULTURAL, RELIGIOUS AND ETHNIC COMPOSITION

28. India’s borders, both land and coastal, present a unique diversity in terms of physical terrain, ethnicity, and cultural composition. The responsibility for securing these borders has traditionally rested with the armed forces and border security agencies. However, the role of local populations in ensuring security has gained recognition, leading to the evolution of border guarding into comprehensive border management. The key aspects of border areas are:-

(a) **Geographical Diversity**. India's borders span glaciated regions, deserts, forests, and riverine terrains. Several areas are inaccessible, un-demarcated, or porous, posing challenges for surveillance and security.

(b) **Role of Border Populations**. The border populace acts as the first line of defence and provides critical support in securing the frontiers. Their inclusion in border management like village defence committees is essential.

(c) **Frontline States**. Except for a few states like Madhya Pradesh, Chhattisgarh, Jharkhand, Delhi, and Haryana, most Indian states have international borders or coastlines. These states are considered frontline areas requiring specialised attention for border management.

29. There are a few challenges in Border Management in relation to ethnic and socio-economic issues. These are:-

(a) **Physical Challenges**. Difficult terrain such as glaciated regions (e.g., Siachen), dense forests, and deserts. Lack of infrastructure and accessibility in remote areas.

(b) **Cultural and Ethnic Challenges**. Border regions often have unique cultural, ethnic, and religious configurations that differ from the mainland. Some communities share affinities with populations across the border, complicating loyalty and identity issues.

(c) **Socio-Economic Issues**. Harsh living conditions, inadequate public amenities, and economic stagnation. Limited access to education, healthcare, and basic infrastructure.

(d) **Security Threats**. Cross-border shelling, insurgency, and religious fundamentalism foster alienation among border communities. Vulnerability to criminal activities, such as smuggling and human trafficking.

(e) **Governance and Perception**. Thinly spread administration and neglect by state and central authorities. A visible disconnect between the border population and security forces often leads to hostility and distrust.

30. Some important measures to address the challenges in border and coastal areas are:-

(a) **Government Initiatives**: To address the harsh living conditions and lack of amenities in border areas, multiple initiatives have been taken by both the Central and the State Governments. The main focus of areas are to strengthen infrastructure & public services to reduce a feeling of alienation and provide opportunities for the socio-economic upliftment of these areas. All central and state agencies are equally committed and involved in countering any external efforts to subvert or radicalise border populations.

(b) **Role of Security Forces**: All security forces deployed along the borders are tasked with maintaining territorial integrity and ensuring the safety of border communities. Hence, the security forces not only provide a security cover in that area but are also involved in infrastructure development projects and socio-economic activities to ameliorate the hardship of the local populace living in these areas.

(c) **Efforts to Improve Border Management**: The integration of border populations into the management framework of border areas is of utmost importance. Development of economic infrastructure and generation of employment opportunities by programme like ***Vibrant Village*** are being executed for favourable results. In addition, enhanced coordination between local civil administration and the security forces has resulted in the improvement of socio-economic conditions of the resident population.

CONCLUSION

31. Border and coastal security are important for a country's national security, economic growth and sovereignty. Borders are the first line of defence for a country and are important for preventing security threats from hostile neighbours. Coastal areas and ports are important for economic growth, and coastal security helps ensure their safety. Borders and coastlines are important for protecting a country's sovereignty. Borders and coastlines are often used for illegal activities like smuggling, human trafficking, and drug trafficking. Coastal areas are vulnerable to natural disasters like cyclones and tsunamis, and coastal security helps ensure timely evacuation and disaster management. In India, various agencies, including the PMF/CAPFs and the Army, secure the land frontiers, while the Indian Navy and the Indian Coast Guard (ICG) are responsible for maritime security, including coastal security. Other agencies that assist with maritime security include the Coastal and Marine Police, as well as other central and State agencies.

SUMMARY

- The study of the historical perspective behind events precipitating India's current borders; especially in case of J&K, Northern Borders & North East is merited to draw lessons especially from security point of view and negate recurrence.
- Acquaintance with our borders; especially the Line of Control (LC) and Line of Actual Control (LAC) is must, to understand the correct perspective behind our perennial border issues with western and northern adversaries.
- The study of the topography of our border areas; especially in J&K and the North East gives us an insight in the typically complicated logistics and operational constraints faced by the border guarding forces. The diverse geographical features of India's borders, including mountains, rivers, deserts and forests evidently displays the versatility and acumen of the armed forces deployed to guard these.
- The population density and distribution also merits attention, as their integration in the mainstream through comprehensive development of these backward areas will further facilitate the effective security management. Synchronous improvement of literacy and education will further augment and integration in to the mainstream thereby ensuring a peaceful transition.
- Also, understanding the occupational structure will give us an indication of the problem areas needed to be prioritized; with an impetus both financially and administratively.
- The study of the cultural, religious and ethnic composition of the populace in border areas will allow training of the personnel of the border guarding forces primarily to negate occurrence of strife/ clashes with locals, facilitate cordial relations and amalgamation by respecting local customs and traditions.
- The study of political boundaries; and consequent ongoing border disputes (India-China, India-Pakistan), the Impact of these disputes on regional and national security gives us an insight in to the security and foreign policy issues currently faced by the nation- be it terrorism, international cooperation, trade etc.

ASSESSMENT EXERCISE

Multiple Choice Questions

Q1. Which of the following states does not have a coastline with the Bay of Bengal?

(a) Tamil Nadu

(b) Odisha

(c) Telangana

(d) Puducherry

Q2. Which of the following states has a coastline?

(a) Jammu & Kashmir

(b) Punjab

(c) Himachal

(d) Maharashtra

3. Which of the following was the first Indian Empire to establish a formidable Navy?

(a) Kushana Empire

(b) Mauryan Empire

(c) Chola Empire

(d) Maratha Empire

Q4. Which of the states does not have a land border with Bangladesh?

(a) West Bengal

(b) Manipur

(c) Meghalaya

(d) Assam

5. Which are the Indian islands in the Arabian Sea?

(a) Lakshdweep islands

(b) Andaman and Nicobar Islands

(c) Paradip Island

(d) None of the above

Q6. Which of the following states/ union territories do not have a land border with China?

(a) Sikkim

(b) Ladakh

(c) Arunachal Pradesh

(d) Nagaland

Q7. Which of the following states/ union territories do not have a land border with Pakistan?

(a) Haryana

(b) Gujarat

(c) Rajasthan

(d) Punjab

Q8. Which of the following states does not have a coastline with the Arabian Sea?

(a) Karnataka

(b) Odisha

(c) Kerala

(d) Maharashtra

Q9. Palk Strait is located between Tamil Nadu and _____?

(a) Bangladesh

(b) Andaman

(c) Lakshwadeep

(d) Sri Lanka

Q10. _____ River is known as Yarlung Tsangpo in Tibet & Dihang in Arunachal Pradesh.

(a) Brahmaputra

(b) Indus

(c) Beas

(d) Ganga

Q11. Ross Island in Andaman & Nicobar Islands has been renamed as _____.

(a) Indira Gandhi

(b) Veer Savarkar

(c) Netaji Subhash Chandra Bose

(d) Sardar Patel

13. What are the Border Management challenges in relation to ethnic and socio-economic issues?

(a) Physical challenge peninsula

(b) Cultural and Ethnic Challenges

(c) Security challenges

(d) All of the above

Q13. Siachen Glacier is located in the Eastern _____ range in Ladakh.

(a) Pangong

(b) Greater Himalayas

(c) Karakoram

(d) Zanskar

Q14. _____is the capital of union territory of Andaman & Nicobar Islands.

(a) Sri Vijaya Puram

(b) Havlock

(c) Port Blair

(d) Radhanagar

Short Answer Questions.

Q1. Summarise the territories added to the Union of India.

Q2. Describe the topography of India's North Western borders.

Q3. Why are the population densities in Coastal areas higher?

Q4. Discuss the demographic profile of Jammu & Kashmir and Ladakh region.

Q5. What are the major economic activities in India's coastal regions?

Long Answer Questions.

Q1. Discuss the differences between the geographical features of India's North-Eastern and and North Western borders.

Q2. Discuss the challenges faced by the people settled in India's coastal regions?

Q3. Describe the challenges in Border Management in relation to ethnic and socio-economic issues.

Q4. Give a summary of the historical events since 18th century that has shaped India's present borders.

Map Exercise

Q1. In the adjoining map of India, mark the following:-

(a) State of Tripura; and its capital.

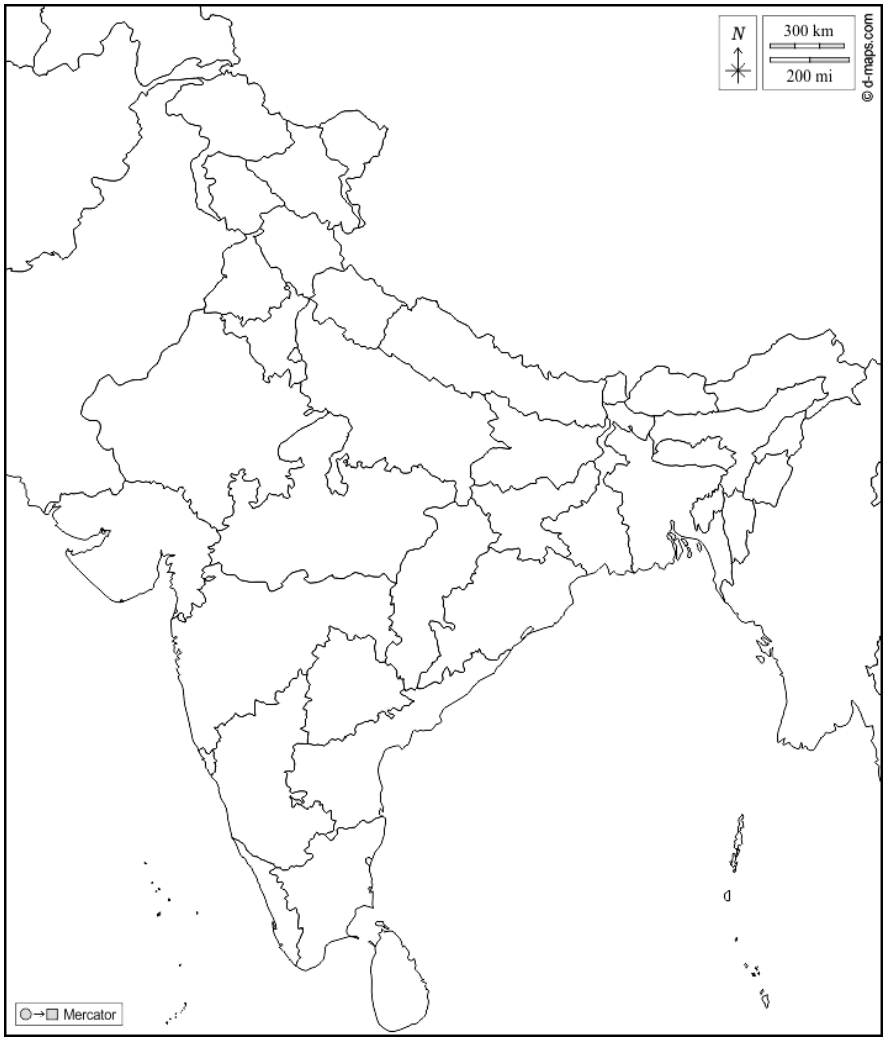
(b) Lakshadweep Islands.

(c) Thar Desert.

(d) Konkan, Malabar and the Coromandal Coasts.

(e) The areas inhabited by Bengali Population.

Q2. Also, mark the areas where major Industrial Centres are concentrated.



BCA – II (SD/SW)

CHAPTER II: SECURITY SET-UP IN BORDER/ COASTAL AREAS

"Men love their country, not because it is great, but because it is their own."
Seneca

TEACHING INSTRUCTIONS

Period(s)	**:**	**01**
Type	**:**	**Lecture**
Year	**:**	**SD/SW (Second Year)**
Training Aids	**:**	**Power Point Presentation, Map of India**

Time-plan:

- Introduction — 02 mins
- Part I: Security Set Up and Management of Land Borders — 12 mins
- Part II : Security Set Up and Management of Maritime Borders — 12 mins
- Part III : Security Setup and Management of Indian Air Space Stations — 12 mins
- Conclusion — 02 mins

INTRODUCTION

1. A nation's identity is often defined by its geographical boundaries as represented on a political map. Similarly, the individuals living within these boundaries are identified as its citizens. History reveals that these borders are not static; they have evolved significantly over time. India, a country with a diverse and extensive boundary, shares its borders with several nations, many of which have been marked by disputes, differences, and historical conflicts. This underscores the importance of understanding the history, geography, and topography of our borders, as well as the lives, cultures, and challenges faced by the people living in these border and coastal areas.

OVERVIEW	LEARNING OBJECTIVES
The subject will be covered in the following parts:- (a) Part-I Security Set Up and Management of Land Borders (b) Part-II Security Set Up and Management of Maritime Borders (c) Part- III Security Set Up and Management of Indian Air Space Stations	➢ Security Set Up and Management of Land Borders ➢ Security Set Up and Management of Maritime Borders ➢ Security Setup and Management of Indian Air Space Stations

PART I : SECURITY SET UP AND MANAGEMENT OF LAND AREAS

2. **Different Types of Borders**. Given the difference in the status of the IB, LC, AGPL, LAC etc there is a slight difference in the management of these lines.

(a) **IB**. International Border (IB) is the line that neighbouring countries and the rest of the world recognises. These are well demarcated and mutually acceptable boundary between two countries. The most common way of demarcation is to place Border Pillars which are generally numbered and placed at regular intervals.

(b) **LC**. The term Line of Control (LC or LoC) refers to the military control line between the Indian and Pakistan occupied parts of the former princely state of Jammu and Kashmir (PoK). It is a line which at international level does not constitute a legally recognized international boundary. Originally known as the Cease-fire Line (an outcome of the first Indo-Pak War in 1947-48), it was re-designated as the "Line of Control" following the Shimla Agreement signed on 2 Jul 1972 after the Pak forces surrendered to Indian forces on 16 Dec 1971 marking the end of second Indo-Pak War. The part of the former princely state that is under Indian control is now known as the UT of Jammu and Kashmir and UT of Ladakh. The Pakistan-controlled part is

divided into Pakistan Occupied Kashmir and Gilgit- Baltistan. The LoC is approximately 740 Kms long.

(c) **AGPL**. The Actual Ground Position Line (AGPL) is the line that divides current positions of Indian and Pakistani troops in the Siachen Glacier region. The line extends from the northernmost point of the LC (Line of Control) i.e. Point NJ 9842 running northwards to Indira Col. AGPL is approximately 110 kilometres long. Siachen Glacier is known as the highest battle field of the world. world.

(d) **LAC**. Mac Mohan Line was a broad line drawn on a map India ratified in the Shimla Agreement (Oct 1913 to Jul 1914) by the independent State of Tibet and Great Britain to demarcated boundary between Tibet and NE Region. Post annexation of Tibet by China, the Chinese government started reneging on the Mac Mohan Line and her stand has remained ambiguous ever since, thus creating many areas of disagreement and disputes. After years of negotiations India and China have adopted a new term called Line of Actual Control (LAC) which is now a broad demarcation line that separates Indian territory from Chinese controlled territory of Tibet. There has been a military conflict in 1962 between the two countries and later some border skirmishes due to the unresolved boundary issue. These include Sino-Indian War of 1962, the Cho La incident in 1967, the 1987 Sino-Indian skirmish, the 2017 Doklam stand-off along Sino- Bhutan Border and the 2020 Galwan Valley incident. The LAC is approximately 3488 kilometres long.

Management of Land Borders

3. A 'Group of Ministers' was formed in Apr 2000 to analyse the issues leading to the Kargil conflict and address the need for effective border management. As a result, the Department of Border Management was established in January 2004. This department was created to focus on managing land borders and coastlines, strengthening border security and guarding territorial integrity, developing border infrastructure such as roads, fencing, and floodlighting, and implementing the Border Area Development Programme (BADP). To enhance border security and infrastructure, several initiatives have been undertaken by the Department of Border Management, including:

(a) **Border Infrastructure Development.** Expeditious construction of fencing, floodlighting, and roads along the Indo-Pakistan and Indo-Bangladesh borders. Development of Integrated Check Posts (ICPs) at strategic locations along international borders and construction of strategic roads along the India-China, Indo-Nepal, and Indo-Bhutan borders.

(b) **Border Guarding Forces.** In line with the "**One Border, One Border Guarding Force**" policy, specific forces were assigned to secure different borders. The Border Security Force (BSF) guards the borders with Bangladesh and Pakistan. (only International Borders). The Indo-Tibetan Border Police (ITBP) secure the border with China. The Sashastra Seema Bal (SSB) protects the borders with Nepal and Bhutan. The Assam Rifles (AR) manages the border with Myanmar.

(c) **Military Deployment.** In critical areas where the IB does not exist (areas having LoC, LAC or AGPL), CAPF, namely BSF and ITBP are deployed alongside the Indian Army in border management role. In these areas the Indian Army has the primary responsibility of guarding of the border areas and providing requisite security infrastructure.

(d) **Other Agencies.** Customs, Local police, Intelligence Bureau, civil administration and various youth organizations such as NCC, Scouts, NSS etc also play important role in the border management at local level.

4. **Physical Means of Securing Borders**. Various means of securing the Borders are:-

(a) **BOPs**. To house border guarding personnel, to send regular patrols and to interact with the nearby villages, border out posts (BOP) have been set up all along the borders. Presently, the India-Pakistan border has 609 BOPs, Indo-Nepal border 436 BOPs, Indo-Bhutan border 127 BOPs and the Bangladesh border 802 BOPs. Ideal inter BOP distance is recommended to be 2.5 km.

(b) **COBs**. Along the Indo-Myanmar Border, Assam Rifles are deployed in Company Operating Bases (COB) and not as per the BOP system. The companies are deployed on all routes of ingress/egress and are responsible to check infiltration, smuggling of arms, ammunition, drugs, fake currency notes, etc.

(c) **Integrated Check Posts (ICP)**. As part of efforts to improve the infrastructure at border checkpoints, India is developing Integrated Check- Posts (ICPs). An ICP is likely to house all regulatory agencies, such as immigration, customs and border security. It will be a post along two international borders which will facilitate cross border trade and movement of people more efficiently and smoothly.

(d) **Flag Meetings**. A flag meeting is basically a meeting that is held at the border or on the Line of Control or LAC by commanders on both sides, to resolve local issues. A flag meeting could be held at the local or higher level depending upon the issue under consideration. These meetings are held at regular pre-arranged intervals; however, a special flag meeting is also organised when required.

(e) **Surveillance**. Foot/ Vehicle Mounted Patrols are done by the security forces on a 24X7 basis for surveillance of the borders aided by electro-optical surveillance devices to ensure its safety and security. In crucial areas, physical barriers like Border fence having been erected for additional security.

Anti-Infiltration Obstacle System (Border Fencing)

5. The Anti-Infiltration Obstacle System (AIOS) is an advanced electrified fencing system designed by the Indian Army to safeguard the Line of Control (LoC) as well as preselected areas of IB on Western as well as Eastern borders. It incorporates floodlights, surveillance devices, and other specialised equipment to deter illegal activities such as infiltration, cross-border terrorism, smuggling of arms, ammunition, contraband, narcotics, and counterfeit Indian currency as well as human trafficking. The barrier consists of double-layered fencing combined with razor-edged concertina wires, standing at a height of 8 to 12 feet. This electrified structure is connected to a network of motion detectors, thermal imaging cameras, floodlights, and alarm systems, which provide ‘rapid alert signals’ to security forces. These signals enable swift action to intercept and neutralize infiltrators attempting to breach the boundary.

6. The AIOS is continually upgraded with modern "smart" technologies, including the Border Surveillance System (BOSS), laser fencing, and short-range surveillance equipment. Currently, the AIOS is being replaced by a "Smart Fence," which features enhanced surveillance capabilities, advanced sensors, and improved resilience to withstand heavy snowfall in higher altitudes. Additional measures such as drones, night vision devices, ground-based short-range radars, and ground sensors have been integrated to further bolster surveillance and ensure near-total prevention of breaches.

Borders without AIOS (Border Fencing)

7. India shares unfenced borders with China, Nepal and Bhutan, each presenting unique challenges and historical contexts.

(a) **China.** In the absence of a mutually agreed to and well defined IB or LAC, no Border fencing on the LAC has been constructed as of date to ensure that the regional sensitivities are not disturbed. Concerted efforts by all stakeholders have been there to arrive at a mutually agreed arrangement at the earliest.

(b) **Nepal.** The India-Nepal border spans approximately 1,751 kilometres, traversing five Indian states: Uttarakhand, Uttar Pradesh, Bihar, West Bengal, and Sikkim. Uttar Pradesh shares the longest segment at 651 kilometres, while West Bengal has the shortest at 96 kilometres. This boundary, originally established under the 1816 Sugauli Treaty between Nepal and the British Raj, was recognised as an international border following India's independence. India and Nepal maintain close ties rooted in shared cultural, religious, and linguistic heritage. Communities residing near the Indo-Nepal border often share historical and familial connections. Whilst some results in the form of Confidence Building Measure have been achieved, however owing to complexity of the issues and regional dynamic the matter is yet to get resolved. The border features eight major crossing points, managed by Indian Integrated Check Posts (ICPs), which facilitate cargo movement, customs processing, and immigration for third-country nationals. Key ICP locations include Banbasa (Uttarakhand), Raxaul, Bhitthamore, and Jogbani (Bihar), Sonauli, Rupaidiha, and Taulihawa (Uttar Pradesh), and Panitanki (West Bengal).

(c) **Bhutan.** The 699-kilometre-long India-Bhutan border runs through four Indian states: Sikkim (32 km), West Bengal (183 km), Assam (267 km), and Arunachal Pradesh (217 km). Following India's independence in 1947, a 1949 treaty recognised Bhutan's sovereignty. This arrangement was revised between 1973 and 1984 during a series of negotiations to resolve minor border disputes, particularly in Arunachal

Pradesh and the Sarbhang-Geylegphug region. A final demarcation treaty was signed in 2006. In 2007, a new Treaty of Friendship and Cooperation was enacted, which today guides our relations with Bhutan.

Role of Indian Army

8. The Indian Army, one of the largest standing armies in the world, plays a pivotal role in maintaining the sovereignty and security of India. This is especially evident in its operations along the nation's borders, which stretch across varied terrains and challenging climates. With neighbours like Pakistan, China, Nepal, Bhutan, Myanmar, and Bangladesh, India faces a complex security environment. The Indian Army's responsibilities in these regions go beyond traditional warfare, encompassing a wide array of tasks to ensure stability and peace:

(a) **Defending Sovereignty and Preventing Infiltration.** One of the primary roles of the Indian Army in border areas is to defend the country's territorial integrity. India shares disputed borders, such as the Line of Control (LoC) with Pakistan and the Line of Actual Control (LAC) with China. These regions are often prone to ceasefire violations, cross-border shelling, and incursions. To counter these threats, the Indian Army maintains a high state of alertness, deploying troops and advanced surveillance systems. The use of technologies like drones, thermal imaging, and radar systems enhances the army's ability to detect and prevent infiltration by hostile forces and terrorists, especially in inaccessible areas. For instance, in Jammu and Kashmir, the army's operations are crucial in thwarting terrorist activities.

(b) **Counterinsurgency and Anti-Terrorism Operations.** Border areas like Jammu and Kashmir and parts of the northeastern states such as Nagaland, Manipur, and Assam have witnessed insurgency and terrorism. The Indian Army plays a dual role here: combating insurgents while also fostering a sense of security among local populations. Specialised units like the Rashtriya Rifles and Assam Rifles are instrumental in these operations. The army's counterinsurgency strategies involve intelligence gathering, targeted strikes, and coordination with local law enforcement

agencies. These measures not only neutralise threats but also prevent the spread of extremist ideologies in sensitive regions.

(c) **Building Infrastructure in Remote Areas.** The Indian Army significantly contributes to the development of border areas by constructing and maintaining infrastructure. Roads, bridges, and airstrips built by the Border Roads Organisation (BRO), a subsidiary of the Indian Army, facilitate the movement of troops and supplies. These projects also boost local economies and improve connectivity for remote communities. Such infrastructure projects are essential not only for military logistics but also for fostering the development and integration of border areas with the rest of the country.

(d) **Humanitarian Assistance and Disaster Relief (HADR).** In border areas prone to natural disasters, such as earthquakes, floods, and avalanches, the Indian Army often serves as the first responder. Its expertise in logistics, engineering, and medical aid ensures timely relief and rescue operations. Moreover, the army conducts regular medical camps, distributes essential supplies, and supports local communities during harsh winters and other adversities. Such efforts build trust and strengthen the bond between the army and local populations.

(e) **Maintaining Peace and Stability.** In regions affected by ethnic tensions and cross-border influences, the Indian Army's presence is a stabilising factor. Patrols, surveillance, and intelligence-sharing with local authorities deter criminal activities, including smuggling, trafficking, and illegal migration. The army's efforts help maintain law and order in areas where civilian governance faces challenges.

(f) **Enhancing International Relations.** Through joint military exercises and border personnel meetings, the Indian Army fosters better relations with neighbouring countries. These initiatives promote confidence-building measures and reduce the risk of conflicts. For example, regular interactions with the Chinese People's Liberation Army (PLA) at designated border points aim to prevent misunderstandings along the LAC.

PART II : SECURITY SET UP AND MANAGEMENT OF MARITIME BORDERS

9. **Coastal Security Organisation**. The coastal security organisation of the country was revamped in year 2009, post Mumbai terror attack. Various initiatives were put in place by Government of India (GoI), both at central and state level to ensure a vibrant coastal security organisation in order to ensure full proof security setup, A national committee on strengthening maritime and coastal security (NCSMCS) headed by cabinet secretary was created at GoI level. Similarly, an APEX committee on coastal security at state levels was formulated, controlled by FOC-in-Csof all Naval commands also known as C-in-C

Coastal Defence (towards coastal security) with chief secretary of all states.

10. **Various Stake Holders in Coastal Security**. The sphere of activities in the maritime environment is vast and the following agencies are the stake holders in Coastal security of country: -

(a) Indian Navy.

(b) Coast Guard.

(c) State Marine Police.

(d) Customs.

(e) Fishers.

(f) Port authorities.

(g) Central and state Government departments.

11. India's maritime borders are safeguarded by the Indian Navy and the Indian Coast Guard. These forces have significantly enhanced their capabilities to address irregular and asymmetric challenges. Coordination has been strengthened through multi-agency exercises such as **Sagar Kavach**, which has improved inter-agency collaboration. A notable achievement has been the substantial strengthening of the Indian Coast Guard's assets in recent years. These developments have bolstered the country's ability to secure its maritime borders and address emerging security challenges effectively.

12. The Indian Navy and the Indian Coast Guard (ICG) are tasked with safeguarding India's maritime interests and maintaining security, safety, and sustainability in coastal regions. The key responsibilities includes:

(a) **Maritime Security.** Protecting India's maritime resources, such as offshore oil fields, fishing zones, and mineral deposits. Enforcing maritime laws against illegal activities, including poaching, smuggling, and narcotics trafficking

(b) **Search and Rescue (SAR).** Assisting mariners and fishermen in distress to ensure the safety of life and property at sea. Coordinating SAR missions and collaborating with state governments for effective operations.

(c) **Marine Environment Protection.** Preserving the marine ecosystem and protecting endangered species. Ensuring the sustainability of the fragile coastal environment

(d) **International Cooperation.** Partnering with other nations to promote maritime safety and security. Patrolling Sea Lines of Communication (SLOCs) and conducting port visits to foster international collaboration.

(e) **Scientific Data Collection.** Gathering marine scientific data for research and analysis.

(f) **Boarding Operations.** Inspecting vessels for compliance with maritime regulations and detecting illegal activities.

(g) **Support to the Navy.** Assisting the Indian Navy during conflicts and war-like situations.

(h) **Community Interaction.** Organising Community Interaction Programmes (CIPs) to educate fishermen on safety protocols and the maintenance of boats and fishing equipment.

Role of Indian Navy In Border/ Coastal Area Management

13. The Indian Navy plays a vital role in safeguarding India's maritime interests along its extensive coastline, which spans over 7,500 kilometres and includes the Andaman and Nicobar Islands and the Lakshadweep Islands. As a key component of India's armed forces, the Navy ensures the protection of the nation's coastal areas, economic zones, and sea-lanes. Its responsibilities are not confined to conventional defence; they also encompass a variety of tasks crucial for national security and development.

(a) **Coastal Defence and Security.** The primary role of the Indian Navy in coastal areas is to protect the country from maritime threats. This includes safeguarding against potential attacks from hostile forces, piracy, and smuggling activities. To bolster coastal security, the Indian Coast Guard, Marine Police and other agencies works in tandem with the Indian Navy. It conducts regular patrolling and surveillance using advanced ships, submarines, and aircraft. The Navy's Information Management and Analysis Centre (IMAC) play a critical role in monitoring maritime activities. This centre consolidates data from coastal radar networks, ships, and other sources to maintain real-time awareness of India's coastal waters, ensuring swift responses to any suspicious activity

(b) **Protection of Economic Assets.** India's coastline is dotted with vital economic infrastructure, including ports, shipyards, and offshore oil rigs. The Indian

Navy ensures the security of these assets, which are crucial for trade and energy supply. It also protects the country's Exclusive Economic Zone (EEZ), which is rich in marine resources and extends up to 200 nautical miles from the coast. Naval patrols and operations deter illegal fishing, poaching, and exploitation of undersea resources.

(c) **Humanitarian Assistance and Disaster Relief (HADR).** The Indian Navy's role in coastal areas extends to providing humanitarian assistance and disaster relief during emergencies. Coastal regions are often prone to cyclones, tsunamis, and floods. The Navy's quick response capabilities, equipped with ships, helicopters, and medical teams, have saved countless lives and provided critical aid in disaster-stricken areas. For example, during the 2004 Indian Ocean tsunami and Cyclone Tauktae in 2021, the Navy played a pivotal role in rescue and relief operations.

(d) **Environmental Protection and Maritime Conservation.** The Navy is also involved in safeguarding the maritime environment. It supports efforts to prevent marine pollution and assists in operations to clean up oil spills and other ecological hazards. Through initiatives like the 'Green Navy' program, the Indian Navy promotes sustainable practices and aims to minimise its environmental footprint.

(e) **Collaboration and Capacity Building.** The Indian Navy collaborates with regional and international partners to ensure maritime security in coastal areas. Joint exercises, capacity-building programs, and sharing of technology strengthen coastal defence capabilities. These efforts not only protect India's interests but also contribute to stability in the Indian Ocean region.

14. **Role of other Agencies towards Coastal Security.** The role of various agencies involved in coastal security is enunciated below: -

(a) **Coastal Marine Police.** The State marine police is also called coastal security group (CSG) headed by ADGP rank officer from police. ICG provides necessary training and administrative and supportive to marine police on regular basis. Marine police maintains a vigil on the beaches, fishing hamlets and in inland waters along the coast of India.

(b) **Regional Coastal Security Ops Centre (RCSOC).** RCSOC are set up at Ops centres of Regional Headquarters of ICG. All inputs related to coastal security

operations are analysed at these centres for coordination amongst all agencies involved in coastal security within territorial waters.

(c) **Joint operations Centre (JOC)**. Joint Operation Centres (JOC) are set up at Headquarters of all Naval Commands. The JOC is jointly manned and operated by Navy and Coast Guard. It mainly co-ordinates coastal security network with all stake holders.

15. **Operational Philosophy.** The Maritime agencies ensure security of maritime assets in Indian EEZ with special focus to ODAs (Offshore Development Assets) and maritime boundary areas with our maritime neighbours. The vulnerable areas & points which include ODA, IMBL (international Maritime Boarder Line), industrial hubs, tourist centres, atomic installations, Defence setup, creek areas and island territories are considered critical areas to guard, demanding concentration of efforts of the security agencies.

16. **Tiered Security Mechanism-Zones of Responsibility**. For coastal security purpose, following a three-tiered security mechanism for coastal surveillance:-

(a) **Base line up to 12 NM**. To be patrolled by Coastal Marine Police, Customs, CISF and other security agencies available for coastal security.

(b) **Base line up to 200 NM.** To be patrolled by Indian Coast Guard including the area for Coastal Marine Police, Customs and CISF.

(c) **Beyond 200 NM.** To be patrolled by Indian Navy.

PART III : SECURITY SET UP AND MANAGEMENT OF INDIAN AIR SPACE STATIONS

17. India's aerial sovereignty means controlling and protecting the airspace above its land and territorial waters. This is done to keep the country safe, manage air traffic, and ensure no unauthorized aircraft enter the airspace. Airspace is like an invisible zone above India where planes, drones, and other flying objects travel. Every country makes rules to make sure this space is used safely and securely and their aerial sovereignty is not compromised. India must protect its airspace to:

(a) Keep the country safe from enemy aircraft or drones

(b) Prevent airplane accidents

(c) Make sure only approved flights enter Indian airspace

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19. India's aerial space security management involves a comprehensive network of civilian and military agencies, including the DGCA for civil aviation, AAI for air traffic control, and the IAF for air defence. The Indian Air Space is divided into Six Air Défense Identification Zones (ADIZs) to monitor and control air traffic. It is supported by the Integrated Air Command and Control System (IACCS) which is a networked air defence which is governed by strict regulations for all aircraft operating within Indian airspace.

20. Several important agencies work together to manage and protect India's airspace:

(a) **Indian Air Force (IAF).**

- Guards the skies using radars, satellites, and fighter jets
- Watches for suspicious aircraft and takes action if needed
- Operates a special system called **IACCS** to track and respond to threats

(b) **Airports Authority of India (AAI).**

- Controls air traffic — like sky traffic police
- Guides planes safely during take-off, flight, and landing using **Air Traffic Control (ATC)**

(c) **Directorate General of Civil Aviation (DGCA).**

- Makes safety rules for airlines and pilots
- Gives flying licenses and checks if rules are followed.

(d) **Bureau of Civil Aviation Security (BCAS).**

- Sets airport and airline security rules
- Protects air travel from threats like terrorism

(e) **Ministry of Civil Aviation.**

- Oversees AAI, DGCA, and BCAS.

(f) **National Security Guard.** It is an elite organization manned by Army and CAPF and has a primary task of carrying out anti hijacking operations.

21. India has created **six Air defence Identification Zones (ADIZs)**. Any aircraft entering these zones must follow strict rules and identify itself. If it doesn't, the IAF can send aircraft to investigate or intercept. Also, as discussed earlier India uses the **Integrated Air Command and Control System (IACCS)**, a network of radars and computers that tracks all aircraft and helps in identifying aircrafts and facilitate earliest and effective response by IAF. With growing numbers of airplanes, drones, and flying machines in the sky, managing airspace is getting harder. Therefore, there is a need of continuous improvement its technology, assets and infrastructure as well as well trained staff to make sure that our skies remain safe.

CONCLUSION

22. India, with its diverse geography and strategic location, shares borders with several nations, each presenting unique challenges and opportunities. Border security is of paramount importance to safeguard the sovereignty, integrity, and stability of the nation. Effective border security ensures national safety, deters infiltration, and protects against potential threats, including terrorism, smuggling, and illegal migration. India's borders span vast terrains, from the icy heights of the Himalayas to the deserts of Rajasthan and the dense forests of the Northeast. The diversity of these landscapes makes surveillance and defence challenging but critical. A well-secured border prevents unauthorised access and serves as the first line of defence against adversarial forces. It ensures peace and stability in border regions, fostering development and reducing the risk of local unrest. Border security is also essential for economic reasons. Illegal cross-border trade and smuggling can destabilise local economies and undermine national revenue. By curbing such activities, border management contributes to the country's financial health. Additionally, well-guarded borders enhance India's global standing by projecting strength and resilience, essential in maintaining diplomatic relations and regional stability. With over 90% of India's trade relying on sea routes and 80% of its hydrocarbon needs being sea-borne, ensuring the security of maritime trade is crucial. It can be concluded that robust border security is not just a military necessity but a comprehensive approach to ensure national prosperity, safety and peace.

SUMMARY

- Various Indian security forces have been made responsible for effective border management of the vast land, air and maritime borders of India.
- These security forces not only guard the border but are equally instrumental in the socio-economic upliftment and infrastructural development of these areas
- The Department of Border Management in conjunction with the central and state agencies conducts various programmes to address the needs of the resident populace.
- To stymie terrorist infiltration from across the border, Anti-Infiltration Obstacle System (Border Fencing) was introduced; and proved very effective. But due to topographical compulsions, some gaps did exist. These were Borders sans AIOS (Fencing); and had to be plugged employing various innovative techniques by the concerned border guarding forces. Any fence/ boundary can only serve its purpose if it is kept under effective surveillance. This necessitated incorporation of various state of art surveillance devices in the system.

ASSESSMENT EXERCISE

Multiple Choice Questions

Q1. BOSS is the acronym for?

(a) Blue Surveillance System

(b) Board Surveillance System

(c) Border Surveillance System

(d) Broadband Surveillance System

Q2. The oldest of the paramilitary forces is?

(a) Assam Rifles

(b) ITBP

(c) CRPF

(d) BSF

Q3. The _____ is responsible for protecting our maritime Borders.

(a) Indian Coast Guard

(b) CISF

(c) ITBP

(d) BRO.

Q4. AAI is the acronym for?

(a) Air Authority of India

(b) Airports Authority of India.

(c) Administration Authority of India

(d) None of the above.

Q5. The _____ refers to the military control line between India and Pakistan.

(a) LC

(b) LoC

(c) Both LC and LoC

(d) None of the above

Q6. AGPL stands for?

(a) Actual Ground Position Line

(b) Active Greater Protection Line

(c) Actual Greater Position Line

(d) None of the above

Q7. The ITBP guards our borders with _____?

(a) Myanmar

(b) Bangladesh

(c) Pakistan

(d) China

Q8. What is the length of LC or LoC?

(a) 700 km.

(b) 778 km.

(c) 740 km.

(d) 800 km.

Q9. _____ is the equipment which has been used by security forces for surveillance of inaccessible areas.

(a) Flying Border Outposts

(b) Drone

(c) AIOS

(d) Laser walls

Q10. Indian Borders which are not fenced include borders with _____, _____ and_____.

(a) Nepal, Bhutan, Myanmar

(b) Nepal, Bhutan, Bangladesh

(c) Bhutan, Myanmar, Bangladesh

(d) Bangladesh, Nepal, Myanmar

Q11. Which is the special security force created to guard against hijack of our aircrafts.

(a) IAF

(b) BSF.

(c) NSG

(d) ITBP.

Q12. What is the full form of AIOS?

(a) Armed Inter Obstacle System

(b) Anti-Infiltration Obstacle System

(c) Anti-Immigration Online System

(d) All India Observation System

Short Answer Questions.

Q1. Discuss the Anti-Infiltration Obstacle System (AIOS) designed by the Indian Army.

Q2. Describe the role of technology in the surveillance of India's borders.

Q3. Describe the key responsibilities of the Indian Coast Guard (ICG).

Q4. Define concept of 'One Border, Once Force' in the management of India's borders.

Long Answer Questions.

Q1. There are a few stretches of the border where the Indian Army is deployed in a border guarding role. Why?

Q2. Where are the eight major border crossings that the Indian Integrated Check Posts (ICP) use for processing cargo, customs and immigration entry for citizens of third countries on the Indo-Nepal border?

Map Exercise

Q1. In the adjoining map of India, mark the borders guarded by:-

(a) BSF

(b) SSB.

(c) Assam Rifles.

(d) ITBP.

(e) Indian Coast Guards.

Q2. Mark the areas where Indian Army is deployed in providing security to our borders.

Q3. Mark the location of the headquarters of the following.

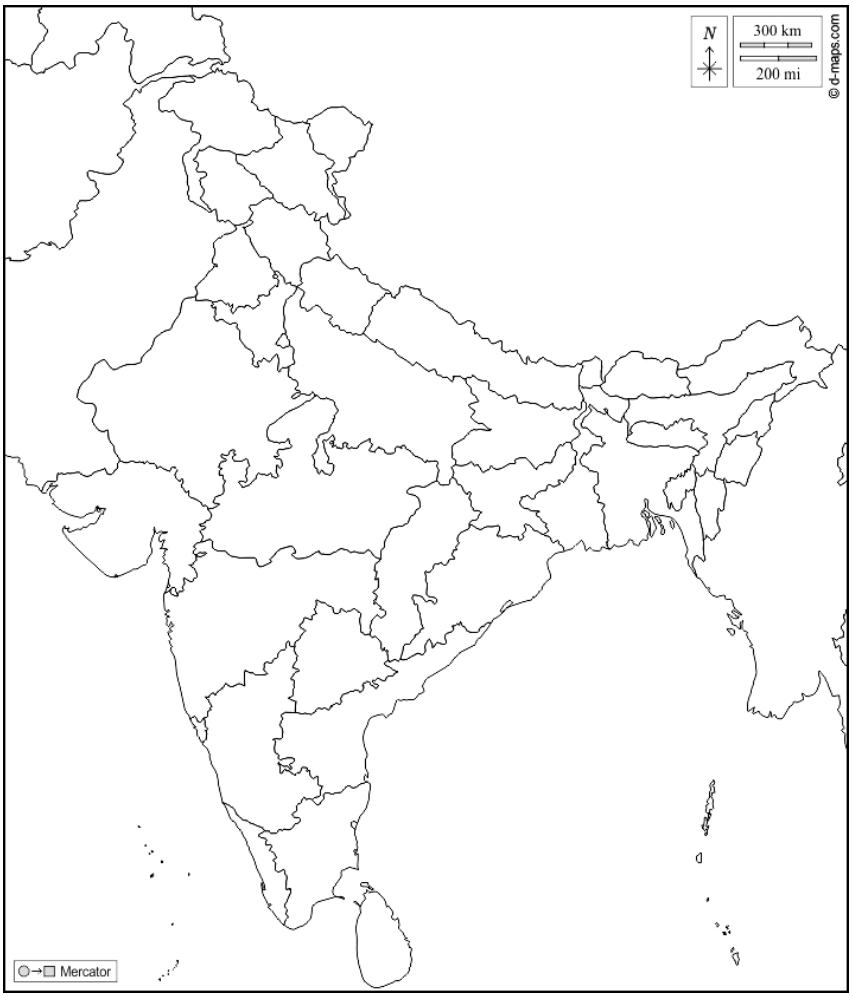
(a) Indian Army.

(b) Indian Navy

(c) Indian Coastguards

(d) BSF

(e) Assam Rifles



BCA III (SD/SW)

CHAPTER III: SECURITY CHALLENGES & ROLE OF NCC CDTS IN BORDER/ COASTAL AREA MANAGEMENT

"A 'Yes man' is a dangerous man."

Sam Manekshaw

TEACHING INSTRUCTIONS

Period(s)	**:**	**02**
Type	**:**	**Lecture**
Year	**:**	**SD/SW (Third Year)**
Training Aids	**:**	**Power Point Presentation, Map of India**

Time-plan:

- Introduction : 02 mins
- The Security Challenges in Border Areas. : 20 mins
- The Security Challenges in Coastal Areas. : 20 mins
- Infrastructure Development in Border Areas. : 08 mins
- Role of NCC Cadets in Border Areas. : 25 mins
- Conclusion : 05 mins

INTRODUCTION

1. India, with its vast geographical expanse and diverse terrain, shares borders with several nations and has an extensive coastline, making it uniquely vulnerable to a range of security challenges. These challenges encompass cross-border infiltration, smuggling, illegal immigration, maritime piracy, and threats from anti-national elements. Ensuring the safety and security of these critical regions demands robust management and a multi-agency approach. The National Cadet Corps (NCC), with its widespread presence, disciplined structure, and youth-oriented training, plays a significant role in addressing these challenges. By integrating NCC cadets into border and coastal security frameworks, India can leverage their skills and patriotism to enhance surveillance, promote social harmony, and support humanitarian efforts, thereby contributing to national security and development

OVERVIEW

The subject will be covered in the following parts:-

(a) Part I : The Security Challenges in Border Areas.

(b) Part II : The Security Challenges in Coastal Areas.

(c) Part III : Infrastructure development in Border Areas.

(e) Part IV : Role of NCC cadets in Border and Coastal Areas.

LEARNING OBJECTIVES

To understand

- The Security Challenges in Border Areas.
- The Security Challenges in Coastal Areas.
- Infrastructure development in Border Areas.
- Role of the NCC Cadets in Border Coastal Areas.

PART I : THE SECURITY CHALLENGES FACED IN BORDER AREAS

2. The persistence of security threats highlights several systemic inadequacies that demand immediate attention and resolution. These challenges are elaborated upon below:

(a) **Border Skirmishes.** The India-China border has been a long-standing point of contention, marked by a series of confrontations. Following border skirmishes between 1959 and 1962, the Chinese People's Liberation Army (PLA) launched a significant offensive on October 20, 1962. Although the Chinese unilaterally declared a

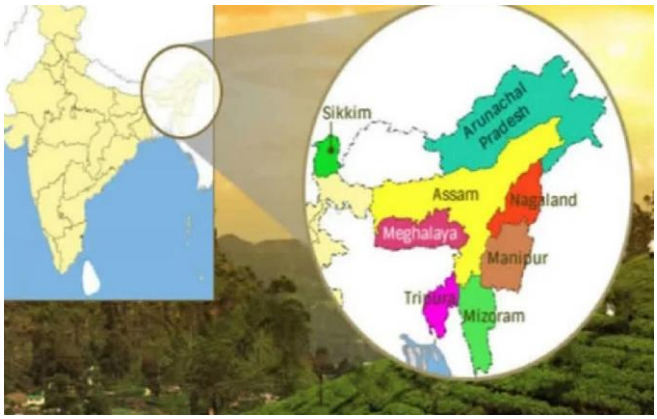
ceasefire on November 20, 1962, and withdrew from most of the captured territory, they retained control of approximately 38,000 square kilometres in Aksai Chin, a region that remains disputed. In recent years, tensions have re-emerged, particularly in Ladakh along the Line of Actual Control (LAC). In May 2020, multiple skirmishes culminated in a violent clash on June 15-16, resulting in casualties on both sides. The security forces have maintained a heightened level of proactive measures; however, efforts are on to resolve the issue amicable. The border between India and Pakistan, particularly along the Line of Control (LoC) in Jammu and Kashmir, has been a persistent flashpoint for tensions and skirmishes since the two nations gained independence in 1947. These conflicts are often triggered by cross-border firing, infiltration attempts by terrorists, or retaliatory strikes. Skirmishes frequently lead to civilian and military casualties, displacement of local populations, and heightened hostility, disrupting the peace and progress of the aera. Despite several ceasefire agreements, including the most recent reaffirmation in February 2021, violations continue to occur, undermining peace efforts and regional stability. Border skirmishes between India and Bangladesh are relatively infrequent compared to other borders but occasionally occur due to disputes over territory, smuggling, illegal migration, and local tensions. Historical disputes, such as the enclave and adverse possession issues, have largely been resolved through agreements like the 2015 Land Boundary Agreement. However, occasional clashes between India's Border Security Force (BSF) and Bangladesh's Border Guard Bangladesh (BGB) arise, often over inadvertent trespassing or anti-smuggling operations.

(b) **Cross-Border Terrorism.** Cross-border terrorism in the union territory of Jammu and Kashmir (J&K) has been a persistent and complex issue, significantly impacting the region's security, development, and human lives. This phenomenon primarily stems from terrorist groups operating across the border, with active support from state and non-state actors in neighbouring Pakistan as well as Pak Occupied Kashmir. These groups infiltrate the Line of Control (LoC) with the intent to destabilise J&K, targeting civilians, security forces, and infrastructure. The roots of this issue date back to the partition of India in 1947 and the subsequent issue highlighting the innate desire of our Western neighbours to dominate and get the erstwhile state of J&K under their control. Pakistan's strategic objective to challenge India's sovereignty over J&K has led to the sponsorship of terrorism as a low-cost proxy war strategy. Over the

decades, groups like Lashkar-e-Taiba (LeT), Jaish-e-Mohammed (JeM), and Hizbul Mujahideen have been involved in orchestrating terror attacks, recruiting local youth, and spreading propaganda. These organisations exploit local grievances, including unemployment and political discontent, to further their agenda by creating a sectarian divide. The impact of cross-border terrorism has been profound. Thousands of lives have been lost due to terrorist violence, while many have been displaced, leading to a humanitarian crisis. The economic toll is also significant, as frequent attacks and instability deter investment, disrupt daily life, and weaken the region's potential for growth. Tourism, once a lifeline for J&K's economy, has been severely affected by the perception of insecurity. India has responded to cross-border terrorism with a combination of military, diplomatic, and developmental strategies. Security forces have intensified counterinsurgency operations, employing advanced surveillance technology and modernised tactics to curb infiltration and neutralise terrorists. On the international front, India has worked to isolate Pakistan diplomatically by exposing its role in supporting terrorism. Developmental initiatives also play a key role in addressing the root causes of local alienation. Programs aimed at improving infrastructure, education, and employment opportunities are designed to integrate the region with the national mainstream and reduce susceptibility to extremist influences. Despite these efforts, challenges remain. The porous nature of the LoC, the ever-changing tactics of terror groups, and the availability of foreign aid and support including modern weaponry complicate counter-terrorism operations. Moreover, misinformation campaigns and radicalisation via social media platforms have added a new dimension to the problem. To achieve lasting peace in J&K, a multi-pronged approach is essential. This includes enhancing border security, strengthening international cooperation against terrorism, and fostering dialogue to address political and social grievances. Resolving the issue of cross-border terrorism is not just critical for J&K's stability but also for regional peace and global security.

(c) **Insurgent Activities in Northeast India and Along the India-Myanmar Border.** The northeastern region of India, comprising eight states, has been a hotspot for insurgent activities for decades. This unrest stems from a complex interplay of ethnic, political, economic, and geographical factors. Insurgencies in this

region often revolve around demands for greater autonomy, secession, or control over local resources. The situation is further complicated by the proximity to international borders, particularly with Myanmar, which serves as a haven for several insurgent groups. Ethnic diversity in Northeast India is immense, with hundreds of tribes and communities, each with distinct cultural identities. The perceived neglect by authorities, combined with economic underdevelopment and competition for resources, has fuelled grievances. Groups such as the National Socialist Council of Nagalim (NSCN), United Liberation Front of Assam (ULFA), and various Bodo, Kuki, and Meitei factions have engaged in insurgent activities, including armed conflict, extortion, and attacks on civilians and security forces. The porous India-Myanmar border, spanning over 1,600 kilometres, plays a significant role in sustaining these insurgencies. Dense forests, rugged terrain and limited infrastructure make this border difficult to monitor, allowing insurgent groups to establish bases, smuggle arms, and recruit cadres across the border. The impact of insurgencies in Northeast India has been profound. Thousands of lives have been lost, and many more have been displaced. The region's economic development has been severely hampered by frequent insurgent engineered disruptions like strikes, blockades and violence. Infrastructure projects, crucial for the integration and growth of the region, are often delayed due to security concerns. Moreover, insurgent activities have fostered an atmosphere of fear, impeding social harmony and governance. India has adopted a multi-faceted approach to address insurgency in the Northeast. Military operations like Operation All Clear, conducted in coordination with Myanmar, have targeted insurgent camps along the border. Simultaneously, the government has engaged in peace talks with various groups, resulting in accords like the Bodo Accord of 2020 and the Naga Framework Agreement of 2015. Economic initiatives, such as the Act East Policy, aim to boost connectivity and development in the region, addressing the root causes of unrest. However, the slow pace of development and sporadic breakdowns in peace processes can reignite tensions. Resolving insurgency in Northeast India requires sustained efforts in border management, regional development, and political engagement. Therefore, strengthened ties with Myanmar and other neighbouring countries, coupled with a focus on inclusive growth and cultural preservation, can pave the way for lasting peace and stability in the region.



(d) **<u>Illegal Immigration and Smuggling in Eastern India</u>.** Illegal immigration and smuggling in Eastern India, particularly along the India-Bangladesh border, are pressing concerns with socio-economic, political, and security implications. The porous 4,096-kilometre-long border, marked by rivers, dense forests, and human settlements, facilitates the influx of illegal immigrants, predominantly from Bangladesh. Many of these migrants, driven by poverty, political instability, or climate change, settle in states like West Bengal, Assam, and Tripura, often creating tensions over resources, employment, and cultural identity. Smuggling of goods such as cattle, narcotics, gold, and arms is also rampant, undermining local economies and funding criminal networks. The Border Security Force (BSF) has intensified surveillance and fencing efforts, but challenges persist due to the region's geographical complexities and local complicity. To address these issues, strengthening of border management, fostering cooperation with Bangladesh, and implementation of inclusive policies that balance security concerns with humanitarian considerations.

(e) **<u>Infrastructure Deficiencies in Border Areas</u>.** India's border areas, characterised by harsh climates and remote locations, suffer from inadequate infrastructure and underdevelopment. Delays in project implementation and land acquisition have compounded the problem, affecting force deployment and surveillance capabilities. Enhanced infrastructure development is crucial for ensuring security and fostering prosperity in these regions. Infrastructure deficiencies in Indian border areas have long posed challenges to security, development, and connectivity. Remote and rugged terrains, particularly in regions like the Himalayas, the Northeast, and the deserts of Rajasthan, suffer from poor road networks, inadequate rail connectivity, and limited communication facilities. The absence of reliable infrastructure also restricts economic opportunities for local populations, leading to underdevelopment and migration. Villages near borders often lack basic amenities such as healthcare, schools, and clean drinking water, further alienating these regions from mainstream growth. Recognising these gaps, India has initiated projects such as the Bharatmala Pariyojana and schemes under the Border Area Development Programme (BADP) to improve road networks and other critical infrastructure.

PART II : SECURITY CHALLENGES IN COASTAL AREAS

3. India faces a number of threats and challenges along the coastal areas that originate from the sea and which are mainly sub-conventional in nature. These threats and challenges can be categorised under five broad categories which are enunciated in succeeding paragraphs.

4. **Maritime Terrorism**. The maritime terrorism features as the most potent threat to our country. Maritime terrorism is defined as 'the undertaking of terrorist acts and activities within the maritime environment, using or against vessels or fixed platforms at sea or in port, or against any one of their passengers or personnel, against coastal facilities or settlements, including tourist resorts, port areas and port towns or cities'.

Thus, major population centres, onshore and offshore strategic installations, commercial facilities, industrial complexes located along the coast as well as coastal waterways can be identified as high value targets for terrorist attacks. Sea based terrorism is not a new phenomenon.

5. **Piracy And Armed Robbery**. Piracy is defined as any illegal acts of violence or detention, or any act of depredation, committed for private ends by the crew or the passengers of a private ship or a private aircraft. It is directed from the high seas, against another ship or aircraft, or against persons or property on board such ship or aircraft, outside the jurisdiction of any State.

6. **Smuggling And Trafficking**. While the entire coast of the country is vulnerable to clandestine landings of contraband, the Gujarat-Maharashtra coastline, the Tamil Nadu coast, the Sunderbans in West Bengal, and the Andaman and Nicobar Islands have been particularly prone to such activities. Geographical location, peculiar terrain, and close trans-border ethnic ties have made these stretches conducive for smuggling and trafficking.

7. **Infiltration, Illegal Migration and the Refugee Influx**. India's land boundaries have always been porous to infiltration by terrorists/militants and large-scale illegal migration. These large-scale influxes over the decades have resulted in widespread political turmoil in the Border States. To prevent infiltration and large-scale illegal migration, the Indian government implemented widespread security measures, included maintaining strict vigil along the borders, the erection of fences, and the thorough checking of immigrants. The elaborate security arrangements on land forced the terrorists and illegal migrants to look towards the sea where security measures are comparatively lax, enabling them to 'move, hide and strike' with relative ease.

8. **Straying of Fishermen beyond the Maritime Boundary**. The frequent straying of fishermen into neighbouring country waters has not only jeopardised the safety of the

fishermen but has also raised national security concerns.

(a) Fishermen who trespass into a neighbour country's waters are invariably arrested along with their boats.

(b) On many occasions, they have also been fired upon by security agencies of the neighbouring country.

(c) The issue is not of an unsettled maritime boundary but the refusal of Indian fishermen to recognize the maritime boundary between India and Sri Lanka, especially in the Palk Bay.

(d) The straying of Indian fishermen into Bangladeshi waters happens mainly in the Sunderbans area. The difficult terrain and the absence of the Global Positioning System (GPS) in the fishing trawlers make it difficult for the fishermen to ascertain maritime limits.

PART III: INFRASTRUCTURE DEVELOPMENT IN BORDER AREAS

9. The Government of India has launched several initiatives and programs to enhance infrastructure, socio-economic conditions, and security in border and maritime areas. These schemes aim to strengthen the nation's territorial integrity and economic growth.

(a) **Border Area Development Programme (BADP)**. Initiated in 1987, the BADP aims to provide socio-economic and security infrastructure in border regions. This includes building essential facilities and addressing the development needs of communities residing in remote border areas.

श्रमेण सर्वम् साध्यम

Border Roads Organisation

(b) **Vibrant Villages Programme (VVP)**. Launched to promote the holistic development of villages near India's northern borders. Targets villages in 19 districts across Arunachal Pradesh, Himachal Pradesh, Sikkim, Uttarakhand, and Ladakh.

(c) **Border Infrastructure and Management (BIM) Scheme**. Focuses on infrastructure enhancement for international borders. Includes construction of fences, roads, floodlights, Border Out-Posts (BOPs), helipads, and foot tracks.

(d) **Bharatmala Pariyojana**. It aims to improve road connectivity to border areas, covers the construction of international connectivity roads to facilitate trade with Bhutan, Bangladesh, Myanmar, and Nepal and supports economic and coastal road development, integration with Sagarmala Pariyojana, and connectivity to non-major ports.

(e) **Bilateral Institutional Mechanisms**. It includes regular meetings at national and sectoral levels through the Joint Working Group on Border Management, which focuses on discussing and resolving border infrastructure development challenges.

(f) **Coastal Security Scheme (CSS)**. Strengthens security infrastructure and enhances the capabilities of police forces in coastal states. Key components include National Automatic Identification System (NAIS) for vessel tracking, Biometric ID cards for coastal fishermen and Vessel Tracking Management Systems (VTMS) for better maritime monitoring.

(g) **National Committee for Strengthening Maritime and Coastal Security (NCSMCS)**. A body chaired by the Cabinet Secretary to review and improve coastal security measures, with input from all stakeholders.

(h) **Vision SAGAR (Security and Growth for All in the Region)**. Envisions India as the Preferred Security Partner in its maritime neighbourhood and focuses on ensuring security and growth in the extended maritime region while advancing India's maritime strategy.

(i) **Sagarmala Pariyojana**. It is a mega initiative with over 400 identified projects for Port modernisation and development, Enhancement of port connectivity, Port-linked industrialisation and Coastal community development.

10. The **Border Roads Organisation (BRO)** is a specialised agency responsible for constructing and maintaining infrastructure in India’s border regions and neighbouring countries. Its contributions span national security, socio-economic development, disaster response, and strategic connectivity. Below are the key roles and responsibilities of BRO:

(a) **Infrastructure Development**. Constructs and maintains roads, bridges, tunnels, and airfields in remote and challenging terrains, enhancing connectivity in high-altitude and border areas.

(b) **Connectivity Enhancement**. Establishes all-weather road links, connecting isolated regions with the rest of the country and improving accessibility for troops, goods, and local communities, fostering national integration.

DID YOU KNOW?

- The Border Roads Organisation (BRO) was formed on 7 May 1960. It was initially established as a temporary organization; however, made permanent in 1965.
- The BRO is building the Shinkun La Tunnel, which once completed, will become the world's highest tunnel at 15,800 ft bypassing Mila Tunnel in China at 15,590 ft.

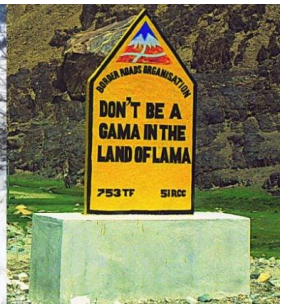
(c) **National Security**. Builds infrastructure that provides vital access to border posts and military installations, which enables rapid deployment of defence forces and ensures preparedness in sensitive border areas.

(d) **Disaster Response**. Plays a critical role in disaster relief by enabling transportation of supplies through its road and bridge networks, and is actively involved in post-disaster reconstruction efforts.

(e) **Socio-Economic Development**. Improves access to healthcare, education, and markets for remote communities. It also supports the upliftment of people living in underserved areas.

(f) **Balanced Regional Growth**. Promotes the integration of marginalised regions into the national economy and encourages economic activities and development in previously isolated areas.

(g) **Strategic Connectivity**. Develops road networks that link military and administrative centres and enhances troop mobility and vigilance in sensitive border areas.



(h) **Innovative Engineering**. Employs advanced engineering techniques to tackle challenges posed by rugged terrains and extreme weather. Delivers durable and efficient infrastructure solutions in hostile environments.

(j) **Maintenance and Repair**. Ensures the operational status of road networks by regular upkeep and timely repairs. Focuses on snow clearance and seasonal maintenance for high-altitude routes.

(k) **Logistical Support**. Provides logistical aid to defence forces, including constructing helipads and essential facilities.

(l) **Environmental Conservation**. Incorporates eco-friendly practices to reduce the environmental impact of infrastructure projects. Maintains ecological balance in sensitive regions.

PART IV : ROLE OF NCC CADETS IN BORDER AREAS

11. The National Cadet Corps (NCC), with its extensive presence across the country, can play a pivotal and constructive role in border management. An expansion of the NCC in border and coastal regions could significantly enhance the availability of trained and disciplined youth who are motivated to pursue careers in the Armed Forces or police services.

12. In border areas, the Indian Army, in collaboration with the Border Guarding Forces such as BSF, ITBP, and Assam Rifles, can train NCC cadets. Similarly, in coastal regions, the Indian Navy and Indian Coast Guard, alongside the Coastal or Marine Police, can take responsibility for training cadets. In locations where Indian Air Force (IAF) airbases are nearby, the IAF can also provide training in coordination with local police forces. These trained cadets can serve as an additional resource for handling natural or man-made disasters in border and coastal regions. Cadets can be integrated into these efforts in various capacities, as outlined below:-

(a) **Human Surveillance: The Eyes and Ears of Security Agencies.** NCC cadets can help address security and intelligence gaps in border areas. Acting as local intelligence sources and interpreters, cadets can provide crucial assistance to Border Guarding Forces, whose personnel often come from diverse regions and may lack familiarity with local dynamics. Frequent rotations within security units and inadequate documentation of intelligence trends can hinder effective surveillance. NCC cadets, being organised, trained, and familiar with the local environment, can significantly improve intelligence gathering and corroboration efforts. Key roles of NCC cadet includes, reporting suspicious activities or individuals, identifying anti-national elements (ANEs), their movements, hideouts, and frequented locations, assisting in tracking rumours and identifying underground or overground workers and their networks, acting as interpreters, guides, and translators for security forces,

supporting local area familiarization efforts for security personnel and identifying influential individuals, community leaders, and victims of terrorism or insurgency.

(b) **<u>Humanitarian Assistance During Natural or Man-Made Disasters</u>.** The National Cadet Corps (NCC) plays a vital role in providing humanitarian assistance during natural and man-made disasters in India. With their training in disaster management, first aid, and teamwork, NCC cadets have consistently demonstrated commitment and courage in aiding affected communities. Their readiness to respond during crises exemplifies the spirit of selfless service and civic responsibility. During natural disasters such as floods, cyclones, earthquakes, and landslides, NCC cadets actively assist in rescue and relief operations. They help in evacuating people from affected areas, distributing food, water, and essential supplies, and setting up temporary shelters for displaced individuals. For instance, during floods in states like Assam and Kerala, NCC cadets worked alongside disaster response teams, ensuring timely assistance to stranded communities and vulnerable populations. Their ability to navigate challenging terrains and maintain discipline under pressure makes them an invaluable resource in such situations. In the aftermath of man-made disasters, such as industrial accidents or fires, NCC cadets extend their support by aiding medical teams, managing crowd control, and providing psychological comfort to victims. Their training in first aid often proves critical in stabilising the injured until professional medical help arrives. Additionally, NCC units are frequently involved in organising blood donation drives and health camps to meet the immediate needs of disaster-stricken areas. Beyond direct relief efforts, NCC cadets contribute to disaster preparedness and awareness campaigns. They educate communities on safety measures, evacuation procedures, and environmental conservation to mitigate the impact of future disasters. Mock drills and training sessions conducted by NCC units in schools and localities enhance community resilience and readiness. The involvement of NCC cadets in disaster response reflects their dedication to nation-building and social responsibility. However, to further enhance their effectiveness, regular updates in disaster management training, access to modern equipment, and stronger coordination with state and national disaster response agencies are essential. Through their unwavering service, NCC cadets continue to embody the motto of "Unity and Discipline," making a significant difference during times of crisis.

(c) **<u>Promoting Good Governance and Civic Responsibility</u>.** The National Cadet Corps plays a pivotal role in shaping responsible citizens who actively contribute to good governance and civic responsibility. By instilling discipline, leadership qualities, and a sense of duty, NCC prepares cadets to participate meaningfully in the democratic and administrative processes of the nation_n. NCC cadets act as role models in their communities, spreading awareness about civic duties such as voting, respecting laws, and maintaining public order. Their active participation in campaigns like voter registration drives, cleanliness initiatives under the Swachh Bharat Abhiyan, and anti-corruption programs inspires others to uphold democratic values and ethical conduct. Cadets also educate citizens about their rights and responsibilities, fostering a culture of accountability and transparency. As ambassadors of good governance, NCC cadets often assist local authorities in implementing developmental schemes and addressing grievances. Their training in leadership and teamwork enables them to mediate between the administration and communities, ensuring the smooth execution of government policies. During public events and social programs, cadets contribute by managing crowds, organising activities, and promoting awareness about health, education, and environmental conservation. Additionally, NCC cadets embody the principles of inclusivity and social justice. Through activities like helping underprivileged children, supporting elderly citizens, and conducting drives to promote gender equality, they address societal challenges and advocate for equitable development. Their involvement in disaster relief operations further demonstrates their commitment to community welfare and collective well-being. NCC's structured programs, which emphasise discipline and moral values, prepare cadets to combat societal issues such as corruption, communalism, and environmental degradation. By practising and promoting ethical leadership, they contribute to building a just and progressive society. The role of NCC cadets in promoting good governance and civic responsibility extends beyond their years of active enrolment. The values and skills they acquire continue to guide their actions as citizens, making them agents of positive change. Strengthening NCC's outreach and integrating its activities with national governance initiatives can further enhance its impact, ensuring that cadets remain instrumental in fostering a culture of good governance and active citizenship in India.

(d) **<u>Community Awareness Initiatives in Underdeveloped Areas</u>.** NCC cadets play a significant role in bridging the gap between underdeveloped communities and developmental opportunities through their active involvement in community awareness initiatives. Trained in discipline, leadership, and social service, NCC cadets work as catalysts of change, spreading knowledge and empowering underprivileged sections of society to address challenges and improve their quality of life. In underdeveloped areas, where access to basic services like healthcare, education, and sanitation is limited, NCC cadets organise awareness campaigns to educate the population about critical issues. They conduct health camps, promote hygiene practices, and disseminate information about government welfare schemes. By addressing topics such as immunisation, family planning, and nutritional needs, they contribute to improving public health outcomes. Education is another key focus area. NCC cadets often engage with children in rural and tribal communities, conducting literacy drives, distributing educational materials, and motivating families to prioritise schooling. They organise workshops and seminars on career guidance, skill development, and digital literacy, equipping youth with the tools needed for self-reliance and employability. Environmental conservation forms an integral part of their community initiatives. Cadets led tree-planting drives, clean-up campaigns, and workshops on waste management and water conservation. Their efforts not only raise awareness but also encourage sustainable practices that benefit the entire community. NCC cadets also address social issues such as gender inequality, substance abuse, and discrimination. Through street plays, rallies, and interactive sessions, they challenge harmful norms and promote values of inclusivity and equality. Their ability to connect with people and communicate in local dialects helps them build trust and influence behaviour effectively. Furthermore, NCC cadets collaborate with local authorities and NGOs to strengthen

the impact of their initiatives. They serve as a link between communities and administrative agencies, ensuring that developmental programs reach the grassroots level. By empowering underprivileged populations with knowledge and resources, NCC cadets help create self-reliant communities and contribute to national development. Enhancing their training and providing them with additional resources can amplify their impact, enabling them to drive transformative change in underdeveloped areas.

(e) **Fostering Social Harmony.** NCC cadets play a critical role in fostering social harmony by promoting unity, inclusivity, and mutual respect among diverse communities. As a microcosm of India's diversity, the NCC brings together cadets from various cultural, religious, linguistic, and socio-economic backgrounds, instilling in them a deep appreciation for unity in diversity. Through their training and activities, NCC cadets become ambassadors of peace and cohesion, contributing significantly to the nation's social fabric. One of the key ways NCC cadets foster social harmony is through awareness campaigns that address divisive issues such as communalism, caste-based discrimination, and gender inequality. Through street plays, discussions, and cultural programs, they spread messages of equality, tolerance, and brotherhood. Their ability to connect with local communities helps them effectively counter stereotypes and prejudices. NCC cadets also organise and participate in events that celebrate India's cultural diversity, such as parades, festivals, and exchange programs. These initiatives create platforms for people from different backgrounds to interact and appreciate each other's traditions, building bridges of understanding and reducing mistrust. The Republic Day Camp and other national integration camps are prime examples of how NCC fosters intercultural dialogue and camaraderie among youth from across the country. In areas affected by social unrest or communal tensions, NCC cadets act as agents of peace. They assist local authorities in maintaining order, spreading awareness, and mediating conflicts. Their presence, marked by discipline and impartiality, often inspires confidence in communities and encourages dialogue over discord. Furthermore, NCC cadets engage in service-oriented activities that bring communities together for a common cause. Be it blood donation drives, environmental conservation projects, or disaster relief efforts, these activities transcend barriers and emphasise collective responsibility, fostering a spirit of cooperation and mutual support. By instilling values of unity, respect, and social responsibility, NCC cadets contribute significantly to creating a harmonious and inclusive society. Strengthening their training in conflict resolution, interfaith dialogue, and community engagement can further enhance their ability to foster social harmony and promote a cohesive national identity.

CONCLUSION

13. The varied and complicated security challenges usually faced by our border guarding forces and armed forces in the border areas are an indication of their dynamism and ingenuity in successfully meeting the challenges posed. This required the development of distinct expertise and competence for specified stretches owing to similar terrain features. This also allowed streamlining of training, equipping, and, to some extent, recruitment too; exploiting the 'sons of the soil' concept for the survival instinct and familiarity with the terrain. Thereafter, the need also arose for effective coordination between multiple agencies operating in these areas. As threats evolve, India's commitment to strengthening its border infrastructure and technology is crucial for its long-term security and development. Also, it needs to be borne in mind that securing the Border and coastal areas involves a lot of expenditure. If the expenses spent on managing security and military forces at the borders can be reduced through mutual agreement, the funds can be used for development purposes. Therefore, it will be prudent to devise a via media for reducing tensions at borders without letting the guard down, and an instilling measure for development concurrently. The National Cadet Corps serves as a transformative force in border and coastal management, leveraging its trained, disciplined, and motivated cadets to address challenges ranging from security and surveillance to disaster relief and social harmony. Their integration into these efforts not only enhances the capacity of security and administrative agencies but also instils a sense of civic duty and patriotism in the youth. The NCC’s contribution in fostering social cohesion, promoting good governance, and strengthening national integrity underscores its vital role in building a secure and united India.

SUMMARY

- The security challenges faced by our bordering guarding forces and armed forces in the border in border areas are being successfully met employing innovative and dynamic measures.
- Border Skirmishes like historical disputes in Aksai Chin and recent clashes in Ladakh along the Line of Actual Control (LAC). Persistent skirmishes along the Line of Control (LoC) due to cross-border firing, infiltration, and retaliatory strikes despite ceasefire agreements.
- Cross-Border Terrorism in Jammu and Kashmir with insurgent activities linked to Pakistan. Narco-terrorism adds to instability.
- Insurgency in Northeast India fuelled by ethnic diversity and political neglect. Insurgent groups with bases in Myanmar contribute to instability despite ceasefires and peace accords.
- Illegal Immigration and Smuggling in Northeast India due to porous borders with Bangladesh and Myanmar.
- Infrastructure Deficiencies in Border Areas due to harsh terrain and such underdevelopment hinder security measures and force deployment.
- The mercurial and volatile nature of challenges necessitated coordination between different agencies operating in the area to negate any inadvertent incident, facilitate optimal resource utilization and economy of efforts.
- The infrastructure development in border areas assumes importance, as it facilitates the logistics of the concerned border guarding force. This invariably necessitated establishment of an special agency responsible for improvement/ enhancement of road network/ infrastructure in border areas. Thus was born the Border Roads Organisation whose tasks have already been discussed in preceding paragraphs.The role of NCC Cadets in border management needs detailed deliberation and planning before employment, especially in sensitive/ disturbed areas, but depends on the ingenuity of the local commanders.
- Role of National Cadet Corps (NCC) in Border and Coastal Management includes, Human Surveillance, Disaster Management ie support humanitarian assistance and disaster relief operations, including evacuation and aid distribution, Promoting Governance and Civic Responsibility, Community Awareness Initiatives ie disseminate information about government programs and foster better community engagement and Fostering Social Harmony by encouraging mutual respect, inclusivity, and patriotism in diverse communities.

ASSESSMENT EXERCISE

Multiple Choice Questions

Q1. PLA is the acronym for?

(a) People's Liberation Army

(b) People's Litigation Army

(c) Palestine Liberation Army

(d) Punjab Liberation Army

Q2. Borders with Nepal and Bhutan are protected by which force?

(a) Shashastra Seema Bal.

(b) Indo-Tibetan Border Force

(c) Indian Coast Guard

(d) Central Reserve Police Force

Q3. SLOCs is the abbreviation of?

(a) Sri Lanka Oil Company.

(b) Singapore League of Cricket.

(c) Shipping lines of Coromandel.

(d) Sea Lanes of Communications.

Q4. _____is a persistent threat in the Indian Ocean and Arabian Sea near the Gulf of Aden off the Somalian coast. ?

(a) Smuggling

(b) Piracy

(c) Dacoity

(d) Shark Attacks

Q5. The security challenges faced in border areas are?.

(a) Cross-border terrorism

(b) Illegal immigration

(c) Smuggling

(d) All of the above

Q6. Spreading awareness is instilling a sense of_____?

(a) Sadness

(b) Happiness

(c) Consciousness

(d) Politeness

Q7. India has maritime boundaries with?

(a) Sri Lanka

(b) Afghanistan

(c) Iran

(d) Bhutan

Q8. National Socialist Council of_____ is an insurgent organisation.

(a) Nagaland

(b) Nagpur

(c) Assam

(d) Mizoram

Q9. _____ is the name of the project to modernise Indian Ports".

(a) Viksit Bharat.

(b) Deepmala

(c) Sagarmala

(d) Viksit Sagar.

Q10. Civic duties in which NCC cadets can contribute are

(a) Voting

(b) Respecting laws

(c) Maintaining public order

(d) All of the above

Q12. NCC cadets can perform the role of ears and _____ of security agencies.

(a) Guide

(b) Eyes and Ears

(c) Instructor

(d) Workhands

Q13. NCC cadets can spread _____ within the community, especially in underdeveloped areas.

(a) Awareness

(b) Education

(c) Medical treatment

(d) Vocational training

Q14. _____ assistance can be given by NCC cadets during natural/ manmade disasters.

(a) Knowledge

(b) Guidance

(c) Humanitarian

(d) Financial

Q15. VVP stands for

(a) Very important person

(b) Very Valuable place

(c) Vibrant Village Programme

(d) None of the above

Q16. SAGAR is the acronym for _____ and _____for All in the Region.

(a) Survival and Growth

(b) Security and Gaming

(c) Security and Growth

(d) Safety and Growth

Short Answer Questions.

Q1. Summarise the steps taken by Government of India to counter the insurgency in North Eastern states.

Q2. Discuss the impact of cross-border terrorism on India.

Q3. Define the scope of Border and Coastal Area Management.

Q4. Why is the illegal migration and influx of people harmful to India's security interests?

Q5. Discuss the objectives of Border Area Development Programme (BADP).

Long Answer Questions.

Q1. Summarise some of the security challenges in land border areas?

Q 2. Discuss the role of NCC cadets as the 'Eyes and Ears of Security Agencies' in border areas.

Map Exercise

Q1. In the adjoining map of India, mark the following:-

(a) Union territories of Jammu; Kashmir & Ladakh. Also mark their capital.

(b) International Border with Pakistan.

(c) Areas affected by Cross-border terrorism.

(d) Coasts prone to Contraband/ Narcotics smuggling.

(e) The Galwan Valley.

Q2. Also mark the location of your NCC Unit & Group HQ.

DISASTER MANAGEMENT

4

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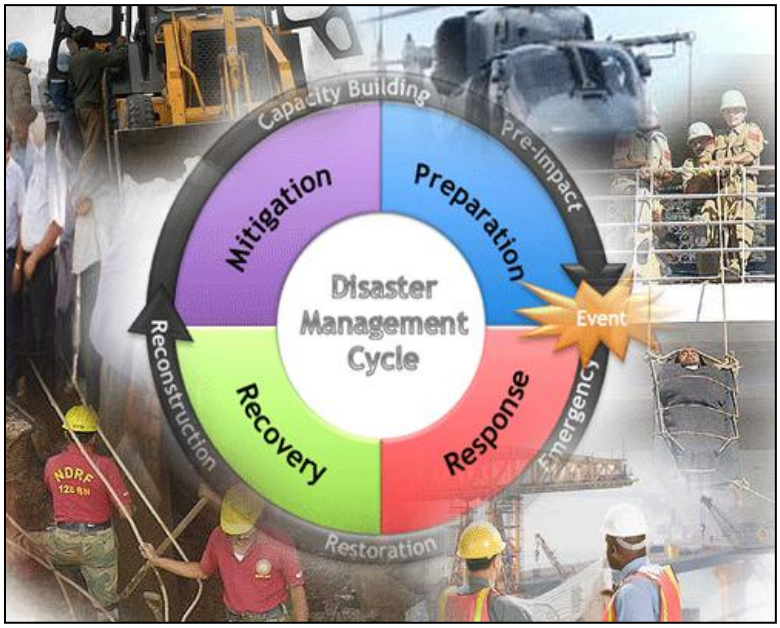
DM I (SD/SW)

CHAPTER I : TYPES OF DISASTER, RELIEF AGENCIES AND ROLE OF NCC CADETS

We cannot eliminate disasters, but through our efforts, we can reduce the risk. Preparedness is the key to mitigating the damage caused by natural disasters

Shri Narendra Modi



TEACHING INSTRUCTIONS

Period	:	**One.**
Type	:	**Lecture**
Year	:	**SD/ SW (First Year)**
Conducting Officer	:	**ANO**
Training Aids	:	**Power Point Presentation**

Time-plan

- Types of Disaster : 05 Mins
- Relief Agencies : 05 Mins
- Essential Services and their Maintenance : 10 Mins
- Role of NCC in Maintenance of Essential Services : 10 Mins
- Civil Defence Organisation : 10 Mins

INTRODUCTION

1. Disasters disrupt progress and destroy the hard-earned fruits of painstaking developmental efforts, often pushing nations, in quest for progress, back by several decades. Thus, efficient management of disasters has, in recent times, received increased attention both, within India and abroad. Disaster management is a continuous process of planning, organizing, and implementing measures to prevent, reduce, and respond to disasters. The goal of disaster management is to reduce the human, physical, and economic losses caused by disasters.

2. Disasters, whether natural (such as earthquakes, floods, and cyclones) or man-made (like industrial accidents, conflicts, and fires), can have devastating effects on human lives, property, and the environment. The primary goal of disaster management is to minimize the impact of disasters by reducing vulnerabilities, enhancing preparedness, and ensuring a swift and effective response. It involves various stages, including **mitigation**, **preparedness**, **response**, and **recovery**, and requires the collaboration of governments, communities, non-governmental organizations (NGOs), and individuals. Effective disaster management relies on understanding risks, building resilience, and using technology and resources efficiently. It not only saves lives but also fosters sustainable development by ensuring that communities are better equipped to handle future disasters.

INTRESTING FACTS

- *Cyclones & Tsunamis have caused the most damage across the globe*
- *Global warming has raised concerns of flooding/ cloud bursts*
- *Odisha was the first state in India to establish Disaster Management Authority (1999), also called disaster capital of India*
- *Indian Armed Forces are the first responders of any disaster*

PREVIEW

The lecture will be conducted in following parts:-

(a) Part I: Types of Disasters

(b) Part II: Relief Agencies

(c) Part III: Essential Services and their Maintenance

(d) Part IV : Role of NCC Cadets in Maintaining Essential Services

(e) Part V : Civil Defence Organisation

LEARNING OBJECTIVES

- Provide a meaningful understanding of Disasters.
- Understand types and characteristics of disasters and methods of mitigation
- Identify critical components in disaster management services.
- Identify role of various agencies and mutual support by NCC in disaster management.

PART I : TYPES OF DISASTERS

3. **Definition of Disaster**. The term disaster is commonly used to denote any adverse event 'natural or man-made' which brings about a lot of misery to a region and it becomes difficult to cope with the situation through local resources. According to WHO "A Disaster can be defined as any occurrence that causes damage, ecological disruption, loss of human life, deterioration of health and health services on a scale, sufficient to warrant an extraordinary response from outside the affected community or area".

Classification of Disasters

4. Disasters can be classified as natural and man-made disasters which are explained below:-

(a) **Natural Disasters**. These are of the following types:-

(i) **Meteorological (Wind Related)**. Storms, Cyclones, Tornadoes, Tidal Waves and Blizzards, etc.

(ii) **Hydrological (Water Related)**. Floods/Flash Floods, Cloudburst, Excessive Rains, Drought, Tsunami, etc.

(iii) **Geological (Earth Related)**. Earthquakes, Tsunamis, Avalanches, Land-slides, Volcanic Eruptions, etc .

Natural Disasters

(iv) **Biological**. Pandemics (COVID, Swine Flu), epidemics (Plague, Cholera), etc.

(b) **Man Made Disasters.** These can be classified as under:- (i) **Accidents.**

(aa) Road, rail, air, sea accidents or building collapse.

(ab) **Fire.** In buildings, coal fields or oil or gas fields and oil or gas store depots.

(ii) **Technological Disasters**. Gas leaks, explosion, and safety breaches, nuclear accidents,

(iii) **Social Disasters**.

(aa) **Terrorist Activities.** Serial Blasts / explosions in public transport or markets, sabotage.

(ab) **Armed Conflicts**. Internal/ External (conventional, nuclear, etc).

(ac) **Contamination/Poisoning.** Incidents of mass food poisoning, water contamination, illicit-liquor poisoning and epidemics.

(iv) **Environmental.** Pollution of air, water, noise, soil degradation, loss of biodiversity, global warming, sea level rise, toxic wastes, forest fires/ deforestation.

PART II : RELIEF AGENCIES

5. There are multiple agencies involved in disaster management at National and State level as also NGOs who get involved in the management and relief.

6. **National Disaster Management Authority (NDMA)**. On 23 December 2005, the Government of India took a defining step by enacting the Disaster Management Act of India, which envisaged the creation of the National Disaster Management Authority (NDMA), headed by the Prime Minister. The organization of NDMA is as under:-

(a) **National Level.** At the national level, the NDMA will be the apex body for disaster management, and will be headed by the Prime Minister. The NDMA is mandated to deal with all types of disasters; natural or man-made.

(b) **National Executive Committee (NEC).** The NEC is the executive committee of the NDMA, and is mandated to assist the NDMA in the discharge of its functions and also ensure compliance of the directions issued by the Central Government. The NEC coordinates the response in the event of any threatening disaster situation or disaster. The NEC is responsible to prepare the National Plan for Disaster

Management based on the National Policy on Disaster Management. The NEC will monitor the implementation of guidelines issued by NDMA.

7. **State Disaster Management Authority (SDMA).**

(a) At the State level, the SDMA, will be headed by the Chief Minister, who will lay down policies and plans for Disaster Management in the State.

(b) It will, approve the State Plan in accordance with the guidelines laid down by the NDMA, coordinate the implementation of the State Plan, recommend provision of funds for mitigation and preparedness measures and review the developmental plans of the different Departments of the State to ensure the integration of prevention, preparedness and mitigation measures.

(c) The State Government shall constitute a State Executive Committee (SEC) to assist the SDMA in the performance of its functions. The SEC will be headed by the Chief Secretary to the State Government and will coordinate and monitor the implementation of the National Policy, the National Plan and the State Plan. The SEC will also provide information to the NDMA relating to different aspects of Disaster Management.

8. **District Disaster Management Authority (DDMA).** The DDMA will be headed by the District Collector or Deputy Commissioner or District Magistrate as the case may be, with the elected representative of the local authority as the Co-Chairperson. The DDMA will act as the planning, coordinating and implementing body for DM at the District level and take all necessary measures for the purposes of DM in accordance with the guidelines laid down by the NDMA and SDMA. It will, inter alia prepare the District DM plan for the District and monitor the implementation of the National Policy, the State Policy, the National Plan, the State Plan and the District Plan.

9. **Local Authorities.** For the purpose of this Policy, local authorities would include Panchayati Raj Institutions (PRI), Municipalities, District and Cantonment Boards, and Town Planning Authorities which control and manage civic services. These bodies will ensure capacity building of their officers and employees for managing disasters, carry out relief, rehabilitation and reconstruction activities in the affected areas and will prepare DM Plans in consonance with the guidelines of the NDMA, SDMAs and DDMAs.

10. **National Disaster Response Force (NDRF)**. For the purpose of specialised response to a threatening disaster situation or disasters/ emergencies both natural and man-made, the Act has mandated the constitution of a National Disaster Response Force (NDRF). The general superintendence, direction and control of this force shall be vested in and exercised by the NDMA and the command and supervision of the Force shall vest in an officer to be appointed by the Central Government as the Director General, NDRF.

(a) Presently, the NDRF comprises 16 battalions and there may be further expansion in future. These battalions are positioned at different locations across India.

(b) NDRF units to maintain close liaison with the designated State Governments and will be available to them in the event of any serious threatening disaster situation.

(c) While the handling of natural disasters rests with all the NDRF battalions, **four battalions** will also be equipped and trained to respond to situations arising out of Chemical, Biological, Radiological and Nuclear (CBRN) emergencies.

(d) The NDRF units will also impart basic training to all the stakeholders identified by the State Governments in their respective locations.

11. **Non Government Organisations (NGOs).** NGOs are organizations registered under various Indian laws. NGOs help people in need by giving them the training they need to be prepared for disasters. This includes things like assessing risks, making emergency plans, running search and rescue, giving first aid, and organizing evacuation. NGOs have also started to collaborate with corporate entities in Public-Private Partnership (PPP) projects and Corporate Social Responsibility (CSR) initiatives in the field of DM at State, District and Sub-district levels. Till recently, the work of NGOs in the field of DM has been mostly sporadic, reactive, responsive and driven by local level compulsions in the geographic areas where they are implementing development projects. Certain functions are enumerated below:-

(a) Emergency Relief Operations.

(b) Search and Rescue Operations.

(c) Medical Care.

(d) Psychosocial Counselling.

(e) Logistics Management.

(f) Coordination and Information Sharing..

(g) Rehabilitation and Reconstruction.

(h) Disaster Preparedness and Risk Mitigation.

(j) Capacity Building.

12. **Civil Defence Organisations (CDO)**. Civil Defence is the largest community-based, volunteer emergency response organization organized by Government. It was functioning in the country as well as in the State during World War periods. It was re-organized during the wake of 1962 India-China conflict with the enactment of Defence of

India Act, 1962 and finally structured on 10th July 1968 with rules and regulations by the Government. Civil Defence supports the frontline emergency services, e.g. in dealing with severe weather or searching for missing people. It also carry out community support activities, e.g. providing first aid cover at both local and national events. Certain roles are enlisted below:-

(a) Casualty Service.

(b) Rescue Service.

(c) Auxiliary Fire Service

(d) Monitoring Service.

(e) Welfare Service.

(f) Communications.

13. **Indian Armed Forces.** The Armed Forces (Army, Navy and Air Force) play a significant role in disaster management in India, responding to disasters as the first line of responders. They are called upon to assist the civil administration when the situation is beyond their capacity. The armed forces are well-equipped to handle a variety of disasters, including natural and man-made ones. Their roles include:

(a) **Search and Rescue**. The armed forces perform search and rescue operations in disaster areas.

(b) **Providing Aid**. They provide essential needs like food, clothing, and shelter. They also provide medical aid and set up emergency hospitals.

(c) **Restoring Services**. The armed forces restore essential services like electricity, water, and telephone lines.

(d) **Repairing Infrastructure**. They repair roads and bridges for smooth communications restoration.

(e) **Training**. They train disaster management managers and trainers in areas like CBRN aspects, heli-insertion, and high-altitude rescue.

(f) **Airlift and Heli-lift.** The armed forces are experts in airlift and heli-lift, which are used to move assistance to neighboring countries.

14. The armed forces are often called upon to respond to disasters because of their professional response, training, and equipment. They also have dual-use equipment that can be used to support troops in combat zones and to help the public during disasters. The role has been significant in latest flood relief operations and also assistance in international arena viz, Nepal, Turkey, etc. Their expertise in the field of search and rescue is unmatched. The armed forces can also bring in equipment for repairing damaged roads or

building makeshift bridges. The Armed Forces are the first responders to calls of disaster management.

PART III : ESSENTIAL SERVICES AND THEIR MAINTENANCE

15. Essential services can be categorized as under:-

(a) Postal and telephone services.

(b) Transport Services like rail, road, air and sea.

(c) Running of air / sea ports.

(d) Provision of water, electricity and sanitation services.

(e) Medical services and essential supplies.

(f) Production and supply of essential commodities.

(g) Running of government mint and security press

16. **Type of Maintenance Required for Essential Services.** These services are maintained by government at all costs. There are very rigid acts and provisions to ensure continuity of these services since without them life in a country will be severely disrupted. Very strict provisions in law exist against personnel going on strike, refusing to work overtime or any other conduct which is likely to result in cessation or substantial degradation of work in maintaining these services. At district level, each district is required to prepare in advance, contingency plans to tackle the likely disturbances in continuity of these services.

17. **Medical.**

(a) Running of medical facilities and hospitals.

(b) Providing nursing services and first aid.

(c) Immunization of the population in relief camps.

(d) Rescue of trapped persons and casualty evacuation.

(e) Disposal of dead bodies and carcasses.

18. **Communication.**

(a) Maintenance and provision of uninterrupted telecommunication through telephone services /telefax, mobile phones, VHF transmitters etc.

(b) Dissemination of information, monitoring media coverage and preventing spread of rumours.

19. **Transport.**

(a) Maintenance of rail/road communications with special attention to Repairing damaged rail/ road network as it directly relates to the delivering of relief supplies by vehicles. Creating diversions for bypassing damaged sections of the roads.

(b) Extent of containers that can be moved inland.

(c) Availability of maintenance facilities and spare parts.

(d) Measures for security of cargo in transit.

20. **Infrastructure.**

(a) Infrastructure of roads and bridges, communications, water and electricity supply, sewerage and essential buildings such as schools/ colleges and health centres may be required to be rebuilt/repaired.

(b) Housing and rehabilitation.

(c) For economic rehabilitation, funding and various new opportunities are to be created, in addition to getting the destroyed stocks replenished, for restoration of livelihood.

21. **Miscellaneous.**

(a) Provision of Military, Para Military and Police assistance.

(b) Speedy establishment of Control Room and deployment of human and material resources in a short time.

PART IV : ROLE OF NCC CADETS IN MAINTAINING ESSENTIAL SERVICES

22. Role of NCC in Disaster Management during Pre Disaster:-

(a) **Awareness Campaigns**: Conducting workshops, street plays, and awareness drives to educate communities about disaster preparedness and safety measures.

(b) **Mock Drills**: Organizing and participating in disaster preparedness drills in schools, colleges, and local communities.

(c) **Emergency Training**: Learning and teaching first aid, evacuation techniques, and use of emergency equipment.

23. **Role - During a Disaster**

(a) **Rescue Operations**: Assisting authorities in rescue operations by helping evacuate affected individuals, especially in hard-to-reach areas .

(b) **Crowd Management**: Maintaining order in relief camps, shelters, and during the distribution of aid.

(c) **Communication Support**: Acting as messengers or coordinators where regular communication channels are disrupted.

(d) **Search and Rescue**: Using their training to search for and assist victims in disaster-hit areas.

24. **Role - Post-disaster.** NCC cadets assist authorities with search and rescue, first aid, relief distribution, and rehabilitation. They also help set up and run relief camps, collect and distribute relief items, and conduct cultural and recreational activities for victims.

25. **Coordination by NCC Cadets.** NCC cadets work with the government at the central, state, and district levels. They can also work with NGOs and other organizations.

26. Being qualified in First Aid, Basic Home Nursing, Signals and having developed leadership traits and learnt about Social Services, Civil Defence and Disaster Management, the cadets of NCC could assist in maintaining the following essential services and important tasks in any and every part of the country in following ways:-

(a) As **operators** in Telephone Exchange.

(b) Assist hospital staff in patient care in hospitals or as links between doctors, nurses, patients and hospital technicians. They could also help in maintaining hospital discipline and security.

(c) Assist in establishment and running of **First Aid Centers**.

(d) Assist civil defence wardens in carrying out their duties.

(e) Carry out neighbourhood campaigns by **motivating** people to create self-assistance groups.

(f) Counteract misinformation and rumours to restore the morale of the people.

(g) Assist the civil authorities whenever feasible and to the best of ability. Some of the areas where cadets can help are:-

(i) **Distribution of relief material** to the affected population for their temporary sustenance.

(ii) **Coordinate** the flow of relief material from out-side and ensure maximum coverage of territory in provision of relief stores, food and water, avoiding wastage and duplication of work in the same area.

27. **Training for Disaster Management**. NCC cadets are trained for disaster management in a number of ways, including:

(a) **Lectures and demonstrations**. The National Disaster Response Force (NDRF) conducts lectures and demonstrations on disaster management for NCC cadets. These sessions cover topics such as earthquake preparedness, first aid, rescue techniques, and how to use improvised stretchers.

(b) **Specialized training**. The India Universities and Institutions Network for Disaster Risk Reduction (IUINDRR) and the University Grants Commission (UGC) are working on a program to provide specialized training to NCC cadets. This program aims to equip cadets with the skills to handle disasters specific to their region.

(c) **Training sessions**. Training sessions may cover skills such as bandaging, rope knotting, CPR, and rescue methods.

Training of NCC Cadets

28. **Key Advantages of NCC Cadets in Disaster Management**.

(a) **Youth Power**: Their energy and enthusiasm can be mobilized quickly.

(b) **Discipline and Organization**: Their training ensures they act efficiently under stress.

(c) **Community Reach**: As part of the community, they can act as a bridge between authorities and the public.

(d) **Quick Mobilization**: Their pre-organized structure enables rapid deployment in emergencies.

29. **Employment of NCC Cadets During Natural Disasters**. For employment of NCC cadets during Natural Disasters, proper SOPs will have to be made in consultation with the DDMA, under the guidelines issued by HQ DG NCC / the State NCC Dtes. The detailed modalities on employment and quantum of cadets to be employed etc. will have to be worked out with the local police authorities. Responsibilities of local traffic police and where cadets can be employed during disaster management stage are as under:-

(a) **Immediate Action.** On receipt of the information about any Disaster taking place, SP/Dy SP concerned shall rush to the spot immediately, with his quick reaction team equipped with adequate communication equipment, rescue material, protective gear, warning signs and contact numbers; assess the situation and inform the SSP about the situation SSP should arrange for additional force from local resources. Some NCC cadets can form part of the group which goes for the immediate action.

(b) **Initial Law and Order.** Local traffic police shall rush to the spot with ropes, search lights and other items for maintaining law and order. NCC Cadets can be incorporated with the local police personnel.

(c) **Cordoning.** The entire affected area shall be cordoned off and no collection of crowds be allowed there. NCC Cadets can be used to cordon off affected areas.

(d) **Casualty Management.** The Traffic Police plays an important role in traffic control and guidance in the chain of evacuation of casualties as injured persons shall be evacuated to the nearby hospital by the PCR vans, ambulances and other modes of conveyance. NCC Cadets can accompany the casualty or be employed as point's man or liaison officer at hospitals.

(e) **Traffic Flow.** No traffic shall be allowed to pass through the affected areas and necessary diversion shall be made accordingly. Diversion points can be manned by NCC cadets in co-ordination with traffic police.

(f) **Emergency Vehicle.** The local traffic police shall ensure clear passage for emergency vehicles until traffic arrangements are made. NCC Cadets can be employed to check and ensure that only emergency vehicles are permitted for right of way.

(g) **Rescue Services.** Help shall be provided to the rescue services and volunteers in all possible manner. This will include guiding the fire tenders, ambulances etc. to the place of incident through a clear route. NCC Cadets can be co-opted with rescue services and volunteers to guide and escorting duties.

(h) **Adequate Reserve.** Adequate force be kept at the scene of occurrence for traffic control. NCC Cadets can form part of the reserve forces to aid traffic police.

(j) **Maintain Records of Incidents.** The entire scene of incident must be videographed as early as possible with a view to reconstruct the scene of occurrence, during the course of investigation. NCC Cadets can be employed to video graph and carryout tasks in maintaining of records of incidents.

30. **Creation of Groups.** The following groups of NCC cadets need to be created for providing assistance:-

(a) **Traffic Control Group**. This group provides assistance to traffic police.

(b) **Relief Group.** This group provides assistance to collect and distribute relief materiel such as food supply, cloth, kerosene, diesel, utensils etc. and coordinate all the relief requirement of the other action groups.

(c) **Shelter Management Group**. This group will be employed for establishment or looking after shelters and safe houses providing the evacuees' food, water and medication requirements. This group can also coordinate with the government authorities to ensure that health and nutrition facilities are available for the extra vulnerable groups, like women and children.

(d) **First Aid Medical Groups.** There should be equal number of SD and SW cadets in this group. Those with some knowledge of nursing will be preferable. The members will have to go through intensive training and drills for first aid medical assistance.

(e) **Sanitation Groups.** This group can consist of SD and SW cadets, who will look after the sanitation responsibilities both at the shelter as well as outdoors.

PART V : CIVIL DEFENCE ORGANISATION

31. Civil Defence (CD) is primarily organised on voluntary basis except for a small nucleus of paid staff and establishment which is augmented during emergencies. The present target of Civil Defence volunteers is 14.11 lakh, out of which 5.38 lakh have already been raised. Civil Defence is primarily organised on voluntary basis except for a small

nucleus of paid staff and establishment which is augmented during emergencies. However, Duty/Training allowance is admissible to the C.D. Volunteers. These volunteers are administered and trained by Deputy Collectors, Medical Officers and C. D. Instructors which are full time paid posts.

32. **Training of CD**. Apart from carrying out training and rehearsal/ demonstration of Civil Defence measures during peace time, Civil Defence volunteers are also deployed, on a voluntary basis, in various constructive and nation building activities, which include providing assistance to the administration in undertaking social and welfare services and in the prevention/mitigation of natural /man-made disasters as well as in post- disaster response and relief operations. Civil Defence training is conducted by the State Governments/ UT Administrations in three tiers, i.e. at the Local/Town/district level, State level and National level. Training of the volunteers in Civil Defence Organization is conducted at local/town levels by trained trainers in the form of short-term training programmers.

Civil Defence

33. The Civil Defence Corps has the following 12 services in which volunteers are trained:-

(a) **Headquarters Service.** This service works under control of Civil Defence.

(b) **Warden's Service.** It is a link between the public and the authorities. This service is responsible for organizing self-help parties, fire parties and to check light restrictions, report damages and guide homeless to the Rest Centres.

(c) **Fire Fighting Service.** They detect small fires and put out the same.

(d) **Casualty Services.** The functions of this service are:-

(i) Rendering first aid on the spot.

(ii) Providing transport to casualties for short distances.

(iii) To send various casualties for further treatment.

(e) **Communication Services**. This service is responsible for:-

(i) Receipt and dissemination of air raid warning.

(ii) Provision of co-ordination and control facilities.

(iii) Provision of communication between warden posts, control centres through messengers or telephone etc.

(f) **Rescue Services.** Their duty is to rescue the injured and personnel trapped under the debris.

(g) **Welfare Services.** It is responsible to supply information about missing and dead etc, to provide shelter, food and clothing and to arrange evacuation from vulnerable areas.

(h) **Depot and Transport Services.** It is this service which is responsible to send various services to the scene of the incident and provide the necessary transport required from time to time.

(i) **Salvage Service.** It is responsible to salvage the damaged property and keep it in safe custody.

(j) **Corpse Disposal Service**. This service is responsible for collection, identification and disposal of dead bodies.

(k) **Supply Service.** This service is responsible for planning, organizing and procuring necessary equipment for Civil Defence Services and its proper storage and quick distribution of equipment at the time of need.

(l) **Repair and Demolition Service.** Besides the above noted services, the Civil Defence organization will be required to set up Repair and Demolition Parties and make arrangements for the care of animals through appropriate existing agencies operating in the town.

CONCLUSION

34. Disasters, whether natural or man-made, pose significant challenges to human safety, infrastructure, and livelihoods. Understanding the types of disasters such as earthquakes, floods, wildfires, pandemics, or industrial accidents helps in planning targeted strategies for prevention, preparedness, and response. Relief agencies, including government organizations play a critical role in mitigating the impact of disasters. Non-governmental organizations (NGOs) and community-based groups also contribute significantly to rescue, relief, and rehabilitation efforts. The combined efforts of these agencies, coupled with public awareness and community participation, are crucial for minimizing the loss of life and property. By fostering coordination and leveraging expertise, relief agencies ensure timely and efficient responses to disasters. Ultimately, building resilience and preparedness remains the cornerstone of effective disaster management, ensuring sustainable recovery and long-term risk reduction. By playing these roles, NCC cadets not only enhance disaster management efforts but also develop their sense of social responsibility and leadership.

SUMMARY

- **Natural Disasters**.
  - Meteorological: Storms, cyclones, tornadoes, tidal waves, blizzards, etc.
  - Hydrological: Floods, flash floods, cloudbursts, excessive rains, drought, etc.
  - Geological: Earthquakes, tsunamis, avalanches, landslides, volcanic eruptions, etc.
- **Man-Made Disasters**.
  - Accidents
  - Industrial Mishaps
  - Fire
  - Forest Fires
  - Contamination/Poisoning.
  - Terrorist Activities.
  - Ecological.
  - Warfare.
- **Relief Agencies**.
  - National Disaster Management Authority (NDMA)
  - State Disaster Management Authority (SDMA)
  - District Disaster Management Authority (DDMA)
  - Local Authorities in District
  - National Disaster Response Force (NDRF)
  - Non-Governmental Organizations (NGOs)
  - Civil Defence Organizations
  - Indian Armed Forces
- **Essential Services**.
  - Postal, telegraph, and telephone services.
  - Transport services (rail, road, air, sea).
  - Air and sea ports.
  - Water, electricity, and sanitation services.
  - Medical services and essential supplies.
  - Production and supply of essential commodities.
  - Running of government mint and security press.

- **Assistance by Cadets.**
  - Operate telephone exchanges.
  - Assist in hospitals as nurses or in patient care.
  - Help in running First Aid Centers.
  - Aid civil defense wardens.
  - Conduct neighbourhood campaigns and motivate people.
  - Counter gossip and rumors to restore morale.
  - Assist civil authorities whenever possible.
- **Groups of NCC Cadets**.
  - Traffic Control Group
  - Relief Group
  - Shelter Management Group
  - Evacuation and Rescue Groups
  - First Aid Medical Groups
  - Sanitation Groups

ASSESSMENT EXERCISE

Multiple choice Questions

Q1. Bhopal Gas Disaster is a kind of :-

(a) Natural disaster

(b) Man-made disaster

(c) Social Disaster

(d) None of the above

Q2. The National Disaster Management Authority (NDMA) is headed by

(a) Prime Minister of India

(b) President of India

(c) Governor of States

(d) Chief Minister of States

Q3. Which of the following is not a man-made hazard?

(a) Leakage of Toxic waste

(b) Wars and Civil Strife

(c) Drought

(d) Environmental pollution

Q4. Disaster Management includes:-

(a) Mitigation

(b) Reconstruction

(c) Rehabilitation

(d) All of the above

Q5. Which of the following is a man-made disaster?

(a) Terrorism

(b) Major fire

(c) Pollution

(d) All of the above

Q6. Which of the following organization is the apex authority of disaster management in India?

(a) NDA

(b) NDMA

(c) CDMA

(d) INDR

Q7. Armed forces are:-

(a) Last responders

(b) Called when free

(c) First responders

(d) All of the above

Q8. The cycle of disaster consists of the following components:-

(a) Mitigation, Preparedness, Response, Recovery

(b) Preparedness, vulnerability assessment, risk assessment, recovery

(c) Mitigation, Risk assessment, Response and Recovery

(d) None of the above

Q9. Essential services can be categorized as under:-

(a) Postal, telegraph or telephone services.

(b) Transport Services like rail, road, air and sea.

(c) Running of air / sea ports.

(d) All of the above

Q10. Which groups of NCC cadets need to be created for providing assistance:-

(a) Traffic Control Group.

(b) Boat Group.

(c) Garbage cleaning group.

(d) No Group.

Q11. The Civil Defence Corps has the following 12 services in which volunteers are trained:-

(a) Headquarters Service.

(b) Warden's Service.

(c) Fire Fighting Service.

(d) All of the above.

Q12. Which of the following skills are NCC cadets trained in for disaster management?

(a) First aid and CPR

(b) Search and rescue operations

(c) Crowd management and relief distribution

(d) All of the above

Q13. During floods, NCC cadets can help by:

(a) Operating boats and helping in evacuation

(b) Providing water purification tablets

(c) Distributing food and medical aid

(d) All of the above

Q14. Which organization do NCC cadets often collaborate with during disaster management efforts?

(a) National Cadet Corps of India

(b) National Disaster Response Force (NDRF)

(c) Indian Medical Association (IMA)

(d) Reserve Bank of India (RBI)

Q15. What is one key advantage of involving NCC cadets in disaster management?

(a) They have medical degrees

(b) They are disciplined and organized

(c) They are professional rescue workers

(d) They are experts in law enforcement

Short Questions

Q1. What are the different types of disasters?

Q2. What are the government governed agencies for relief at various levels?

Q3. What groups of NCC cadets are required for DM?

Long Questions

Q1. What is the role of NCC in DM?

Q2. How does Armed Forces help during DM?

Q3. What is the training required by NCC cadets for preparation for DM?

DM II (SD/SW)

CHAPTER II : DO's AND DONT's DURING DISASTERS

"During a disaster, every action matters. Acting responsibly and avoiding panic can save lives—yours and others'."

Ratan Tata

TEACHING INSTRUCTIONS:

Period	:	**One.**
Type	:	**Lecture**
Year	:	**SD/ SW (First Year)**
Conducting Officer	:	**ANO**
Training Aids	:	**Class Room, Computer and Projector, Power Point Presentation**

Time-plan

- Introduction & General Guidelines : 05 Mins
- Do's and Don'ts, Before and After for Natural Disasters : 15 Mins
- Do's and Don'ts, Before and After for Man Made Disasters : 15 Mins
- Do's and Don'ts During assisting Civil Adminisration : 05 Mins

INTRODUCTION

1. Effective disaster management hinges on preparedness, timely actions, and informed decision-making. A critical aspect of this is understanding the essential "do's" and "don'ts" that guide individuals and communities during each phase of a disaster—before, during, and after its occurrence. This chapter focuses on the practical steps to be taken to minimize risks, protect lives, and ensure a swift recovery. By adhering to these guidelines, cadets can enhance their resilience, reduce the chaos during emergencies, and foster a safer, more organized response to disasters. Understanding and implementing these do's and don'ts empower individuals to act confidently and responsibly, whether in preparation for potential hazards or in the face of an actual crisis.

2. Cadets being young and exuberant can be selectively employed through correct selection of areas of intervention. Proper guidance and strict supervision of their activities will ensure success of cadets.

PREVIEW	LEARNING OBJECTIVES
The lecture will be conducted in following parts:- (a) Part1: General Guidelines (b) Part II: Natural Disasters (c) Part III: Man-made Disasters (d) Part IV: Do's & Don'ts during assistance to Civil Administration	➢ Awareness and Preparedness ➢ Ensuring Personal Safety ➢ Safe Use of Resources and Equipment ➢ Responding to Specific Disasters

PART I : GENERAL GUIDELINES

3. **Criteria of Selection and Employment of Cadets**.

(a) Some disaster situations may, however, demand functioning of cadets on their own. It would, however, be preferable to determine their areas of activity and responsibility in any disaster situation beforehand and limit the same to an indirect support role, while the direct intervention is left to the experts in the field. Ordinarily participation should be restricted to 2nd/3rd year SD/SW cadets only and selection of boys and girls should depend on area and distance from home town. Precautionary Measures to be followed by NCC Cadets.

(b) NCC cadets have to perform multifaceted duties during disaster under the guideline of District Disaster Management Authorities. JD/JW cadets are young and may not be considered suitable for such operations. SW cadets may be used for softer jobs like providing medical assistance or manning exchanges during strikes of

nurses or telephone operators. Only SD cadets may be found suitable for helping in natural calamities like earthquakes, land-slides and floods.

4. **Prior to sending the cadets on such tasks**, parental consent must be obtained before the deployement. Cadets are not adequately trained for specialized tasks related to Disaster Management. Suitable training must be given to them during institutional training. Adequate allowances would require to be allocated for the cadets taking part in these activities. Joint schemes with the State Disaster Relief machinery would be required to be made in which NCC cadets may be incorporated. Adequate signal equipment and other disaster relief equipment would be required to be authorised to NCC to carry out necessary training cadets would have to carry out rehearsals along with the Army, Police, Fire Fighting forces and others in the state.

Preparedness State

PART II : NATURAL DISASTERS FLOODS

5. **Before floods**.

(a) Do not litter waste, plastic bags, plastic bottles in drains.

(b) Try to be at home if high tide and heavy rains occur simultaneously.

(c) Listen to weather forecast at All India Radio, Doordarshan. Also, messages by Municipal bodies from time to time and act accordingly.

Do's & Don'ts during Floods

(d) Evacuate low lying areas and shift to safer places.

(e) Make sure that each person has lantern, torch, some edibles, drinking water, dry clothes and necessary documents while evacuating or shifting.

(f) Make sure that each family member has identity card.

(g) Put all valuables at a higher place in the house.

6. **Do's and Don'ts during the Flood Situation.**

(a) Obey orders by Government and shift to a safer place.

(b) Be at safe place and then try to collect correct information.

(c) Switch of electrical supply and don't touch open wires.

(d) Don't get carried away by rumours and do not spread rumours.

7. **DO's.**

(a) Switch off electrical and gas appliances, and turn off services off at the mains.

(b) Carry your emergency kit and let your friends and family know where you are going.

(c) Avoid contact with flood water it may be contaminated with sewage, oil, chemicals or other substances.

(d) If you have to walk in standing water, use a pole or stick to ensure that you do not step into deep water, open manholes or ditches.

(e) Stay away from power lines electrical current can travel through water, Report power lines that are down to the power company.

(f) Look before you step-after a flood, the ground and floors are covered with debris, which may include broken bottles, sharp objects, nails etc. Floors and stairs covered with mud and debris can be slippery.

(g) Listen to the radio or television for updates and information.

(h) If the ceiling is wet shut off electricity. Place a bucket underneath the spot and poke a small hole into the ceiling to relieve the pressure.

(i) Use buckets, clean towels and mops to remove as much of the water from the afflicted rooms as possible.

(j) Place sheets of aluminium foil between furniture wet carpet.

8. **Don'ts.**

(a) Don't walk through flowing water - currents can be deceptive, and shallow, fast moving water can knock you off your feet.

(b) Don't swim through fast flowing water - you may get swept away or struck by an object in the water.

(c) Don't drive through a flooded area - You may not be able to see abrupt drop - offs and only half a meter of flood water can carry a car away. Driving through flood water can also cause additional damage to nearby property.

(d) Don't eat any food that has come into contact with flood water.

(e) Don't reconnect your power supply until a qualified engineer has checked it. Be alert for gas leaks - do not smoke or use candles, lanterns, or open flames.

(f) Don't scrub or brush mud and other deposits from materials, this may cause further damage.

(g) Never turn on ceiling fixtures if ceiling is wet. Stay away from ceilings those are sagging.

(h) Never use Televisions, computers, and other electrical appalinces while standing on wet floors, especially concrete.

(i) Don't attempt to remove standing water using your vacuum cleaner.

(j) Don't remove standing water in a basement too fast. If the pressure is relieved too quickly it may put undue stress on the walls.

TSUNAMI

9. **DO's.**

(a) Remain calm.

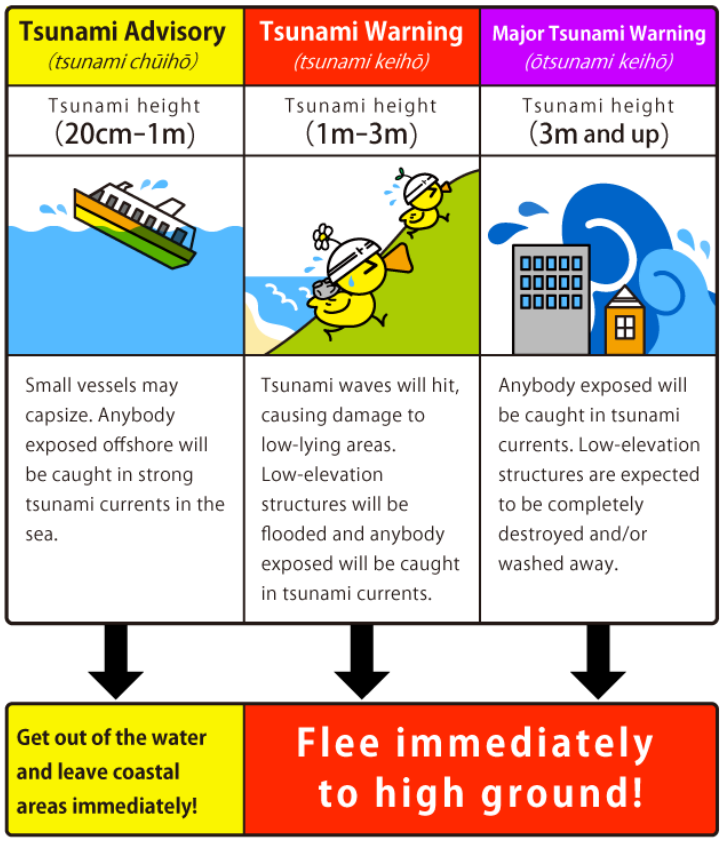
(b) Protect yourself if it is accompanied by an earthquake.

(c) Immediately head inland and to higher ground (at least 20 metres above sea level) if you experience an earthquake that lasts a minute or more, you are on the

beach and the tide suddenly goes way out, or you see a wall of water rushing toward you. If you can't get inland and up, go up.

(d) Know whether you are in a tsunami hazard zone or not.

(e) Know where the nearest tsunami escape route is.



(f) Have a ready portable emergency survival kits for you and your family.

(g) Wait for an official announcement that the danger has passed before returning home or to the beach.

(h) Have emergency supplies set in at home, since it might take days or weeks for electricity, food, water, and protective services to be restored.

(i) You should find out if your home, school, workplace, or other frequently visited locations are in tsunami hazard areas along sea-shore.

(j) Know the height of your street above sea level and the distance of your street from the coast or other high-risk waters. (Local administration may put sign boards).

(k) Plan evacuation routes from your home, school, workplace, or any other place you could be where tsunamis present a risk.

(l) If your children's school is in an identified inundation zone, find out what the school evacuation plan is.

(m) Practice your evacuation routes

(n) Use a Weather Radio or stay tuned to a local radio or television station to keep informed of local watches and warnings.

(o) Talk to your insurance agent. Homeowners' policies may not cover flooding from a tsunami. Ask the Insurance Agent about the benefits from Multi-Hazard Insurance Schemes.

(p) Discuss tsunamis with your family. Everyone should know what to do in a tsunami situation. Discussing tsunamis ahead of time will help reduce fear and save

precious time in an emergency. Review flood safety and preparedness measures with your family.

10. **DON'T's.**

(a) Rush to the beach to see the big wave.

(b) Rush to the beach after the first wave to see what has washed up on shore. (A tsunami may include several waves arriving over a period of hours.)

(c) Hop in your car to get to higher ground. (Roads may be impassable, you'll just contribute to the traffic jam, and you may not get to safety. You'll also make it harder for emergency vehicles to get through.)

(d) Stop to pack your most cherished possessions to take with you. (You may not have time.)

(e) Wait for an official warning if you feel an earthquake that lasts a minute or more, are on the beach and the tide suddenly goes out, or you see a wall of water rushing toward you. (By the time a warning is issued, it may be too late.)

(f) Start to put together an emergency survival kit. (You should already have one prepared.)

(g) Go back because you don't remember whether you turned off the oven.

(h) Brush your teeth and put on your makeup before going out.

(i) Avoid wasting time on unnecessary tasks.

(j) Live in a tsunami hazard zone.

EARTHQUAKES

11. **What to Do Before an Earthquake.**

(a) Repair deep plaster cracks in ceilings and foundations. Get expert advice if there are signs of structural defects.

(b) Anchor overhead lighting fixtures securely.

(c) Follow BIS codes relevant to your area for building standards

(d) Fasten shelves securely to walls.

(e) Place large or heavy objects on lower shelves.

Do's & Don'ts during Earthquake

(f) Store breakable items such as bottled foods, glass, and china in low, closed cabinets with latches.

(g) Hang heavy items such as pictures and mirrors away from beds, settees, and anywhere that people sit.

(h) Brace overhead light and fan fixtures.

(i) Repair defective electrical wiring and leaky gas connections. These are potential fire risks.

(j) Secure water heaters, LPG cylinders etc., by strapping them to the walls or bolting to the floor.

(k) Store weed killers, pesticides, and flammable products securely in closed cabinets with latches and on bottom shelves.

(l) Identify safe places indoors and outdoors.

(i) Under strong dining table, bed

(ii) Against an inside wall

(iii) Away from where glass could shatter around windows, mirrors, pictures, or where heavy bookcases or other heavy furniture could fall over

(iv) In the open, away from buildings, trees, telephone and electrical lines, flyovers and bridges (m) Know emergency telephone numbers (such as those of doctors, hospitals, the police, etc) (n) Educate yourself and family members

12. **Have a disaster emergency kit ready.**

(a) Battery operated torch with extra batteries

(b) Battery operated radio

(c) First aid kit and manual

(d) Emergency food (dry items) and water (packed and sealed)

(e) Candles and matches in a waterproof container

(f) Knife

(g) Chlorine tablets or powdered water purifiers

INTERESTING FACTS

- Having an emergency kit with essentials like water, food, medications, and first-aid supplies can sustain you for up to 72 hours. Many households lack one, despite its importance.
- Text messaging often works better than phone calls during disasters due to network congestion.
- During wildfires, evacuation orders are sometimes issued based on a “Ready, Set, Go!” approach, emphasizing preparation, awareness, and quick action.
- In a fire, smoke inhalation causes more fatalities than burns.

(h) Can opener.

(i) Essential medicines

(j) Cash and credit cards

(k) Thick ropes and cords

(l) Sturdy shoes

13. **What to Do During an Earthquake**. Stay as safe as possible during an earthquake. Be aware that some earthquakes are actually foreshocks and a larger earthquake might occur. Minimize your movements to a few steps that reach a nearby safe place and stay indoors until the shaking has stopped and you are sure exiting is safe.

14. **If indoors.**

(a) DROP to the ground; take COVER by getting under a sturdy table or other piece of furniture; and HOLD ON until the shaking stops. If there is no a table or desk near you, cover your face and head with your arms and crouch in an inside corner of the building.

(b) Protect yourself by staying under the lintel of an inner door, in the corner of a room, under a table or even under a bed.

(c) Stay away from glass, windows, outside doors and walls, and anything that could fall, (such as lighting fixtures or furniture).

(d) Stay in bed if you are there when the earthquake strikes. Hold on and protect your head with a pillow, unless you are under a heavy light fixture that could fall. In that case, move to the nearest safe place.

(e) Use a doorway for shelter only if it is in close proximity to you and if you know it is a strongly supported, load bearing doorway.

(f) Stay inside until the shaking stops and it is safe to go outside. Research has shown that most injuries occur when people inside buildings attempt to move to a different location inside the building or try to leave.

(g) Be aware that the electricity may go out or the sprinkler systems or fire alarms may turn on.

15. **If outdoors.**

(a) Do not move from where you are. However, move away from buildings, trees, streetlights, and utility wires.

(b) If you are in open space, stay there until the shaking stops. The greatest danger exists directly outside buildings; at exits; and alongside exterior walls. Most earthquake-related casualties result from collapsing walls, flying glass, and falling objects.

16. **If in a moving vehicle.**

(a) Stop as quickly as safety permits and stay in the vehicle. Avoid stopping near or under buildings, trees, overpasses, and utility wires.

(b) Proceed cautiously once the earthquake has stopped. Avoid roads, bridges, or ramps that might have been damaged by the earthquake.

17. **If trapped under debris.**

(a) Do not light a match.

(b) Do not move about or kick up dust.

(c) Cover your mouth with a handkerchief or clothing.

(d) Tap on a pipe or wall so rescuers can locate you. Use a whistle if one is available. Shout only as a last resort. Shouting can cause you to inhale dangerous amounts of dust

PART III : MAN MADE DISASTERS

ACCIDENTS

18. **Do's**

(a) DO seek medical attention before doing anything else.

(b) DO call the police to the scene of the accident, in appropriate cases.

(c) DO cooperate with all law enforcement and emergency personnel who respond to the scene.

(d) DO get the license plate numbers of all other vehicles involved in car accidents and the drivers' names, addresses, telephone numbers, and insurance information.

(e) DO write down the names, addresses, and phone numbers of all potential witnesses to an accident before the witnesses leave the area where the accident occurred.

(f) DO take photographs of all of the following, as applicable, as soon as possible after the accident:

(i) The scene of the accident, from all angles.

(ii) The surrounding area.

(iii) The product or animal that caused your injuries.

(iv) Photograph your injuries at different stages of healing.

(v) Any property damages.

(g) DO keep track of all work missed because of the accident and follow-up medical appointments, all medical treatment received, and how you felt physically and emotionally because of your injuries.

(h) DO get a property damage valuation from your insurance company or from two independent shops if you aren't satisfied with how your insurance company has valued the damage to your car.

19. **DON'Ts.**

(a) DON'T move your vehicle after an automobile accident unless necessary for safety or required by law.

(b) DON'T put yourself at risk of being further injury by standing or waiting in an area with traffic or other safety hazards.

(c) DON'T leave the scene of an accident until the police tell you it's okay to do so.

(d) DON'T throw away any potential evidence in the case, such as defective products, torn or bloodstained clothing, or car parts that came off the car during the accident.

(e) DON'T remain in a burning car or building while calling for help. Leave the area of danger first, and then immediately call help from a safe place.

20. **Tips To Save Life.** Here are a few important things that you can do as a responsible citizen to save a precious life before the arrival of the ambulance:

(a) **Remain Calm** – Do not panic. It is important for you and the victim to remain calm as it will help you take rational decisions. Do not allow any person at the scene, be it the victim or bystander to panic.

(b) **Assess the Accident Spot** – Move closer to the accident area, to understand if the accident involves only a single person or there are more. Be careful and check for leaking CNG and petrol pipes, live wires or broken glass.

(c) **Call the Emergency Services** – Dial 112 for help during emergencies. Give the exact location of the accident, so that they do not waste time in reaching the accident spot.

(d) **Stop Cars and Ask for Help** – If there aren't too many people on the road, try and stop other cars or bikes for help. Request other bystanders to help you.

(e) **Call Family and Friends** . Check the last dialled number from the victim's mobile or check for frequently called numbers or names like Mother, Father, Husband, Wife etc.

(f) **Provide First Aid**. If you know or are trained to give CPR (Chest pressure for heart rate / Mouth to Mouth Oxygen transfer) do it if the victim is unconscious. If it involved a car accident, search for a first aid kit inside car or take help from the bystanders.

(g) **Check for Pulse**. Try and assess the condition of the victim. If the victim is unconscious and not responding, then you might have to immediately take the victim to the nearest hospital without waiting for the ambulance. Remember to take care of the neck and head portion. Lesser movements and road jerks will help if you have given a little head and neck support to the victim's body. However, avoid moving the victim, unless absolutely necessary or you are trained in it as you might be hurting the victim and causing further damage.

(h) **Help Keep the Traffic Moving**. Make space for ambulance to come, so keep the traffic moving. Some curious people simply slow down their vehicles to check out an accident. Just let them know it is nothing serious. You should also warn the oncoming traffic and let drivers know that there is an accident and they need to avoid the area.

(j) **Comfort the Victim**. The accident victim is scared and even hurt. Talk to the victim if he or she is conscious with comforting and encouraging words like 'ambulance is on the way' and 'nothing serious has happened.

(k) **Accompany the Victim**. Do accompany the victim to the hospital till the arrival of the family members and provide all the support to the police to help them register a case.

PART IV : ASSISTANCE TO CIVIL ADMINISTRATION

21. **Do's and Don'ts**. Few Do's and Don'ts instructions to be followed by NCC cadets performing any kind of disaster related tasks are given below: -

Ser No	Do's	Don'ts
(a)	NCC cadets should take all the preventive measures during disaster management	Ensure that no cadet will be permitted without the consent bond document from the parents.
(b)	Assist in Traffic Management under supervision	Without adequate signal equipment traffic control should not be operated.
(c)	First Aid can be given to the rescued people.	They should avoid treatment of serious injuries.
(d)	Help in setting up and administration of Relief Camps.	Without suitable training specialized tasks should not be handled by NCC cadets.

(e)	Distribute the relief material to the affected population for their temporary sustenance	Don't operate away from your group.
(f)	Manning exchanges during strikes of telephone operators.	Cadets should not act as experts as they don't have required technical knowledge.
(g)	Collect the water containers, food and ordinary and special medicines.	Cadets should not indulge in mishandling of water, food and medicines as these are important amenities during disaster
(h)	Submit suitable bonds to be obtained from their parents.	Avoid risky work during the disaster management.
(i)	Cadets may be used in duties like providing medical assistance or manning exchanges	Ensure that cadets are not involved directly in the rescue operations
(j)	Be prepared for immediate response	Cadets should not make unnecessary delays in their response
(k)	Cadets can mark safe places and make evacuation route chart of the arena	Cadets should not impede rescue operations
(l)	Collect data of the injured & casualties	Given task should not be neglected
(m)	Counteract gossip and rumours to restore the morale of the people	Cadets should stay away from gossiping and rumours
(n)	Conduct of cultural and recreational activities for victims to boost their morale at later /Land rehabilitation stages	Operate without full preparation
(o)	Help removal of debris	Cadets should not be involved in removal of toxic material

CONCLUSION

22. A sound disaster prevention and response plan reflect on the effectiveness of the NCC cadets during the disaster. Suitable training must be given to them during institutional training. NCC cadets can effectively assist the state which could take the form of traffic management under supervision, conduct of cultural and recreational activities for victims to boost their morale at later or rehabilitation stages, collection, loading and dispatch of medical aid material, food and other articles of relief, help in setting up and administration of relief camps etc. Cadets must be well versed with various Do's and Don'ts associated with disaster related tasks.

SUMMARY

- **Selection and Employment of Cadets**
  - Cadets, especially 2nd/3rd year Senior Division (SD) and Senior Wing (SW), are selected for indirect support roles in disaster management under District Disaster Management Authorities.
  - Junior Division/Junior Wing (JD/JW) cadets are not suitable for disaster-related operations.
  - Cadets should participate in areas close to their home, and parental consent must be obtained.
- **Precautionary Measures**
  - Cadets require proper training during institutional sessions.
  - Joint schemes with state disaster relief agencies are essential for practical preparedness.
  - Adequate equipment like communication tools must be provided.

Natural Disasters

- **Floods**
  - **Preparation**: Avoid littering drains, stay updated with weather forecasts, and evacuate low-lying areas with essentials.
  - **During Floods**: Follow government instructions, switch off electrical appliances, and avoid rumours.
  - **Do's and Don'ts**: Avoid contact with floodwater, ensure safety measures, and never reconnect utilities without professional checks.
- **Tsunami**
  - **Do’s**: Move to higher ground immediately after signs like long earthquakes or receding tides, have emergency kits, and follow evacuation plans.
  - **Don'ts**: Avoid returning to the beach or packing belongings during emergencies.
- **Earthquakes**
  - **Preparation**: Secure heavy objects, repair structural defects, and have emergency kits ready.
  - **During Earthquakes**: Take cover under sturdy furniture or in safe spots indoors. If outdoors, stay away from structures and power lines.

Man-Made Disasters

- **Accidents**
  - **Do’s**: Seek medical help, record details like witnesses and evidence, and report to authorities.
  - **Don'ts**: Avoid moving vehicles unnecessarily or engaging in blame discussions.
- **Life-Saving Tips**
  - Stay calm, assess the accident spot, call emergency services, provide first aid, and ensure traffic flow for emergency vehicles.

ASSESSMENT EXERCISE

MCQs

Q1. If the power went out during the evening, I would:

a) Sit in the dark, waiting for the power to come back.

b) Light candles.

c) Search the kitchen drawers for flashlight batteries; they've got to be in there somewhere.

d) Know exactly where to find flashlights, battery-powered lanterns and fresh batteries.

Q2. During an emergency, I would depend on the following for information:

a) My neighbours.

b) A battery-powered radio

c) The Internet.

d) The television.

Q3. If I suddenly had to leave my home for five days, I would:

a) Grab my emergency kit and follow the steps in our family preparedness plan.

b) Throw some clothes and necessities in a suitcase and take an impromptu vacation.

c) Leave; then coordinate with family members or friends about what to do.

d) Hang out at the mall and wait to hear how long before we could return.

Q4. If local authorities told me to evacuate, I would:

a) Refuse to leave. Most "emergencies" don't turn out to be a big deal.

b) Wait to see if the situation worsened, then decide.

c) Wait for word from the Governor; he's the only one who can order an evacuation.

d) Follow the advice of local responders to ensure my safety and theirs.

Q5. A family emergency plan should include:

a) Information about the emergency plan at your children's schools

b) The name and phone number of an out-of-town contact person

c) A list of important phone numbers, including those of doctors and emergency services

d) A central meeting spot outside your home and one outside your neighborhood in case you need to leave the area

e) All of the above.

Q6. Which of the following should NOT be done during an evacuation?

a) Take your pets with you

b) Use your car to evacuate if possible

c) Move in groups to prevent getting lost

d) Panic and separate from others

Q7. Which of the following is a "do" after a disaster?

a) Ignore the risk of aftershocks or secondary hazards

b) Share unverified information about the disaster on social media

c) Wait for official guidance before returning to affected areas

d) Return to your home immediately after the event

Q8. When evacuating during a natural disaster, you should:

a) Leave pets behind

b) Follow the crowd without considering official evacuation routes

c) Take important documents and necessary items with you

d) Go back to check if you missed something

Q9. What is the key precaution before involving cadets in disaster management activities?

a) Providing parental consent

b) Ensuring proper training

c) Availability of communication tools

d) All of the above

Q10. Which cadets are considered suitable for disaster management activities?

a) Junior Division (JD) and Junior Wing (JW)

b) Senior Division (SD) and Senior Wing (SW)

c) Both JD/JW and SD/SW

d) None of the above

Q11. What should you avoid during a tsunami?

a) Moving to higher ground

b) Listening to government instructions

c) Returning to the beach

d) Preparing an emergency kit

Q12. Which of the following is a recommended action during an earthquake if you are indoors?

a) Stand near windows or heavy objects

b) Take cover under sturdy furniture

c) Use an elevator to evacuate

d) Run to the nearest exit

Q13. What is the first step to take if you witness a road accident?

a) Move the injured without assessing their condition

b) Blame the responsible party

c) Provide first aid and call emergency services

d) Leave the site immediately

Q14. What should cadets do in preparation for disaster management activities?

a) Participate in joint schemes with state relief agencies

b) Rely on on-the-spot training

c) Focus only on physical fitness

d) Stay away from disaster zone

Q15. Which of the following is a "don't" during a flood?

a) Avoid contact with floodwater

b) Turn off utilities before evacuation

c) Reconnect utilities without professional checks

d) Stay updated with weather forecasts

Short Answers

Q1. What precautions will you take before an earthquake?

Q2. List out important do's during a road accident.

Q3. What actions will you take during the flood situation?

Long Answers

Q1. Bring out important do's and don'ts during the event of a flood.

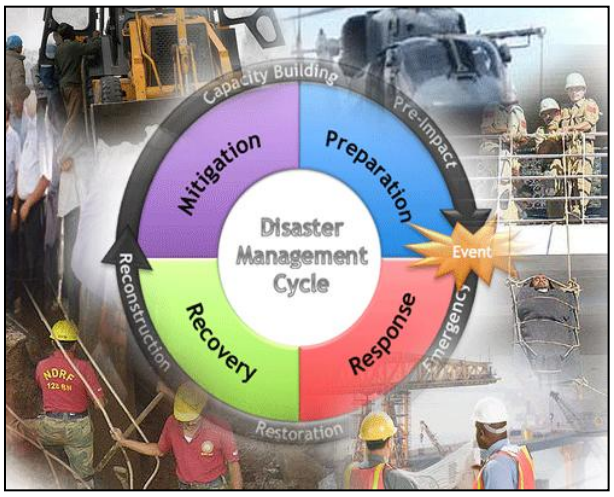
Q2. What would you do while assisting civil administration during any disaster?

DM III (SD/SW)

CHAPTER III : DISASTER PREPAREDNESS RESPONSE STRUCTURES

"Disasters often strike the most vulnerable. A structured and inclusive response system ensures that noone is left behind in the recovery process."

MS Swaminathan



HERE ARE SOME TIPS FOR DISASTER PREPAREDNESS

- Know what disasters and hazards could affect your area.
- Learn what to do before, during, and after each type of emergency.
- Draw a floor plan of your home and mark two escape routes from each room.
- Post a copy of the drawings at eye level in each child's room.
- Include one complete change of clothing and shoes per person, including a jacket or coat, long pants, long sleeve shirt, sturdy shoes, hat, mittens, and scarf.
- Also include a sleeping bag or warm blanket per person.

TEACHING INSTRUCTIONS

Period	:	**Two.**
Type	:	**Lecture**
Year	:	**SD/ SW (Second Year & Third Year)**
Conducting Officer	:	**ANO**
Training Aids	:	**Power Point Presentation**

Time-plan

- Disaster Preparedness : 20 Mins
- Response Structure : 20 Mins
- Role, Modalities & Employment of NCC Cadets for Assistance : 40 Mins

INTRODUCTION

1. Disaster preparedness is the process of preparing for and responding to disasters, whether they are natural or man-made. Disaster preparedness consists of a set of measures undertaken in advance by governments, organisations, communities, or individuals to better respond and cope with the immediate aftermath of a disaster, whether it be human-induced or caused by natural hazards. Preparedness is not just the responsibility of governments and agencies but also of individuals and communities. By fostering awareness, encouraging participation, and implementing early warning systems, we can significantly reduce the impact of disasters. In an increasingly vulnerable world, disaster preparedness acts as the first line of defense, emphasizing the importance of readiness in protecting lives and livelihoods.

PREVIEW

The lecture will be conducted in following parts:-

(f) Part I: Disaster Preparedness

(g) Part II: Response Structure

(h) Role, Modalities & Employment of NCC Cadets for Assistance

LEARNING OBJECTIVES

- Define disaster preparedness and response structures and their significance in mitigating disaster impacts.
- Identify key components of disaster preparedness plans, including risk assessment, resource management, and communication protocols.
- Describe the roles and responsibilities of various stakeholders, such as government agencies, non - governmental organizations (NGOs), and community members, within disaster response structures

PART I : DISASTER PREPAREDNESS

2. The four phases of disaster management are:

(a) **Prevention**. Focuses on preventing hazards from occurring, whether they are natural, technological, or caused by humans. Examples of mitigation may can include measures such as:

(i) Clearing space around buildings to create a defensible space against fires.

(ii) Adding levees or improving property drainage to protect from flooding.

(iii) Securing furniture to floors and walls to help prevent damage/injuries during earthquakes.

(iv) Re-locating structures to less disaster-prone areas.

(b) **Preparedness**: The phase where response plans are constructed. **Examples of preparedness** include hosting training, education, drills, tabletop exercises, and full-scale exercises on disaster preparedness.

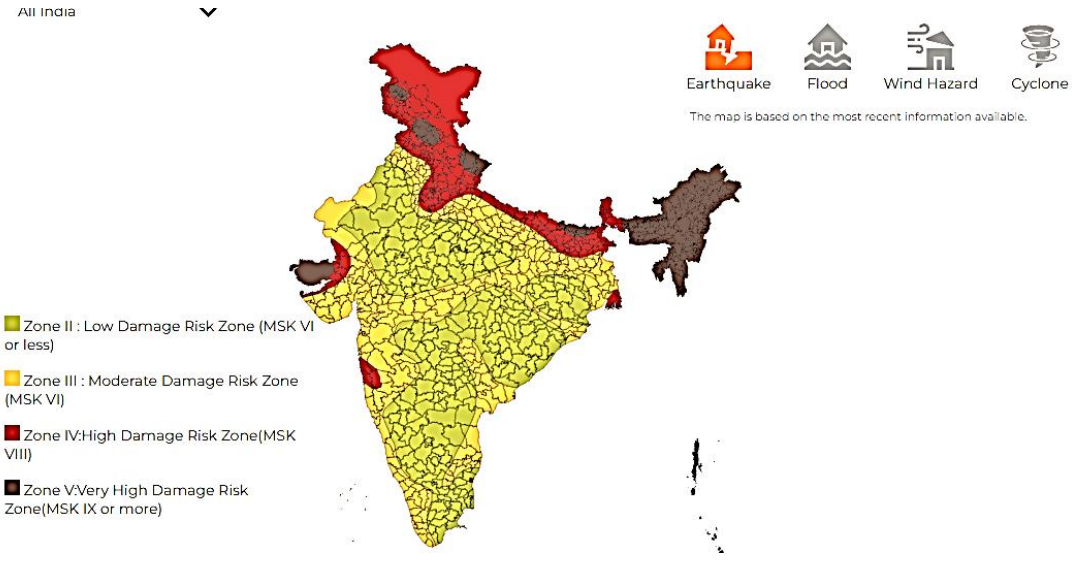
(c) **Response**: The phase where immediate action is taken to limit the hazards created by the disaster. **The most notable example of the response phase is ensuring that people are out of harm's way.** The organization can then move on to assess damage, implement disaster response plans, triage cleanup efforts, and start resource distribution as necessary.

(d) **Recovery**: The effort to return a community to pre-disaster levels of functioning

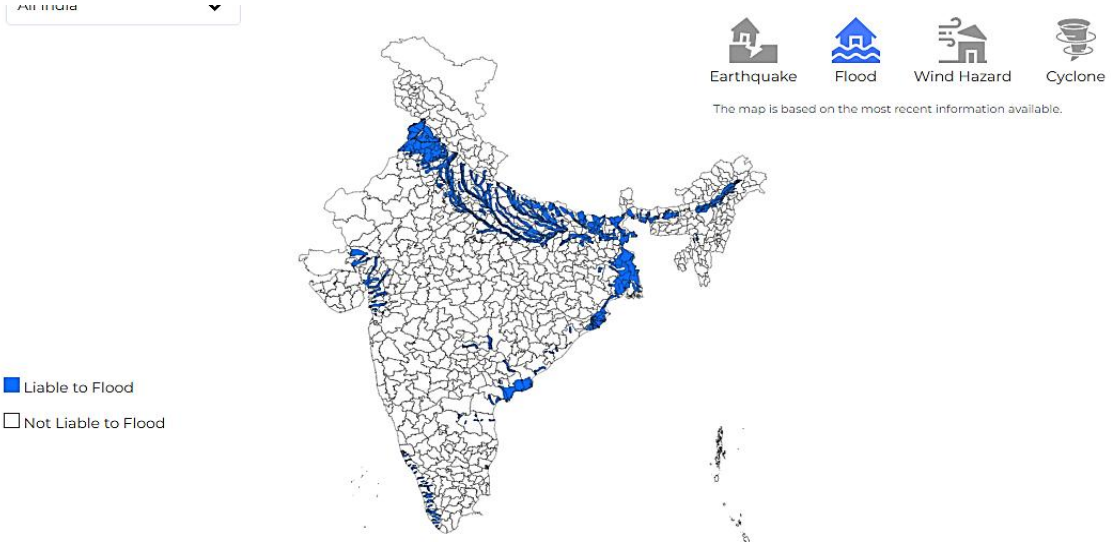
3. Each stage of the disaster management cycle is interdependent and builds on the previous one. The cycle is designed to be holistic, and outcomes should improve with each disaster. For example the organization works to obtain new resources, rebuild or create partnerships, and implement effective recovery strategies.

4. **Profile Mapping of India**.

(a) India is vulnerable, in varying degrees, to a large number of disasters. Around 59% of the landmass is prone to earthquakes of moderate to very high intensity.

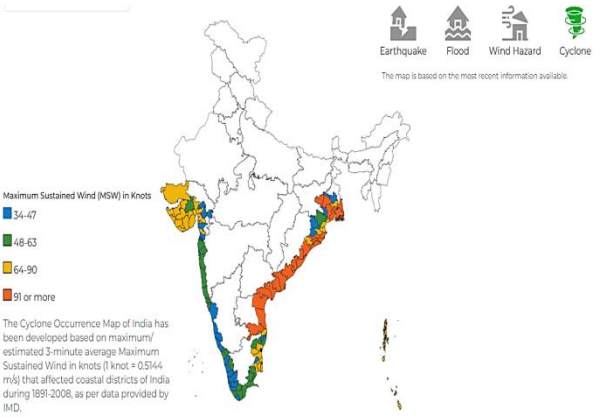


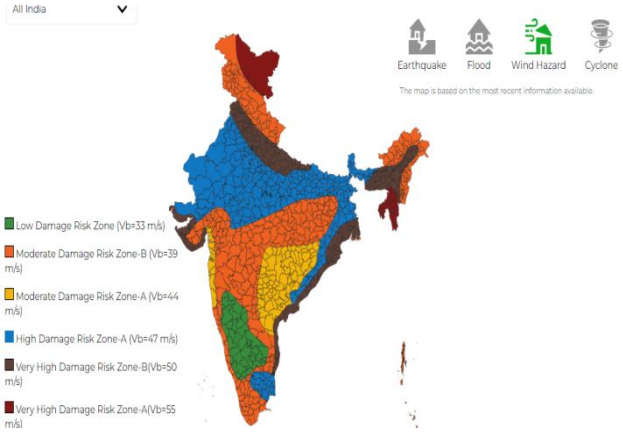
(b) About 12% (over 40 million hectares) of its land is prone to floods and river erosion. Approximately **66 per cent of individuals** in India are exposed to extreme flood events; however, only **33 per cent of the exposed individuals** are covered by flood EWS.



Landmass Prone to Floods

(c) Close to 5,700 kms, out of the 7,516 kms long coastline is prone to cyclones and tsunamis.





(d) 68% of its cultivable area is vulnerable to droughts; and, the hilly areas are at risk from landslides and avalanches.

(e) Moreover, India is also vulnerable to chemical, biological, radiological and nuclear (CBRN) emergencies and other man-made disasters.

(f) Disaster risks in India are further compounded by increasing vulnerabilities related to changing demographics and socio-economic conditions, unplanned urbanization and development within high-risk zones, environmental degradation, climate change, geological hazards, epidemics and pandemics.

(g) Clearly, all these contribute to a situation where disasters seriously threaten India's economy, its population and sustainable development.

5. **Early Warning Systems.** Early Warning Systems (EWS) are a network of tools that monitor and predict potential disasters, such as floods, tsunamis, landslides, volcanoes, and droughts. These are integrated system of hazard monitoring, forecasting and prediction, disaster risk assessment, communication and preparedness activities systems and processes that enable individuals, communities, governments, businesses, and others to take timely action to reduce disaster risks/ impacts in advance An effective EWS should:-

(a) Be holistic and designed to fit people's needs.

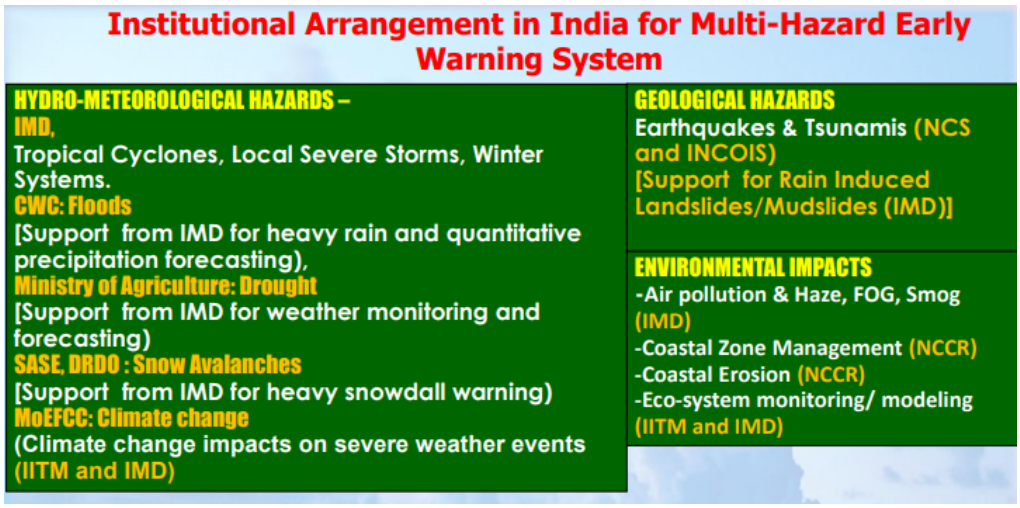
(b) Give people the knowledge and skills they need to prepare.

(c) Provide vital warning time.

(d) Rely on the direct participation of at-risk communities.

(e) Facilitate public education and awareness of risks.

(f) Disseminate messages and warnings efficiently.



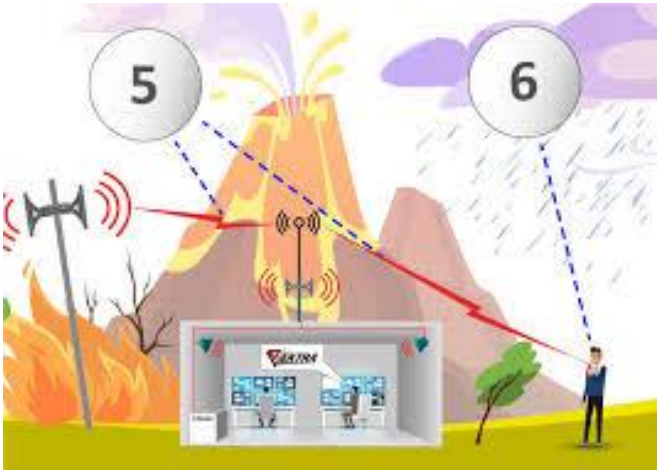
6. India has a number of early warning systems for disasters, which are as under:-

(a) **Cyclone Alert**: Issued 48 hours in advance

(b) **Cyclone Warning**: Issued at least 24 hours in advance, this warning includes information on the cyclone's position, intensity, and the time and location of landfall

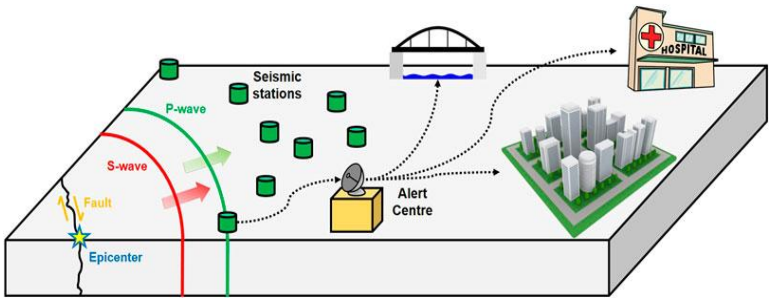
(c) **National Disaster Alert Portal**: **SACHET**: Provides browser notifications for disaster-related information on Google Chrome, Mozilla Firefox, and Microsoft Edge.

(d) **Early Warning Dissemination System (EWDS)**: A system that includes concrete and steel towers to disseminate warnings.

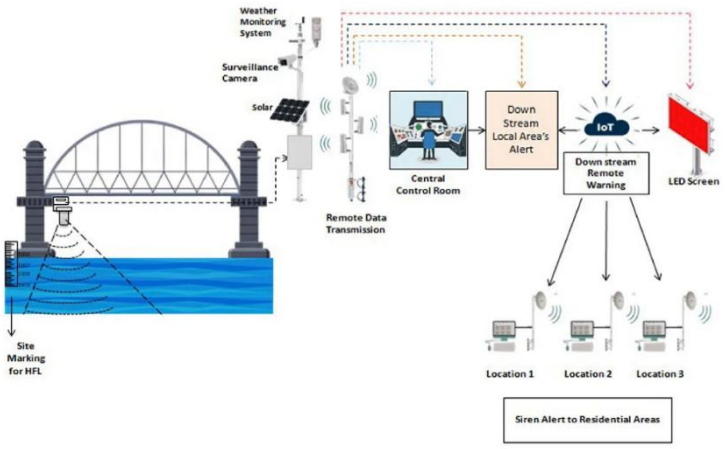


(e) **Weather and Climate EWS**: These systems are designed to provide advance notice of extreme weather events, such as hurricanes, tornadoes, and heat waves, as well as longer-term climate risks such as droughts and floods. They provide advance warning to local authorities and communities, allowing them to prepare and take necessary precautions.

(f) **Earthquake EWS**: These systems use **seismometers** to detect potential earthquakes and provide warnings to people in affected areas. This can give people time to take shelter and protect themselves from potential damage.

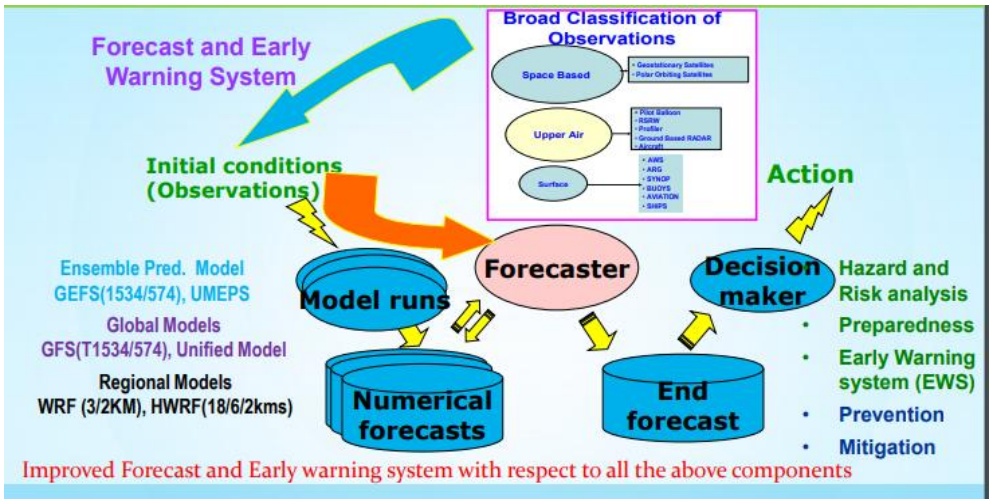


(g) **Tsunami EWS**: Similar to earthquake EWS, tsunami EWS use **sensors** to detect **seismic activity** in the ocean and provide alerts to coastal communities in the path of a potential tsunami.



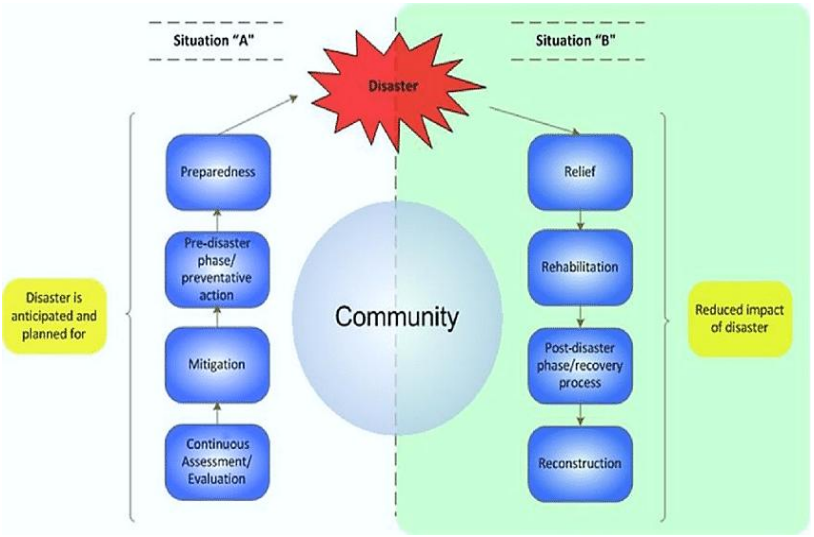
(h) **Wildfire EWS**: These systems use data on weather, vegetation, and other factors to estimate the risk of wildfires and provide alerts to nearby communities.

(e) Accessibility to EWS in India. Most of the exposed population in India can access early warning information through a mobile or telephone connection. More than 88 per cent of Indian states that are exposed to floods and 100 per cent of the states exposed to extreme cyclone events have a high tele density ratio.



7. **Community Preparedness**.

Community Based Disaster Preparedness is a process of bringing people together within the same community to enable them to collectively address a common disaster risk and to collectively pursue common disaster preparedness. Disaster management involves understanding the potential risks in the area, and developing plans to reduce vulnerability and build resilience. Here are some ways to prepare for disasters:



(a) **Understand the risks**. Know the likelihood of disasters, what types might occur, and who could be affected. Also consider the Understanding the communities capacity for managing the mental health impacts of disasters, including knowledge of existing resources and how to access them

(b) **Create a Plan**. Develop a disaster plan that includes information on emergency services, exit maps, and ready reference guides. Update the plan regularly based on new needs.

(c) **Build a Community Profile**. Collect information about the community, including population, socio-economic, and physical characteristics. This information can help identify vulnerabilities.

(d) **Prepare a telephone tree**.Create a list of contact details for disaster response teams, first responders, and other stakeholders.

(e) **Identify Resources**. Identify the resources available in the community, including manpower, systems, and costs.

(f) **Purchase and Distribute Supplies**. Buy supplies that are needed for an effective response and plan how to distribute and maintain them.

(g) **Train the community**. Provide training programs on disaster preparedness and response.

(h) **Use Simulations**. Test different strategies through simulations to optimize response and reduce risk.

(j) **Community Engagement**. Involve the people most likely to be exposed to hazards in disaster risk reduction measures. This can help ensure that emergency management plans meet local needs. Engaging with the local community to understand the capacity for managing the mental health impacts of disasters, available resources and identifying needs from the communities perspective.

8. **Public Awareness Campaign**. A Public Awareness Campaign is defined as a strategic effort to increase knowledge and understanding of risks or issues among the general population through targeted communication and educational initiatives. Effective public awareness and public education (PAPE) programs have been instituted in the country which are based on principles like consistency, standard messaging, scalability, and sustainability. Here are some examples of public awareness campaigns and preparedness in India:

(a) **M Pox Awareness Campaign**. The Indian government has implemented an awareness campaign to educate healthcare providers on the signs and symptoms of M Pox. The campaign also emphasizes the importance of reporting cases to the surveillance system in a timely manner.

(b) **Heatwave Prevention Posters**. The Hathras District Administration collaborated with artists and cartoonists to create posters on heatwave prevention. The posters were shared on social media platforms like WhatsApp and Twitter to raise awareness and emphasize the importance of preventive measures.

(c) **Public Awareness Campaigns For Arsenic Contamination**. Public private partnerships have implemented public awareness campaigns to combat arsenic contamination in areas of India. These campaigns include small projects like water filtration plants and supply from safe wells.

(d) Certain other ways to prepare people for disasters is as under,

(i) Identify evacuation routes in buildings, schools, hospitals and neighbourhood during natural and man-made calamity which is regularly practiced.

(ii) Regular announcements and trainings for flood preparedness, know how to turn off the electricity in case of flooding.

(iii) Checking of people especially older people during heat wave and broadcast on social media on the rise in temperature and precautions to be taken.

(e) **COVID Awareness**. Publicity on social media by various individuals. Distribution of mask sand announcements for knowledge on the Pandemic.

PART II : RESPONSE STRUCTURES

9. **National Disaster Management Authority**. The National Disaster Management Authority (NDMA) is the apex body in India for disaster management

(a) NDMA was established through the Disaster Management Act, 2005 enacted by the Government of India, and was formally constituted by Dec 2006.

(b) It is a **Statutory Body** for disaster management in the country.

(c) **Mandate**: Its primary purpose is to coordinate the response to natural or man-made disasters and for capacity-building in disaster resiliency and crisis response. It is also the apex body to lay down policies, plans and guidelines for Disaster Management to ensure a timely and effective response to disasters

10. **Organisational Structure of NDMA**.

(a) The Prime Minister is the ex-officio chairperson of the NDMA.

(b) The Cabinet Minister is the Vice-Chairman.

(c) The NDMA Secretariat, headed by a Secretary, is responsible for providing secretarial support and continuity.

(d) Along with this, NDMA has 8 Ministers of State as its Members.

11. The NDMA's role and functions are as under:-

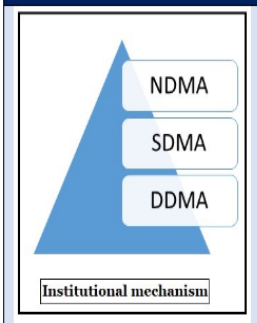
(a) **Policymaking**. The NDMA creates policies, plans, and guidelines for disaster management. It also approves the National Disaster Management Plan (NDMP) and plans from government ministries and departments.

(b) **Coordination**. The NDMA coordinates the implementation of disaster management plans and policies. It also provides guidelines to state disaster management authorities for preparing their plans.

(c) **Support to Other Countries**. The NDMA can provide support to other countries that are affected by major disasters.

(d) **Early warning Systems**. The NDMA develops early warning systems and forecasting tools.

(e) **Response and Relief**. The NDMA ensures efficient response and relief to disasters, with a focus on the needs of vulnerable communities.



Institutional Mechanism	Authority	Head
	National Disaster Management Authority (NDMA)	Prime Minister
	State Disaster Management Authority (SDMA)	Respective Chief Ministers
	District Disaster Management Authority (DDMA)	Either District Magistrate or District Collector

(f) **Reconstruction**. The NDMA works to build disaster-resilient structures and habitats through reconstruction.

(g) **Partnerships**. The NDMA promotes partnerships with the media and other stakeholders to improve disaster management.

12. **National Executive Committee**. The National Executive Committee is mandated to assist the NDMA in the discharge of its functions and have the responsibility for implementing the policies and plans. National Executive Committee has following functions:-

(a) Act as the coordinating and monitoring body for disaster management;

(b) Prepare the National Plan to be approved by the National Authority;

(c) Coordinate and monitor the implementation of the National Policy;

(d) Lay down guidelines for preparing disaster management plans by different Ministries or Departments of the Government of India and the State Authorities;

(f) Monitor the implementation of the National Plan and the plans prepared by the Ministries or Departments of the Government of India;

(h) Monitor, coordinate and give directions regarding the mitigation and preparedness measures to be taken by different Ministries or Departments and agencies of the Government;

(k) Plan and coordinate specialised training programme for disaster management for different levels of officers, employees and voluntary rescue workers;

(l) Coordinate response in the event of any threatening disaster situation or disaster;

(m) lay down guidelines for, or give directions to, the concerned Ministries or Departments of the Government of India, the State Governments and the State

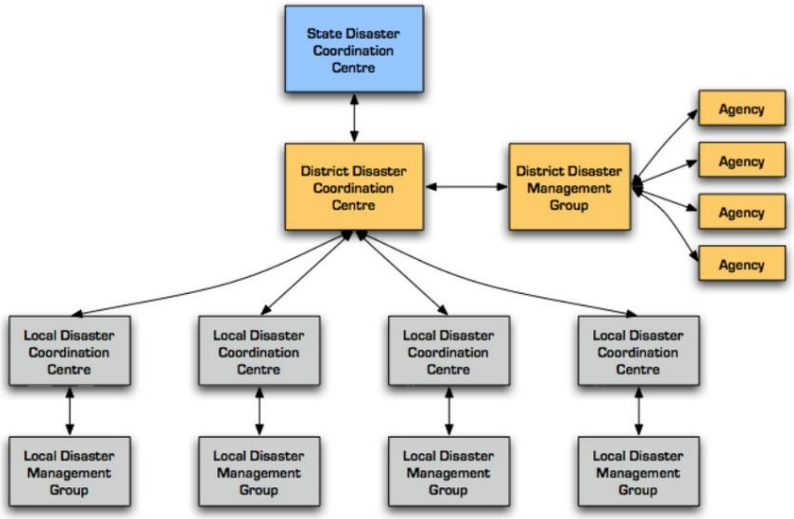
Authorities regarding measures to be taken by them in response to any threatening disaster situation or disaster;

(n) Advise, assist and coordinate the activities of the Ministries or Departments of the Government of India, State Authorities, statutory bodies, other governmental or non-governmental organisations and others engaged in disaster management;

(o) Provide necessary technical assistance or give advice to the State Authorities and District Authorities for carrying out their functions under this Act;

(p) Promote general education and awareness in relation to disaster management;

13. **Response Structure at State and District Level.** The chief aim of disaster response is **to immediately press in the emergency services to maintain or improve the life, health, and property of the community**.



(a) **State level**. The State Disaster Management Authority (SDMA) is responsible for the state-level action plan during a disaster. The State disaster management authorities (SDMA) with the Chief Minister as the chairperson is responsible for the state-level action plan during a disaster. While the District level institutions are led by the Collector. It is responsible for planning and executing the plan at the district level. **The State Disaster Response Force (SDRF)** of the State level, is a specialized force that responds to disasters and emergencies in a state. The SDRF responds to a variety of disasters, including Floods, earthquakes, road accidents, train accidents, fires, chemical/ biological/ radiological/ nuclear and bore well disasters. The SDRF's responsibilities include:-

(i) Removing debris

(ii) Evacuating injured and dead people

(iii) Providing first aid

(iv) Delivering relief materials

(v) Coordinating with other organizations

(vi) Training civil police

(vii) Conducting awareness campaigns

(b) **District level**. The District Management Disaster Authority (**DDMA**) is responsible for planning and executing the district-level plan. The Deputy Commissioner, Collector, or District Magistrate is the head of the DDMA. The Deputy Commissioner is the focal point for all disaster-related activities at the district level. The District level management is as under:-

(i) **Block-Level Disaster Management Authority**. The nodal officer leads the block level disaster management committee. It assists the block level administration to come up with a management plan accordingly.

Designation	Status
Deputy Commissioner	Chairperson
Chief Executive Member	Co-Chairperson
Addl. Deputy Commissioner	Chief Executive Officer
Superintendent of Police	Member
District Medical & Health Officer	Member
Executive Engineer, PWD, Roads	Member
District Agriculture Officer	Member

(ii) **Village-Level Disaster Management Authority**. Sarpanch/ Village head leads the village disaster management authority. It teams with local bodies to take action in case of disaster. Both block and village level disaster management authorities are the immediate authority to respond to disastrous events.

(c) **Other organizations**. The State EOC and State steering committees are also important organizations that regulate disaster management activities in the state.

(d) **The Incident Response System (IRS**). IRS is a mechanism to reduce ad-hoc measures in response to disasters. The IRS aims to: Reduce confusion and chaos, Ensure proper documentation of activities, Standardize and strengthen the disaster response mechanism, and Minimize loss of life and property.

14. Response measures include Rescuing and evacuating victims and property, Meeting basic needs, Protection, Managing refugees, and Restoring infrastructure and facilities.

15 **Community and Local Level Response**. Community-based disaster management has emerged as a primary priority area in disaster risk management. Communities are the first responders during the disaster, thus communities become significant in disaster response, mitigation, and management interventions. Hence Community-based Disaster Risk Management (CBDRM) is an approach that seeks to actively engage at risk communities in the identification, analysis, implementation, monitoring and evaluation of disaster risks in order to reduce their vulnerabilities and enhance their capacities.

PART III : ROLE AND EMPLOYMENT & MODALITIES OF PROVIDING ASSISTANCE BY NCC CADETS

16. Being qualified in First Aid, Basic Home Nursing, Signals and having developed leadership traits and learnt about Social Services, Civil Defence and Disaster Management, the cadets of NCC could assist in maintaining the following essential services and important tasks in any and every part of the country in following ways:-

(a) As operators in Telephone Exchange.

(b) As nurses in hospitals or as links between doctors, nurses, patients and hospital technicians. They could also help in maintaining hospital discipline and security.

(c) Assist in establishment and running of First Aid Centers.

(d) Assist civil defence wardens in carrying out their duties.

(e) Carry out neighbourhood campaigns by motivating people to create self-assistance groups.

(f) Counteract gossip and rumours to restore the morale of the people.

(g) Assist the civil authorities whenever feasible and to the best of ability. Some of the areas where cadets can help are:-

(i) Search for and rescue trapped people.

(ii) Salvage destroyed structures and property.

(iii) Distribution of relief material to the affected population for their temporary sustenance.

(iv) Coordinate the flow of relief material from out-side and ensure maximum coverage of territory in provision of relief stores, food and water, avoiding wastage and duplication of work in the same area.

(v) Repair and restore essential services to enable rescue and relief work and for normalization of activities.

17. **Employment of NCC Cadets during Natural Disasters**. For employment of NCC cadets during Natural Disasters, proper SOPs will have to be made in consultation with the DDMA, under the guidelines issued by HQ DG NCC / the State NCC Directorates. The detailed modalities on employment and quantum of cadets to be employed etc. will have to be worked out with the local police authorities. Responsibilities of local traffic police and where cadets can be employed during disaster management stage are as under:-

(a) **Immediate Action.** On receipt of the information about any Disaster taking place, SP/Dy SP concerned shall rush to the spot immediately, with his quick reaction team equipped with adequate communication equipment, rescue material, protective gear, warning signs and contact numbers; assess the situation and inform the SSP about the situation SSP should arrange for additional force from local resources. Some NCC cadets can form part of the group which goes for the immediate action.

(b) **Initial Law and Order.** Local traffic police shall rush to the spot with ropes, search lights and other items for maintaining law and order. NCC Cadets can be incorporated with the local police personnel.

(c) **Cordoning.** The entire affected area shall be cordoned off and no collection of crowds be allowed there. NCC Cadets can be used to cordon off affected areas.

(d) **Casualty Management.** The Traffic Police plays an important role in traffic control and guidance in the chain of evacuation of casualties as injured persons shall be evacuated to the nearby hospital by the PCR vans, ambulances and other modes of conveyance. NCC Cadets can accompany the casualty or be employed as point's man or liaison officer at hospitals.

(e) **Traffic Flow.** No traffic shall be allowed to pass through the affected areas and necessary diversion shall be made accordingly. Diversion points can be manned by NCC cadets in co-ordination with traffic police.

(f) **Emergency Vehicle.** The local traffic police shall ensure clear passage for emergency vehicles until traffic arrangements are made. NCC Cadets can be employed to check and ensure that only emergency vehicles are permitted for right of way.

(g) **Rescue Services.** Help shall be provided to the rescue services and volunteers in all possible manner. This will include guiding the fire tenders,

ambulances etc. to the place of incident through a clear route. NCC Cadets can be co-opted with rescue services and volunteers to guide and escorting duties.

(h) **Adequate Reserve.** Adequate force be kept at the scene of occurrence for traffic control. NCC Cadets can form part of the reserve forces to aid traffic police.

(j) **Maintain Records of Incidents.** The entire scene of incident must be video graphed as early as possible with a view to reconstruct the scene of occurrence, during the course of investigation. NCC Cadets can be employed to video graph and carryout tasks in maintaining of records of incidents.

18. **Assistance by NCC during Natural Disasters.** To carry out disaster rescue and emergency relief operations readily with utmost speed, the state ADG/DDG will be the decision maker, who will act, separately keeping DG NCC informed. The executors will be the Group Commanders / Unit Commanders who will maintain close liaison with the DDMA authorities.

19. **Method of Providing NCC Assistance.** Immediately on receiving any requisition for providing NCC assistance from the district authorities, the CO Unit / Group Commander will take following actions:-

(a) Muster adequate number of SD/JD cadets along with the ANOs and PI Staff. All means of communication should be used for collection of cadets. The ANOs must ensure that their cadets are collected in the shortest possible time.

(b) Organize various action groups of strength 20-30 cadets under an ANO and a PI Staffs'.

(c) Carryout proper briefing of the cadets about the impending task. 134.

(d) Allocate and handover the action groups to the various agencies for providing assistance.

20. **Creation of Groups.** The following groups of NCC cadets need to be created for providing assistance:-

(a) **Traffic Control Group**. This group provides assistance to traffic police.

(b) **Relief Group.** This group provides assistance to collect and distribute relief materiel such as food supply, cloth, kerosene, diesel, utensils etc. and coordinate all the relief requirement of the other action groups.

(c) **Shelter Management Group**. This group will be employed for establishment or looking after shelters and safe houses providing the evacuees' food, water and medication requirements. This group can also coordinate with the government authorities to ensure that health and nutrition facilities are available for the extra vulnerable groups, like women and children.

(d) **Evacuation and Rescue Groups.** The members of this group have to be physically strong (both SD and SW), and should be trained in basic evacuation and rescue method. The members of this group should coordinate with state government to get facilities for rescue and evacuation in terms of rescue training, rescue infrastructure and equipment.

(e) **First Aid Medical Groups.** There should be equal number of JD/SD and JW/SW cadets in this group. Those with some knowledge of nursing will be preferable. The members will have to go through intensive training and drills for first aid medical assistance.

INTERESTING FACTS

- ATMs and electronic payment systems often fail during disasters due to power outages. Having cash in small denominations is an essential part of an emergency kit.
- Disaster experts recommend being self-sufficient for at least 72 hours after a disaster because it can take that long for first responders to reach affected areas.
- Countries with strict building codes, like Japan, experience far fewer fatalities during earthquakes than those without them
- Having a “go bag” ready can make evacuation faster and less stressful

(f) **Sanitation Groups.** This group can consist of girl and boy cadets, who will look after the sanitation responsibilities both at the shelter as well as outdoors.

21. **Command and Control**. NCC cadets will be activated on the orders of ADG NCC of the Directorate and will be under the command and control of the respective Battalion HQ. The employment is completely voluntary.

CONCLUSION

22. Disaster preparedness and response structures can help reduce the loss of life and livelihoods, and build the resilience of communities. Disaster management is crucial for reducing the impact of disasters on lives and property. Collective effort. Everyone should take an active role in disaster management to reduce the risk of human life.

23. The assistance provided by NCC cadets in disaster management exemplifies the power of discipline, leadership, and teamwork. Their active participation in rescue operations, relief distribution, and awareness campaigns not only mitigates the impact of disasters but also inspires the community to act collectively. As young leaders, NCC cadets set an example of selfless service, proving that youth can be a powerful force in building resilient societies. By further enhancing their training and resources, their potential to make a difference can be amplified, ensuring a safer and more prepared future for all.

SUMMARY

- The four phases of disaster management are:
  - Prevention:
  - Preparedness:
  - Response:
  - Recovery:
- EWS in India are as under:-
  - Cyclone Alert:
  - Cyclone Warning:
  - National Disaster Alert Portal: SACHET:
  - Early Warning Dissemination System (EWDS):
  - Weather and climate EWS:.
  - Earthquake EWS:
  - Tsunami EWS:
  - Wildfire EWS:
  - **Accessibility to EWS in India**.
- **Community Preparedness**. Here are some ways to prepare for disasters:
  - Understand the risks.
  - Create a Plan.
  - Build a Community Profile.
  - Prepare a telephone tree.
  - Identify Resources.
  - Purchase and Distribute Supplies.
  - Train the community.
  - Use Simulations.
  - Community Engagement.
- **Organisational Structure of NDMA**.
  - The Prime Minister is the ex-officio chairperson of the NDMA.
  - The Cabinet Minister is the Vice-Chairman.
  - The NDMA Secretariat, headed by a Secretary.
  - Along with this, NDMA has 8 Ministers of State as its Members.

- **<u>Employment of NCC Cadets during Natural Disasters</u>**. Responsibilities of local traffic police and where cadets can be employed during disaster management stage are as under:-
  - Immediate Action.
  - Initial Law and Order.
  - Cordoning.
  - Casualty Management.
  - Traffic Flow.
  - Emergency Vehicle.
  - Rescue Services.
  - Adequate Reserve.
  - Maintain Records of Incidents.
- **<u>Assistance by NCC during Natural Disasters.</u>** State ADG/DDG will be the decision maker, who will act, separately keeping DG NCC informed. .

ASSESSMENT EXERCISE

MCQs

Q1. An effective EWS should:-

(a) Be holistic and designed to fit people's needs.

(b) Give people the knowledge and skills they need to prepare.

(c) Provide vital warning time.

(d) All of the above.

Q2. The scientific study of earthquake is called

(a) Seismograph

(b) Seismology

(c) Both a and b

(d) None of the above

Q3. What is the name of instrument used for measuring earthquake intensity?

(a) Modified Mercalli Scale

(b) Metrological scale

(c) Vernier scale

(d) Barometer.

Q4, Head of the NDMA is,

(a) State CMs,

(b) Home Minister of India.

(c) National Disaster adviser.

(d) Prime Minister.

Q5. Community Preparedness involves:

(a) Understand the risks.

(b) Create a Plan.

(c) Build a Community Profile.

(d) All of the above.

Q6. The following groups of NCC cadets need to be created for providing assistance:-

(a) Traffic Control Group.

(b) Relief Group.

(c) Shelter Management Group.

(d) All of the above.

Q7. NCC cadets will be under command of

(a) DDMA

(b) ADG

(c) CO of NCC BN

(d) NDRF.

Q8. In case of Natural Disaster, who are the first responders:-

(a) NCC Cadets.

(b) Armed Forces.

(c) The District Collector.

(d) Local Residents.

Q9. What is the primary function of NDMA?

(a) Conducting elections in disaster-prone areas

(b) Formulating policies and plans for disaster management

(c) Allocating funds to states for disaster relief

(d) Monitoring international disaster

Q10. Under which act was NDMA constituted?

(a) Environment Protection Act, 1986

(b) Epidemic Diseases Act, 1897

(c) Disaster Management Act, 2005

(d) National Emergency Act, 1975

Q11. What is the role of SDMA at the state level?

(a) Conduct military operations during disasters

(b) Organize national-level disaster management drills

(c) Plan and implement disaster management strategies in the state

(d) Approve disaster insurance policies for citizens

Q12. Who heads the State Disaster Management Authority (SDMA)?

(a) The Governor of the State

(b) The Chief Minister of the State

(c) The Chief Secretary of the State

(d) The State Home Minister

Q13. What is the key difference between NDMA and SDMA?

(a) NDMA operates at the local level, while SDMA operates nationally.

(b) NDMA focuses on states, while SDMA focuses on districts.

(c) NDMA coordinates national policies, while SDMA focuses on state-specific strategies.

(d) There is no functional difference between NDMA and SDMA.

Q14. What is the role of District Disaster Management Authority (DDMA) under SDMA?

(a) To implement and coordinate disaster management activities at the district level

(b) To conduct international disaster training programs

(c) To formulate the national disaster response plan

(d) To directly provide funds to the NDMA

Q15. Who chairs the District Disaster Management Authority (DDMA)?

(a) The District Magistrate (DM)

(b) The State Home Minister

(c) The Chief Secretary of the State

(d) The Superintendent of Police (SP

Short Questions

Q1. List out the agencies involved in Disaster Management in India?

Q2. What possible groups can be made for employment od NCC cadets in DM?

Q3. What is the role of NDMA?

Q4, What are the stages of disaster management?

Long Questions

Q1. What is the role of NCC cadets in DM?

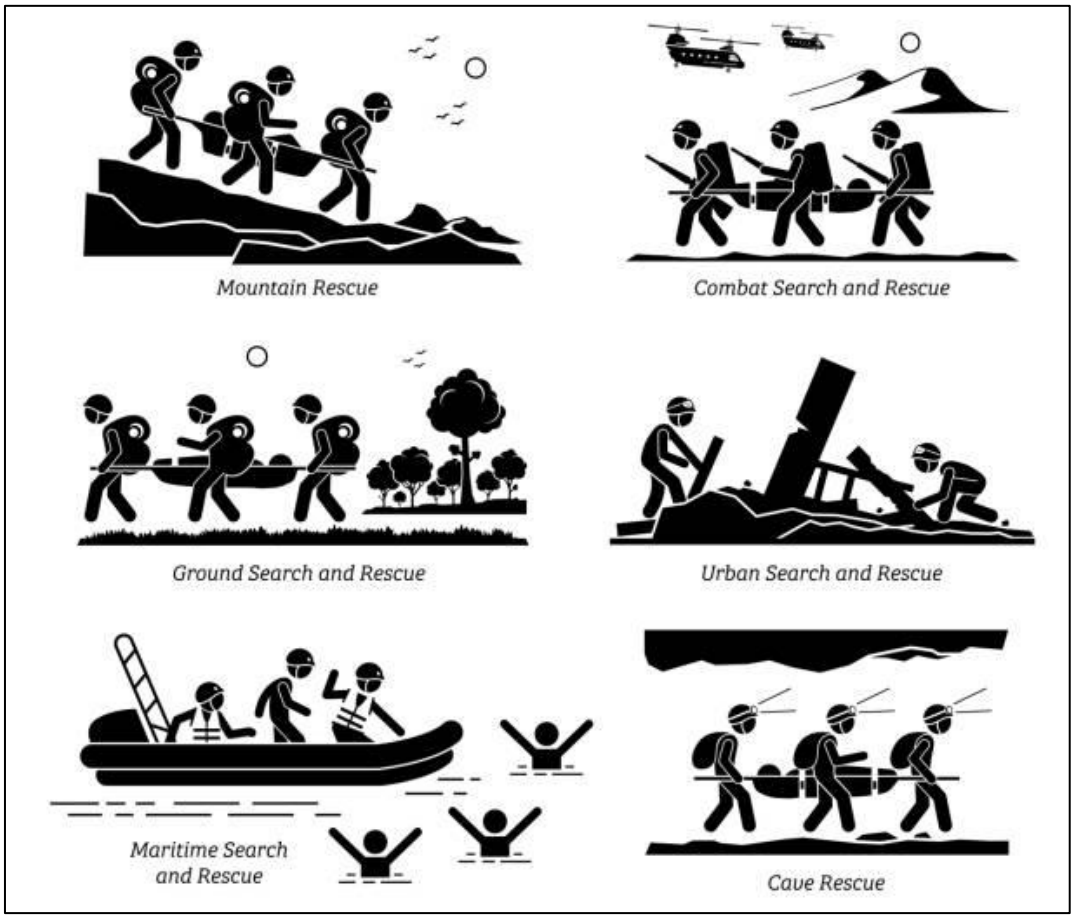
Q2. List out the response structure for DM at state level?

DM IV (SD/SW)

CHAPTER IV : SEARCH AND RESCUE TECHNIQUES – LOCATE & EXTRICATE

"There's no harm in hoping for the best as long as you're prepared for the worst"

- Stephen King



TEACHING INSTRUCTIONS

Period	**:**	**One.**
Type	**:**	**Lecture**
Year	**:**	**SD/ SW (Third Year)**
Conducting Officer	**:**	**ANO**
Training Aids	**:**	**Power Point Presentation**

Time-plan

- Part - I: Search and Rescue Techniques : 15 Mins
- Part - II: Tools and Procedures Required for Search : 10 Mins
- Part - III: Training and Preparedness : 15 Mins

INTRODUCTION

1. Search and Rescue (SAR) techniques are specialized methods and practices used to locate, assist, and evacuate individuals in distress or trapped due to natural or man-made disasters. Whether responding to earthquakes, floods, building collapses, or wilderness accidents, SAR operations play a critical role in saving lives and minimizing the impact of emergencies.

2. These techniques combine systematic planning, advanced tools, and skilled personnel to conduct efficient and safe rescue missions. From locating victims in challenging terrains to providing immediate medical aid, SAR requires a high degree of coordination, teamwork, and situational awareness. The development and mastery of SAR techniques are essential for first responders, emergency teams, and even volunteers, as they ensure timely intervention and effective disaster response.

PREVIEW

The lecture will be conducted in following parts:-

(a) Part I: Search and Rescue Techniques

(b) Part II: Tools and Procedures Required for Search

(c) Part III: Training and Preparedness

LEARNING OBJECTIVES

- Understanding Basics of Search and Rescue.
- Learn Hazard Assessment
- Understand various Search and Rescue Techniques
- Communication and Coordination
- Train on Use of Equipment
- Appreciate the role of coordination and collaboration among stakeholders in effective disaster response with involvement of NCC.

PART I : SEARCH AND RESCUE TECHNIQUES

3. **Search and Rescue Techniques**.Search and Rescue refers to the organized efforts to locate and extract victims who are trapped or in need of assistance during natural disasters or emergencies.

4. The primary principles of search and rescue are as follows:-

(a) Maintain rescuer safety at all times.

(b) Rescue the greatest number of people in the shortest amount of time.

(c) Rescue the lightly trapped victims first.

(d) Timelines with rapid response and prioritization.

(e) Organization and Coordination

(i) Unified Command.

(ii) Inter-Agency Collaboration

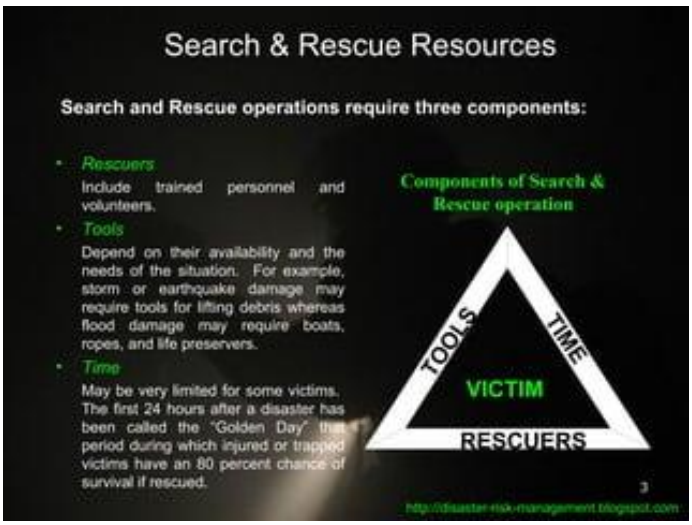
(ii) Communication:

(f) Situational awareness.

(g) Victim prioritization.

(h) Rescue techniques.

5. Search and rescue techniques & procedures during disaster management include:-



(a) **Crawling**: Crawl into the room, keeping close to the wall and near the floor where there is less smoke and heat.

(b) **Searching**: Search under and on beds, and inside cupboards and wardrobes. Cross the room diagonally to make sure no one is in the middle.

(c) **Victim management**: Continue searching until the last victim is rescued while ensuring rescuer safety.

(d) **Positive Attitude**: Maintain a positive attitude to sustain morale and focus. Be positive about the possibility of finding and saving the victim.

(e) **Communication**: Identify yourself as a rescuer, and be calm and confident in your voice and words.

(f) **Drones**: Use drones to map large areas, identify possible hiding places, and provide situational awareness. Drones can be equipped with thermal or infrared cameras to provide valuable information, especially at night. (For awareness only)

6. **General Search and Rescue (SAR) Procedures** Search and Rescue (SAR) operations follow systematic procedures to ensure the safe and effective rescue of individuals in distress. These procedures are designed to prioritize human life while minimizing risks to rescuers and others involved. The general SAR procedures include the following steps:-

(a) **Assessment and Planning.**

(i) Evaluate the Situation.

(ii) Identify Hazards.

(iii) Set Objectives.

(iv) Develop a Plan.

(b) **Mobilization of Resources.**

(i) Team Deployment.

(ii) Gather Equipment.

(iii) Establish Command.

(c) **Search Operations**.

(i) Area Reconnaissance.

(ii) Search Patterns.

(iv) Use of Technology.

(d) **Rescue Operations**.

(i) Stabilize the Scene.

(ii) Access Victims.

(iii) Provide First Aid.

(iv) Evacuate Safely.

(e) **Communication and Coordination.**

(f) **Documentation and Reporting**. All actions should be videographed and documented after the operation.

(g) **Safety and Risk Management**. Ensuring safety of rescuer at all times and of the equipment being used.

7. **Types of Search and Rescue Techniques.** Search and rescue techniques are diverse and adaptable to various disaster scenarios, from urban collapses to wilderness emergencies. Success relies on proper training, the use of specialized equipment, and coordinated efforts to ensure the

safety of both rescuers and victims

(a) Trench and excavation search and rescue.

(b) Technical rope rescue.

(c) Structural collapse search and rescue.

(d) Confined space search and rescue.

(e) Vehicle and machinery search and rescue.

(g) **Underwater and Dive Search**. Used in water-related incidents (e.g., drownings, floods). Techniques involve Sonar systems to detect objects underwater and Dive teams to search lakes, rivers, or submerged areas.

(h) **Wilderness search and rescue.**

(j) **Ground Search.** Used for locating individuals in urban, rural, or wilderness settings. Techniques include **Grid Search, Line Search, Tracking, Visual and Audible Searching**.

(k) **Aerial Search.** Utilizes drones, helicopters, or planes for searching over large or inaccessible areas.

(l) **Canine-Assisted Search**. Specially trained dogs are used to locate victims by scent, especially in collapsed structures or wilderness.

(m) **Urban Search**. Specialized for collapsed buildings or urban disasters. Methods include using cameras, listening devices, and infrared sensors.

8. **Rescue Techniques**.

(a) **High-Angle or Rope Rescue**. Used for victims trapped in steep terrain, cliffs, or tall buildings. Techniques include rappelling, rope systems, and pulley setups for safe extraction.

(b) **Confined Space Rescue Technique.** Focused on rescuing victims trapped in small or enclosed spaces like tunnels, mines, or caves. Requires specialized equipment like breathing apparatus, lighting, and narrow stretchers.

(c) **Water Rescue.**

(i) **Swift Water Rescue:** For fast-moving currents (e.g., river flooding).

(ii) **Still Water Rescue:** For lakes or ponds.

(iii) Techniques include using boats, flotation devices, and throw bags.

(d) **Air Rescue.** Helicopters or aircraft are used to extract victims from inaccessible areas. Includes winching techniques and airlifting injured individuals.

(e) **Vehicle Extraction**.Removing victims trapped in vehicles after accidents using tools like the "Jaws of Life" or hydraulic cutters.

9. **Disaster-Specific Techniques.**

(a) **Avalanche Rescue.** Using probes, beacons, and trained dogs to locate victims under snow. Quick shoveling techniques for safe extraction.

(b) **Structural Collapse Rescue**. Tools like search cameras, thermal imaging, and acoustic sensors to locate and rescue victims trapped under debris.

(c) **Hazardous Material (HazMat) Rescue**. Handling victims exposed to chemical, biological, or radiological hazards. Requires decontamination techniques and the use of HazMat suits.

(d) **Wilderness Rescue**. Techniques include navigation, tracking, and survival skills for prolonged rescues in remote areas.

10. **Technological and Modern Techniques.**

(a) **Use of Drones**. Drones equipped with cameras, GPS, and sensors for aerial search. Particularly effective in inaccessible terrains or hazardous environments.

(b) **Thermal Imaging**. Used in nighttime or low-visibility conditions to locate heat signatures.

(c) **Robotics and Sensors**. Robots or remote-operated devices for confined or hazardous spaces.

PART II : TOOLS AND EQUIPMENT REQUIRED

11. Equipment used in disaster management includes:-

(a) **Personal Protective Equipment**. Such as hard hats, protective eyewear, dust masks, leather gloves, and sturdy protective footwear.

(b) **Lighting**. Such as LED lights, headlamps, and LED lanterns

(c) **Tools**. Such as shovels, multi-tools, crowbars, handsaws, and hammers and nails

(d) **Trailers**. Equipped with tools, supplies, and equipment for recovery, such as axes, saws, generators, masks, battery chargers, drills, and extension cords

(e) **Rescue Equipment.** Such as lifebuoys, life jackets, face masks, gas masks, hand gloves, gum boots, safety shoes, helmets, rappelling ropes, climbing ropes, BOB ropes, descenders, ascenders, water jell blankets, harnesses, and safety nets

(f) **Fire Fighting Equipment**. Such as breathing apparatus sets and pumps.

(g) You can also prepare an emergency kit with non-perishable food, water, a flashlight, a portable, battery-operated radio or television, batteries, medicines, anti-bacterial hand wipes or gel, first aid kit, money, seasonal clothing, and sanitation supplies.

12. **Equipment required for Extrication**. Here are some tools and equipment used for extrication:

(a) **Battery-powered Rescue Tools**. Used to create access to people trapped in vehicles by cutting or spreading damaged parts of the vehicle

(b) **Hydraulic Rescue Tools**. Also known as the "Jaws of Life", these tools can cut and spread metal to free people trapped in vehicles

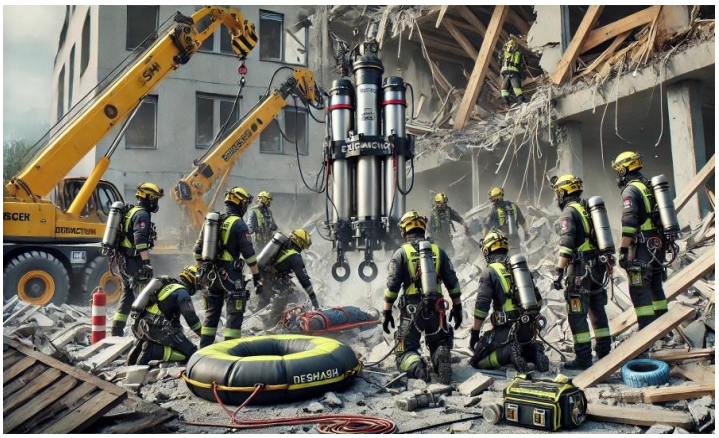
(c) **Lifting bags**: Used to lift heavy objects in spaces with limited clearance

(d) **Extrication Collars and Splints**. Used to stabilize patients and prevent further injury during extraction

(e) **Shoring Equipment**. Used to transfer the weight of an object to the ground, which is important when moving large weights safely

(f) **Cervical Collars**. Used to provide support and stabilization for the neck and cervical spine, especially when there is a suspected neck injury

(g) **Vehicle Stabilization Kits**. Can be used to stabilize any size vehicle, including sub compact cars, buses, cement trucks, and train locomotives



(h) Other tools and equipment used for rescue operations include folding stretchers, inflatable stretchers, scoop stretchers, neck braces, rescue hammers, and emergency blankets

PART III : TRAINING AND PREPAREDNESS

13. **Training and Preparedness**. An important aspect for rescue operations during disaster. Disaster preparedness is important for reducing loss of life and livelihoods. It can be undertaken by governments, organizations, communities, or individuals. Disaster rescue involves a variety of activities, including:-

(a) **Training**: This can include:-

(i) Survival swimming

(ii) Endurance swimming

(iii) Rescue swimming

(iv) Dry and wet lifesaving in floods

(v) Motor boat operation

(vi) Awareness about snakebite prevention and first aid.

(vii) Basic search and rescue diving

(viii) First aid

(ix) Emergency response

(b) **Mock drills**. These can include disaster exercises to reinforce training and test capabilities.

(c) **Equipment and Supplies**. This can include stockpiling equipment and supplies.

(d) **Early Warning Systems**. These can be established to help anticipate and respond to disasters.

(e) **Contingency Plans**. These can be developed to help manage emergencies.

(f) **Public Information**. This can include presenting all-hazards education campaigns.

(g) **Coordination**. This can include developing mutual aid agreements and memorandums of understanding.

(h) **Evacuation**. This can be planned for.

(j) **PPE**. This can include ensuring that appropriate PPE is available and used correctly.

14. **Training Required for Search and Rescue (SAR)**. Search and Rescue (SAR) operations demand a wide range of skills, requiring specialized training to ensure rescuers are prepared to respond effectively in various emergency situations. Here is an overview of the key areas of training required for SAR personnel:

(a) **Basic Rescue Skills**.

(i) **First Aid and CPR**. Certification in first aid and cardiopulmonary resuscitation.

(ii) **Victim Handling**. Training in safe victim stabilization, lifting, and evacuation techniques.

(iii) **Rope Rescue Techniques**. Proficiency in using ropes, harnesses, and other equipment for vertical rescues.

(b) **Search Techniques**.

(i) **Search Patterns**. Training in systematic search methods, such as grid and line searches.

(ii) **Tracking and Navigation**. Skills in map reading, compass use, and GPS navigation.

(c) **Hazard Awareness and Risk Assessment**.

(i) **Situational Awareness**. Ability to assess risks and identify hazards in disaster zones, such as fire, unstable debris, or chemical spills.

(ii) **Disaster - Specific Training.** Knowledge of risks and strategies specific to scenarios like floods, earthquakes, or urban collapses.

(d) **Communication and Coordination.**

(i) **Radio Communication**: Proficiency in using communication devices for team coordination.

(ii) **Team Coordination**. Skills in working collaboratively with diverse teams, including other SAR units and emergency services.

(e) **Equipment Handling**.

(i) **Tool Usage.** Proficiency in operating SAR equipment, such as stretchers, cutting tools, and lifting devices.

(ii) **Maintenance Skills**. Ensuring SAR tools and equipment remain in working condition.

(f) **Scenario-Based Drills and Simulations**. Participating in mock disaster scenarios to practice SAR skills in realistic settings.

15. **Preparedness Required for Disaster Management**.

Disaster preparedness involves proactive measures to minimize the impact of disasters, safeguard lives and property, and ensure an effective response. Below are the key types of preparedness required:

(a) **Individual and Family Preparedness**

(i) **Emergency Supplies Kit**. Assembling essential items such as non-perishable food, water, first aid supplies, flashlights, batteries, and copies of personal documents (ID, insurance, etc.).

(ii) **Evacuation Plan**. Creating a clear plan for evacuating homes, including designated meeting points and routes.

(iii) **Communication Plan**. Establishing a way to stay in contact with family members during emergencies, including backup options like radios.

(iv) **Home Safety**. Securing furniture, reinforcing structures, and installing safety equipment like fire extinguishers.

(b) **Community Preparedness**

(i) **Awareness Campaigns**. Educating the community on disaster risks and preparedness strategies.

(ii) **Community Emergency Plans**. Developing evacuation and shelter plans specific to the community's vulnerabilities.

(iii) **Volunteer Training**. Training local residents in basic first aid, search and rescue, and disaster response skills.

(iv) **Local Resources**. Mapping and organizing local resources such as water supply, medical facilities, and emergency shelters.

(c) **Organizational Preparedness.**

(i) **Emergency Response Teams**. Establishing trained personnel for immediate response.

(ii) **Safety Drills**. Conducting regular evacuation and response drills in workplaces, schools, and public institutions.

(d) **Infrastructure Preparedness**

(i) **Utilities Backup**. Ensuring alternative power, water, and communication systems in case of outages.

(ii) **Transportation Readiness**. Maintaining clear roads and functional transportation systems for evacuation and aid delivery.

(e) **Medical Preparedness**.

(i) **Emergency Medical Kits**: Stocking hospitals and clinics with additional supplies and equipment.

(ii) **Training Healthcare Workers**: Ensuring medical personnel are trained in disaster-specific medical care.

INTERESTING FACTS

- The earliest formalized SAR efforts date back to the **18th century**, when lifeboat crews were established to rescue shipwreck survivors.
- SAR dogs can detect human scent buried under **30 feet of snow** or rubble, making them invaluable in avalanches and earthquakes.
- In SAR, the first **60 minutes** after a disaster are called the **"golden hour"** because victims are most likely to survive if rescued during this critical time
- It takes **12-18 months** to train a search and rescue dog

(f) **Psychological Preparedness.**

(i) Stress Management

(ii) Counseling Resources

(g) **Training and Capacity Building**

(i) **Drills and Simulations**. Conducting regular disaster response exercises for individuals, communities, and organizations.

(ii) **First Aid and CPR Training**. Equipping people with basic life-saving skills.

CONCLUSION

16. Search and Rescue (SAR) operations are critical in saving lives during emergencies, disasters, and distress situations. Effective SAR relies on a combination of advanced techniques, modern technology, and well-coordinated teamwork. Proper training is indispensable, as it equips responders with the knowledge, skills, and physical preparedness to operate in challenging environments, whether in urban areas, wilderness, or at sea.

17. Training programs emphasize search patterns, rescue techniques, safety protocols, and the use of specialized tools and equipment, ensuring responders are ready for any scenario. Moreover, continuous practice and real-life simulations enhance decision-making and adaptability in high-stress situations. Ultimately, the success of SAR operations lies in preparation, collaboration, and the unwavering commitment of responders to save lives and reduce suffering. Comprehensive training not only improves operational efficiency but also safeguards the rescuers themselves, making it an integral part of SAR efforts.

SUMMARY

- Primary principles of search and rescue are as follows:
  - Maintain rescuer safety at all times.
  - Rescue the greatest number of people in the shortest amount of time.
  - Rescue the lightly trapped victims first.
- Search and rescue techniques & procedures during disaster management include:
  - Crawling:
  - Searching:
  - Victim management:
  - Positive Attitude:
  - Communication:
  - Drones:
- **Types of Search and Rescue Techniques.**
  - Trench and excavation search and rescue.
  - Technical rope rescue.
  - Structural collapse search and rescue.
  - Confined space search and rescue.
  - Vehicle and machinery search and rescue.
  - Water search and rescue.
  - Wilderness search and rescue.
- Equipment used in disaster management includes:
  - Personal Protective Equipment:
  - Lighting:
  - Tools:
  - Trailers:
  - Rescue Equipment:
  - Fire Fighting Equipment:
  - You can also prepare an emergency kit
- **Training**: This can include:
  - Survival swimming
  - Endurance swimming
  - Rescue swimming
  - Dry and wet lifesaving in floods
  - Motor boat operation
  - Snake handling
  - Basic search and rescue diving
  - First aid
- Emergency response

ASSESSMENT EXERCISE

Q1. Search and rescue techniques include

a) Crawling

b) Searching

c) Positive attitude

d) All of the above.

Q2. Primary principles of search and rescue are as follows:

a) Maintain rescuer safety at all times.

b) Leave the place if not able to rescue.

c) Try to do everything yourself.

d) Wait for help.

Q3 What is the primary goal of a search and rescue operation?

a) To apprehend a criminal

b) To locate and provide assistance to people in distress

c) To conduct reconnaissance in a disaster area

d) To transport equipment to remote locations

Q4. Which of the following is a widely used search pattern in SAR operations?

a) Circular Pattern

b) Grid Search

c) Zigzag Walk

d) Parallel Overlap

Q5. In urban search and rescue (USAR), what is the first step when arriving at a collapsed structure?

a) Start removing debris

b) Use heavy machinery to clear the area

c) Conduct a scene size-up and ensure safety

d) Send search dogs inside immediately

Q6. What is the primary purpose of using search dogs in SAR operations?

a) To identify dangerous terrain

b) To track scents and locate victims

c) To guard rescue teams from threats

d) To carry supplies to difficult locations

Q7. Which of the following tools is commonly used in fire rescue operations?

a) Pulaski tool

b) Throw bags (rescue ropes packed in bags used in water resues)

c) Fire hose and water

d) Ice axe

Q8. What is the primary role of a SAR commander?

a) To perform technical rescues

b) To manage and coordinate SAR operations

c) To conduct medical treatment on-site

d) To navigate search teams through hazardous areas

Q9. Which of the following is an essential step in documentation SAR operations?

a) Ignoring small leads to save time

b) Videorecording search progress

c) Only focusing on visual evidence

d) Avoiding the use of maps to stay flexible

Q10. Which of the following is NOT typically part of a SAR team?

a) Search dogs

b) Medical personnel

c) Structural engineers

d) Journalists

Q11. What does "SAR" stand for in emergency management?

a) Safety and Rescue

b) Search and Recovery

c) Search and Rescue

d) Save and Respond

Q12. What is the “golden hour” in search and rescue operations?

a) The first hour after a disaster when media coverage is high

b) The time frame in which rescuing victims is most likely to save lives

c) The hour before nightfall when operations cease

d) A metaphor for teamwork and coordination

Q13. In a collapsed building, what is the primary danger for rescuers?

a) Lack of communication

b) Secondary collapses

c) Excessive noise

d) Presence of animals

Short Answers

Q1. What is the type of training required for disaster preparedness?

Q2. What is the kind of kit required for disaster preparedness?

Q3. List the types of search and rescue techniques?

Q4. How are we supposed to be prepared for any disaster?

Long Answers

Q1. What kind of training preparedness required for search and rescue?

Q2. What are the basic principles of SAR?

DM V (SD/SW)

CHAPTER V : MED TRIAGE, PRIORITISING AND CATAGORIZING BASED ON ILLNESS AND INJURY, IMMIDIATE ASSISTANCE

“Medical care is not just a profession; it is a mission to serve humanity. In moments of crisis, the ability to decide quickly and act with precision is what saves lives"

- Anonymous

TEACHING INSTRUCTIONS

Period	**:**	**Three. (01 Period Second Year & 02 Period Third Year)**
Type	**:**	**Lecture and Practical**
Year	**:**	**SD/ SW (Second Year & Third Year)**
Conducting Officer	**:**	**ANO**
Training Aids	**:**	**Power Point Presentation, Charts, Triage Tools**

Time-plan

- Medical Triage : 20 Mins
- Prioritising and Categorizing : 20 Mins
- Immediate Assistance : 40 Mins
- Practical : 40 Mins

INTRODUCTION

1. Injuries caused by emergencies and accidents are increasing in the world. To prioritise patients to provide them with proper services and to optimally use the resources and facilities of the medical centers during accidents, the use of triage systems, a key principle of accident management, are essential. One of the symptoms of disasters is that the immediate needs of the community affected exceed the available resources, so the question is how these resources should be used to have the best outcome for the people. Triage is the allocation of limited resources during a disaster.

2. The sorting of and allocation of treatment to patients, especially battle and disaster victims, according to a system of priorities is designed to maximize the number of survivors. Medical triage is a process where medical professionals and first aid responders prioritize treatment for patients based on their medical condition and the availability of resources. The goal of triage is to maximize the number of survivors by ensuring that limited supplies are allocated to those who need them most.

PREVIEW

The lecture will be conducted in following parts:-

(a) Part I: Medical Triage

(b) Part II: Prioritising and Categorising

(c) Part III: Immediate Assistance

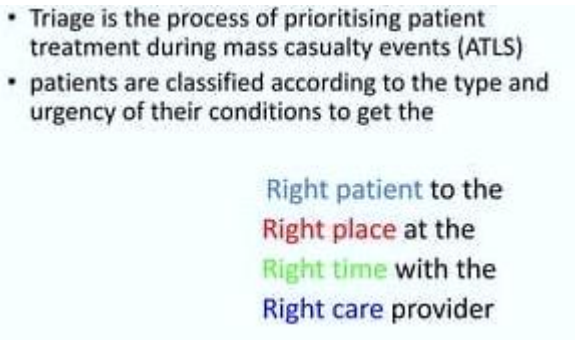
(d) Part IV : Practical

LEARNING OBJECTIVES

- To understand the medical triage and role of triage.
- To define and understand major types of triage practices and prioritizing based on medical conditions.
- To learn the procedure of providing immediate assistance and monitoring.
- Using Triage Tools and Systems

PART I : MEDICAL TRIAGE

3. Triage systems are used in a variety of settings, including emergency rooms, military settings, and disaster areas. The type of triage used depends on the ratio of resources to the number of patients. For example, emergency rooms have a higher resource-to-patient ratio than disaster areas.



4. **Context in which Triage is Used**. Although the concept of triage applies to all resources, “patient care” is the most commonly discussed field for which the notion of triage is used. Triage is one of the key principles of the effective management of major emergencies. The process of triage allows the responders to a disaster, who do not have enough resources to treat everyone, to prioritize care services, so that most services are

provided to the greatest number of injured people, and this is essentially the philosophy of doing triage in disasters and mass casualty incidents.

5. Triage is used in disaster management when:

(a) The number of injured people is greater than the number of rescuers

(b) The community's immediate needs exceed the available resources

6. Medical triage is used in a variety of situations, including:-

(a) **Emergency Departments**. When patients arrive at the emergency room, triage is used to prioritize who needs care first.

(b) **Disaster and Mass Casualty Incidents (MCIs)**. Natural disasters (earthquakes, floods, hurricanes), terrorist attacks, industrial accidents, or other large-scale emergencies to sort victims by injury severity and urgency of treatment to save as many lives as possible. eg, using the START (Simple Triage and Rapid Treatment) system at the site of a collapsed building to categorize patients into immediate, delayed, minor, or deceased categories.

(c) **Understaffed Hospitals**. Times of limited healthcare resources, such as during natural disasters or system overloads to determine how to best allocate limited staff, equipment, or treatment spaces

(d) **Elective Surgeries**. In a hospital, triage may prevent an elective surgery from being performed if there are more urgent cases.

(e) **Pandemics and Public Health Crisis**. Large-scale infectious disease outbreaks, such as COVID-19, influenza pandemics, or Ebola. To allocate limited medical resources (e.g., ventilators, ICU beds) based on the severity of illness and likelihood of recovery. Eg, Hospitals triage COVID-19 patients to decide who requires hospitalization versus those who can recover at home.

(f) **Search and Rescue Operations**. Situations like wilderness accidents, plane crashes, or maritime rescues to evaluate survivors quickly, prioritizing life-threatening conditions for evacuation or immediate care. Eg, rescue teams assess individuals trapped in a snowstorm, prioritizing those with hypothermia over minor injuries.

(g) **Mass Gatherings and Events**. Large public events like concerts, sports events, or political rallies to manage medical emergencies efficiently when dealing with large crowds. Eg, first aid teams at a stadium use triage to decide which spectators need urgent transport to a hospital after an incident

7. **Principles and Objectives**. The principles and objectives of medical triage are to prioritize patients for treatment, evacuation, or transport in order to save as many people as possible:

(a) **Prioritize life-threatening needs**. Triage systems prioritize patients with immediate needs for life-saving treatment.

(b) **Consider Urgent Needs**. Triage systems also prioritize patients with urgent needs for treatment to preserve or restore function or health.

(c) **Fairness**. Triage systems should ensure that no action is taken contrary to the accepted standards and principles of justice.

(d) **Impartiality**. Triage officers should assess each patient's condition impartially and assign treatment priority based on established criteria.

(e) **Efficient use of resources**. Triage systems should manage and categorize needs in response to resource and service constraints.

8. The main objectives of medical triage in disaster management are to:

(a) **Prioritize care**: Triage prioritizes patients based on their clinical urgency and the likelihood of their survival.

(b) **Ensure the Survival of the Community**. Triage focuses on saving the largest number of people possible.

(c) **Allocate patients to the correct Treatment Areas**. Triage assigns patients to predesigned patient care areas.

(d) **Initiate Appropriate Measures**. Triage initiates diagnostic and therapeutic measures as needed.

9. Triage is used when resources are limited, such as in a disaster when there are more injured people than rescuers. Patients are typically categorized into three groups:

(a) **Immediate Patients**. Patients who are likely to benefit the most from immediate care.

(b) **Delayed Patients**. Patients who are likely to survive with delayed or minimal care.

(c) **Expectant Patients**. Patients who are unlikely to survive regardless of care.

PART II : PRIORITIZING & CATAGORISING

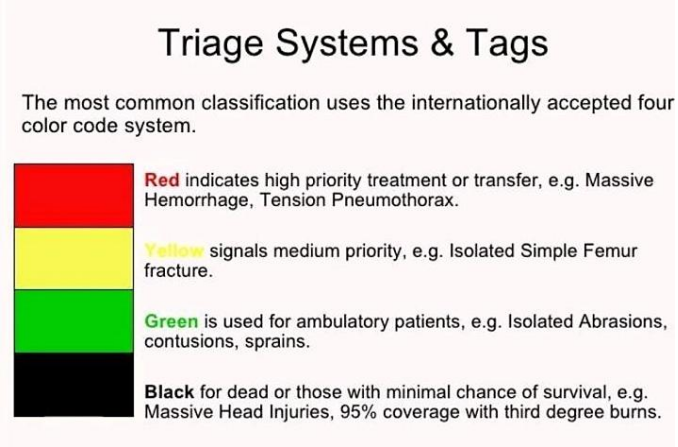
10. Triage separates the injured into four groups:-

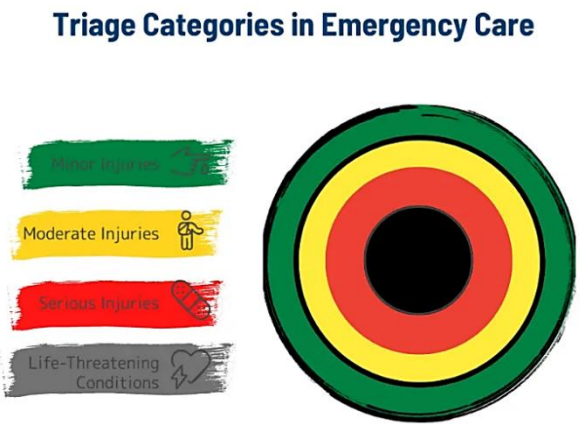
(a) The *expectant* who are beyond help.

(b) The injured who can be helped by *immediate* transportation.

(c) The injured whose transport can be *delayed.*

(d) Those with *minor* injuries who need help less urgently.





11. In general, the triage system has five levels**:**

(a) Level 1 – Immediate: life threatening.

(b) Level 2 – Emergency: could become life threatening.

(c) Level 3 – Urgent: not life threatening.

(d) Level 4 – Semi-urgent: not life threatening.

(e) Level 5 – Non-urgent: needs treatment when time permits.

12. Triage also sets priorities for evacuation and transport as follows:-

(a) **<u>Deceased are left where they fell</u>**. These include those who are not breathing and repositioning their airway efforts were unsuccessful.

(b) Immediate or Priority 1 (Red) evacuation to a medical facility as they need advanced medical care at once or within one hour. These people are in critical condition and would die without immediate assistance.

(c) Delayed or Priority 2 (Yellow) can have their medical evacuation delayed until all immediate people have been transported. These people are in stable condition but require medical assistance.

(d) Minor or Priority 3 (Green) are not evacuated until all immediate and delayed persons have been evacuated. These will not need advanced medical care for at least several hours. Continue to re-triage in case their condition worsens. These people are able to walk and may only need bandages and antiseptic.

13. Types of triages for various scenarios are available on NDMA and NIDM websites.

14. Triage procedures can vary depending on the situation, but generally involve the following steps:

(a) **Primary Triage**. Performed at the scene of an incident by an emergency technician, this step involves quickly assessing the injured person and moving them to a treatment center.

(b) **Secondary Triage**. Performed by an emergency doctor or surgeon at the hospital, this step is used when there are too many injured people for the pre-hospital resources.

(c) **Tertiary Triage**. Performed by a surgeon or critical care specialist, this step involves prioritizing which patients will receive care services and where they will go.

15. **Types of Triage in Different Disaster Situations**. Triage is adapted to suit various disaster contexts and patient needs, with distinct approaches tailored to the type of emergency and available resources. Here are the main types of triage used in different disaster situations:

(a) **Primary Triage (On-Site Triage).** Initial categorization of victims at the disaster site, used in natural disasters (earthquakes, floods) and mass casualty incidents (building collapses, train derailments). The focus is on quickly assess and classify patients based on urgency. Eg, using START (Simple Triage and Rapid Treatment) to assign patients to categories such as Immediate, Delayed, Minor, or Deceased.

(b) **Secondary Triage**. Reassessment of victims after initial triage, typically at treatment or evacuation points, used in emergency department triage after patient transport and field hospitals in disasters. The focus is to refine priorities for treatment and allocate resources more effectively. Eg, in a flood response, secondary triage may reevaluate stable patients for delayed care while prioritizing deteriorating conditions.

(c) **Mass Casualty Triage**. Manage large numbers of casualties with limited resources, used in terrorist attacks, bombings, and mass shootings. The focus is maximize survival by prioritizing those most likely to benefit from immediate care. Systems Used:-

(i) START, Jump START (pediatric version).

(ii) SALT (Sort, Assess, Lifesaving Interventions, Treatment/ Transport).

(iii) Care is categorized into Immediate (Red), Delayed (Yellow), Minor (Green), and Deceased/Expectant (Black).

(d) **Disaster Triage**. A broader term used during large-scale disasters to allocate resources effectively, considering both immediate and long-term needs used in refugee crises, pandemics, or prolonged natural disasters. Eg, in a cholera outbreak in a refugee camp, disaster triage focuses on separating patients with severe dehydration for IV fluids and others for oral rehydration therapy.

(e) **CBRN (Chemical, Biological, Radiological, and Nuclear) Triage**. Address injuries caused by hazardous materials, contamination, or exposure used in chemical spills, nuclear accidents, or biological attacks. The focus is to separate contaminated victims from those unexposed and prioritize decontamination and treatment. Eg, Victims exposed to toxic chemicals may be categorized as Immediate for decontamination and antidote administration, while non-exposed individuals are tagged for delayed treatment.

(f) **Evacuation Triage**. Prioritize victims for transport to medical facilities, used in airlifts from remote disaster areas, maritime rescues, or after major accidents. The focus is to categorize victims for transportation based on urgency, survivability, and distance to definitive care. Eg, in a shipwreck, hypothermic and severely injured individuals are evacuated first.

(g) **Event or Crowd Disaster Triage**. Handle emergencies at large public events like concerts or sports gatherings, used in stampedes, collapses, or terrorist attacks at mass gatherings. Focus is rapidly assess injuries like suffocation, fractures, or head trauma to manage high casualty numbers. Eg, after a stadium collapse, victims are triaged based on breathing and consciousness to determine transport priority.

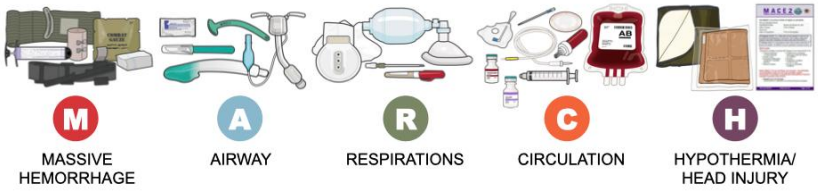
(h) **Mental Health and Psychological Triage**. Sorting individuals based on psychological distress to provide emotional support or refer to specialized care, used in refugee camps, mass casualty incidents, or disasters with significant trauma. Eg, after a terrorist attack, psychological triage identifies victims showing acute stress or PTSD symptoms for immediate support.

16. **Tools and Equipment**. Some tools and equipment used in triage during disasters include:-

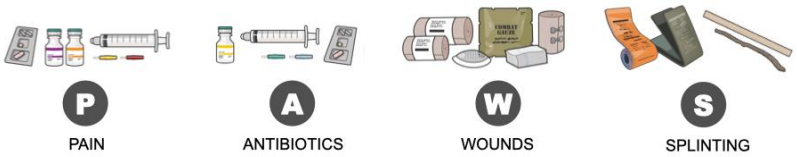
(a) **NHS Major Incident Triage Tool (MITT)**: A single tool for both adults and children that can be used by NHS responders to major incidents

(b) **Emergency Severity Index (ESI)**: A structured tool that helps triage decision making.

(c) **Care Flight Triage**: A tool for rapid triage in mass casualty incidents that evaluates criteria such as walking ability, airway respiration, and palpable radial pulses



(d) **Personal protective equipment (PPE)**: A variety of supplies that protect care providers in the field, such as full safety suits for incidents with hazardous materials or biohazards



(e) **First aid kits**: Can be used to save lives in emergencies such as fires, cuts, earthquakes, and other natural disasters

(f) **Disaster Database Management Systems**: Computer systems that store, manipulate, and retrieve disaster-based data.

(g) **Triage tags**: Premade labels that identify patients, indicate their priority for treatment, and track their progress. Tags can be color-coded or numbered, and can include space for more detailed information.

(h) **Glasgow Coma Scale (GCS)**: A common process used to evaluate a patient's consciousness by assessing their eye-opening, motor, and verbal responses.

(j) **START (Simple Triage and Rapid Treatment)**: A common system that uses a color-coded system.

(k) **Other Equipment**: A triage area may also include a thermometer, pulse oximeter, blood pressure cuff, glucometer, weighing scale, oxygen source, oxygen masks, basic dressing supplies, and a cervical spine immobilization device

17. **Training for Triage.** *Triage training* is considered essential, underpinned by the assumption that improved *triage* knowledge will improve *triage* decision making

(a) **Triage exercises**. These exercises can be part of a disaster training course that includes radio communication exercises.

(b) **Dealing with difficult patients**. Triage nurses need to be trained on how to react to all types of patients, including those who are angry or uncooperative

(c) **Telephone triage**. Registered nurses who are trained to assess patient symptoms and provide guidance over the phone

(d) **Telehealth protocols**. Telehealth consultations can be used to determine the severity of an illness or injury and if further care is needed

Triage Training

(e) **Understanding hospital resources**. It's important to understand the resources available at a hospital to ensure that patients are distributed evenly and receive optimal care.

(f) Triage nurses need to have excellent communication and assessment skills, as well as knowledge of legal and professional principles. They also need to be able to accurately record each patient's information.

18. In addition, following training needs deliberation:-

(a) **Simulation-based training**. Simulation-based training can improve knowledge and performance in triage and crisis management during mass casualty incidents. This should be carried out regularly to train cadets for all scenarios.

(b) **Communication networks**. A triage communication network can incorporate information from first responders, Emergency Medical Services (EMS), and triage officers. There has to be constant communication in all scenarios and also during peace time.

(c) **Drills and simulations**. Hospitals can develop plans that include drills and simulations to ensure a well-coordinated response

CPR Training of Cadets

PART III : IMMEDIATE ASSISTANCE

19. **Search and Rescue.** (SAR) is a vital part of disaster management, involving finding and safely removing victims of a disaster and providing them with medical care. SAR is a response phase activity that is particularly important in the first 72 hours after a disaster, which is known as the "Golden Hour". Following needs to be followed:-

(a) **Evacuation**. Moving people to safer areas before a disaster.

(b) **Humanitarian Aid**. Providing immediate support and relief, such as food, water, shelter, and medical assistance.

(c) **Emergency Medical Services (EMS).** Responding to disasters, including pandemics, as first responders

(d) **Drones**. Using drones to deliver equipment and aid on-ground teams.

(e) **Urban Search and Rescue (USAR).** Specialist teams that assist with search and rescue in urban environments.

(f) **Assessing the Situation**. SAR teams assess the situation and conduct searches.

(g) **Providing Medical Assistance**. SAR teams provide initial medical aid to victims.

(h) **Coordinating with other Emergency Services**. SAR teams coordinate with other emergency services.

(j) **Evacuating People**. SAR teams arrange for the safe transportation of people to shelters, medical facilities, or safe zones.

(k) **Using Specialized Equipment**. SAR teams use specialized equipment like fiber-optic cameras, listening devices, sniffer dogs, cranes, and earthmovers.

20. **Initial Assessment and Rapid Categorization**. Initial patient assessments and rapid categorization of patients are critical parts of emergency care:

(a) **Initial Patient Assessment**. Also known as a primary survey, this assessment is a vital part of prehospital care. It involves a visual inspection, assessing the patient's airway, breathing, and circulation (ABCs), and determining their neurological status.

(b) **Triage**. A quick assessment of a patient in an emergency room to determine the urgency of care and priorities. Triage systems can use a variety of criteria, including walking ability, level of consciousness, and the presence of shock, breathlessness, and injuries.

(c) **Simple Triage and Rapid Treatment (START)**. A triage system used in emergency medicine and mass casualties. START categorizes patients into four priority groups: red, yellow, green, and black.

21. **Immediate Assistance in Initial Assessment and Rapid Categorization of Patients During a Disaster.** In the chaotic environment of a disaster, quick and efficient assessment of patients is crucial to prioritize care and allocate limited resources effectively. The following are key elements of immediate assistance during the **initial assessment** and **rapid categorization** of patients:

(a) **Use of Triage Systems**

(i) Employ standardized triage protocols.

(ii) Triage categories are typically color-coded like red, yellow, green and black as given in the chapter.

(b) **Rapid Primary Survey.** Conduct a **quick, systematic assessment** focusing on:

(i) **Airway.** Check if the patient can breathe or if there's an obstruction.

(ii) **Breathing.** Assess for effective breathing and oxygenation.

(iii) **Circulation:** Identify severe bleeding or signs of shock.

(iv) **Disability.** Evaluate responsiveness using the **AVPU scale** (Alert, Verbal response, Pain response, Unresponsive).

(c) **Immediate Life-Saving Interventions.** Eg, CPR, pressure on bleeding, open airway, etc

(d) **Triage Tags or Markers.** Use **triage tags** or visible markers (e.g., ribbons, colored cards) to categorize patients quickly based on severity.

(e) **Establishing a Triage Area**. Set up a clear and organized triage zone near the disaster site.

(f) Deployment of Trained Personnel

(g) **Tools and Equipment for Initial Assessment**. Use portable medical kits containing:

(i) Tourniquets and wound dressings.

(ii) Basic airway management tools (e.g., oropharyngeal airways).

(iii) Triage tags, markers, or tape.

(iv) Flashlights for assessing pupils and wound visibility in low light.

(h) Documentation**.**

(j) Communication and coordination amongst all agencies.

22. **Logistic Support**. Effective medical triage during disasters or emergencies relies on robust logistical support to ensure rapid response and prioritization within defined timelines. Triage is a process management technique that prioritizes incoming work so that the most critical work is addressed first. In emergency rooms, triage nurses evaluate patients and determine the priority of care. They also provide emergency care when needed and update the medical team on the patient's status. Logistics support for medical triage can include:

INTERESTING FACTS

- The word "triage" comes from the French word *trier*, meaning "to sort."
- It originated during the **Napoleonic Wars** in the early 1800s
- The **Simple Triage and Rapid Treatment (START)** method is widely used in disasters.
- Effective triage was crucial during events like the **2010 Haiti earthquake** and **9/11 attacks**.

(a) **Triage protocols**. These are the procedures that are followed to perform triage

(b) **Triage Officers**. These are the people who perform triage, and they should be appropriately trained

(c) **Triage Support Team**. This team supports the triage officers

(d) **Communication Network**. This network allows for rapid communication between the triage officers and the central triage committee

(e) **Data Collection System**. This system links the front lines and the central triage committee to monitor triage outcomes and situational awareness

(f) **Incident Management System**. This system is used for managing incidents

(g) **Legislative or Policy Framework**. This is the framework that governs triage

(h) **Central Triage Committee**. This committee is responsible for triage

23. **Logistic Support Required for Immediate Assistance in Medical Triage**. Effective medical triage during disasters or emergencies relies on robust logistical support to ensure rapid and efficient prioritization, treatment, and transportation of casualties. Below are the key areas of logistic support required for immediate assistance in medical triage:-

Medical Supplies

(a) **Personnel and Training**. Skilled Medical Teams like Triage officers, doctors, paramedics, and nurses trained in disaster response and specific

triage protocols like START, Jump START, or CBRN. Non-Medical Staff like Volunteers and logistics personnel for patient movement, communication, and documentation. Training and Drills with regular training programs and simulations to prepare staff for high-pressure situations.

(b) **Medical Supplies and Equipment**. Basic Medical Kits like Bandages, splints, IV fluids, antiseptics, tourniquets, and medications (e.g., pain relievers, antibiotics). Advanced Medical Equipment like Ventilators, oxygen tanks, cardiac monitors, and defibrillators. Specialized Equipment like Hazmat suits and decontamination kits for CBRN incidents. Triage Tags and Tools like Color-coded tags, markers, and portable devices for categorizing patients.

(c) **Transportation and Evacuation.**

(i) Ambulances and Emergency Vehicles equipped with life-support systems for transporting critically injured patients.

(ii) Air Evacuation Support like Helicopters or planes for remote areas or critical transfers to higher-level care.

Transportations for Medical Evacuation

(iii) Patient Movement Equipment like Stretchers, wheelchairs, and rescue sleds for rapid evacuation.

(d) **Communication Systems.**

(i) Two-Way Radios and Mobile Devices for real-time communication between triage teams, command centers, and hospitals.

(ii) Centralized Command Systems to coordinate triage activities and allocate resources effectively.

(iii) Patient Tracking Systems like Digital or manual systems to document triage decisions and monitor patient progress.

(e) **Infrastructure and Facilities**.

(i) Field Hospitals and Treatment Areas which are temporary setups near the disaster site for initial treatment and stabilization.

(ii) Triage Stations are designated areas for rapid assessment and categorization of casualties.

(iv) **Shelters and Holding Areas.** For patients awaiting treatment or transportation.

(f) **Energy and Power Supply.** Portable Generators to ensure uninterrupted power for medical devices and communication tools and battery backups for critical equipment like ventilators and monitors.

Medical Shelters during Disasters

(g) **Water, Sanitation, and Hygiene (WASH) Resources**.

(i) Clean Water Supply for wound cleaning, hydration, and sanitation purposes.

(ii) Sanitation Facilities with portable toilets and handwashing stations to prevent infections.

(iii) Waste Management Systems for safe disposal of medical and biological waste.

(h) **Decontamination Resources (CBRN Incidents).** Decontamination Units with protective Gear and designated isolation Areas for managing contaminated patients.

(j) **Resource Management and Allocation.**

(i) Inventory Management Systems to track and manage medical supplies and ensure their availability at triage sites.

(ii) Resource Prioritization for efficient use of limited resources, focusing on saving the most lives.

(k) **Psychological and Emotional Support**. Have Crisis Counselors for patients, families, and responders coping with trauma. Comfort Supplies like blankets, food, and basic necessities for victims in shock or distress.

(l) **Security and Crowd Control.** Security Personnel and barriers and Designated Zones.

(m) **Coordination**. Hospital Readiness ensuring receiving facilities are prepared to handle the influx of patients. Clear guidelines for transferring patients to higher-level care.

24. **Psychological and Emotional Support During Disasters.** Disasters, whether natural or human-made, have profound effects not only on physical safety but also on the psychological and emotional well-being of individuals and communities. While emergency response efforts often focus on addressing immediate physical needs such as food, shelter, and medical aid, it is equally important to provide psychological and emotional support to those affected. Disasters can cause widespread fear, anxiety, grief, and trauma. These emotional responses are natural reactions to the stress of losing loved ones, homes, or livelihoods. For many, the emotional scars of a disaster can last much longer than physical injuries, affecting mental health, relationships, and overall quality of life.

25. The importance of psychological and emotional support lies in helping individuals and communities recover their sense of safety, stability, and hope. It also fosters resilience, empowering people to cope with adversity and rebuild their lives. By addressing emotional needs alongside physical ones, disaster response efforts can promote holistic recovery and long-term well-being. The next chapter will explore the various aspects of psychological and emotional support during disasters, including:

(a) **Understanding Emotional Responses to Disasters** – The psychological effects of disasters and how they manifest in individuals and groups.

(b) **Providing Immediate Psychological First Aid (PFA)** – Practical steps to offer comfort, reduce distress, and ensure safety in the immediate aftermath.

(c) **Long-Term Mental Health Support** – Strategies for addressing prolonged trauma, depression, and other mental health issues.

(d) **Community-Based Approaches** – Leveraging social networks, cultural practices, and collective efforts to foster recovery and resilience.

(e) **Role of Rescuers and Caregivers** – Understanding the psychological challenges faced by responders and how to support their mental health.

CONCLUSION

26. The application, reliability, sensitivity, and specificity of triage systems developed for use in disasters are verified by simulations. However, the correct use of triage systems and their success rates may differ in the real chaotic environment of a disaster. A simple triage system that quickly identifies critical injuries without detailed investigation would be easy to implement in a disaster. As a result, “triage” in disasters is considered the cornerstone of disaster response. Suggested triage systems should be learned and used in disaster situations in order to quickly recognize critical injuries in disasters and to provide care to the maximum number of patients who will benefit, taking into account available resources Triage is a process management technique that prioritizes incoming work so that the most critical work is addressed first. In emergency rooms, triage nurses evaluate patients and determine the priority of care. They also provide emergency care when needed and update the medical team on the patient's status

27. Psychological and Emotional support will be covered in next chapter of Psychological first aid.

SUMMARY

- Triage separates the injured into four groups:
  - The *expectant* who are beyond help.
  - The injured who can be helped by *immediate* transportation.
  - The injured whose transport can be *delayed.*
  - Those with *minor* injuries who need help less urgently.
- In general, the triage system has five levels**:**
  - Level 1 – Immediate: life threatening.
  - Level 2 – Emergency: could become life threatening.
  - Level 3 – Urgent: not life threatening.
  - Level 4 – Semi-urgent: not life threatening.
  - Level 5 – Non-urgent: needs treatment when time permits
- Triage also sets priorities for evacuation and transport as follows:
  - Deceased are left where they fell.
  - Immediate or Priority 1 (red) evacuation
  - Delayed or Priority 2 (yellow).
  - Minor or Priority 3 (green).
- Triage procedures involve the following steps:
  - Primary triage.
  - Secondary triage.
  - Tertiary triage.
- **Tools and Equipment**.
  - NHS Major Incident Triage Tool (MITT).
  - Emergency Severity Index (ESI).
  - Care Flight Triage.
  - Personal protective equipment (PPE).
  - First aid kits.
  - Disaster Database Management Systems.
- **Training for Triage.**
  - Triage exercises.
  - Dealing with difficult patients.
  - Telephone triage.
  - Telehealth protocols.
  - Understanding hospital resources.
- **Logistic Support Required for Immediate Assistance in Medical Triage**.
  - Personnel and Training.
  - Medical Supplies and Equipment.
  - Transportation and Evacuation.
  - Communication Systems.
  - Infrastructure and Facilities.
  - Energy and Power Supply.
- Water, Sanitation, and Hygiene (WASH) Resources.

ASSESSMENT EXERCISE

Multiple Choice Questions

Q1. During a mass casualty incident, which of the following patients should be prioritized for treatment?

a) A patient with minor injuries

b) A patient with life-threatening injuries

c) A patient with moderate injuries

d) All patients should be treated simultaneously

Q2. What is the primary purpose of triage in a disaster setting?

a) To provide immediate treatment to all patients

b) To identify patients who require immediate medical attention

c) To determine the severity of patients' illnesses or injuries

d) To prioritize patients based on their severity of conditions

Q3. How can the triage nurse determine the severity of a patient's condition?

a) By asking the patient how much pain they are in

b) By assessing the patient's vital signs

c) By checking the patient's insurance status

d) By counting the number of family members present

Q4. When conducting triage, which patient would you treat first?

a) A patient experiencing difficulty breathing

b) A patient experiencing a minor headache

c) A patient with a sprained ankle

d) A patient with a minor cut on their arm

Q5. If there are limited resources available during a triage situation, how should patients with similar conditions be prioritized?

a) The youngest patients should always be treated first

b) The oldest patients should always be treated first

c) Patients with a higher chance of survival should be treated first

d) Patients who arrive earliest should be treated first

Q6. What is the initial step in the triage process?

a) Assessing the patients' vital signs

b) Dispensing medications

c) Conducting a detailed medical history

d) Explaining the triage process to the patients

Q7. Which patient is considered the highest priority in triage?

a) A patient with a severe allergic reaction

b) A patient with a minor skin rash

c) A patient with a fractured bone

d) A patient with a common cold

Q8. What is the role of a triage nurse during a disaster situation?

a) To provide psychological support to patients

b) To diagnose patients' conditions

c) To perform surgeries on critically injured patients

d) To allocate resources and prioritize patients for treatment

Q9. In a triage setting, what does the term "triage tag" refer to?

a) A tag indicating the patient's insurance information

b) A tag attached to a patient to track their treatment progress

c) A tag showing the patient's allergy information

d) A tag indicating the patient's level of medical urgency

Q10. What is the purpose of the START triage system?

a) To assess the emotional well-being of patients

b) To determine the order of treatment for patients

c) To identify patients' underlying medical conditions

d) To provide emergency medical training to healthcare professionals

Q11. How does the triage process change during a pandemic situation?

a) All patients are treated on a first-come, first-served basis

b) Patients with non-urgent conditions are treated first

c) Triage resources are prioritized for patients with the contagious disease

d) Patients are not triaged during a pandemic situation

Q12. A patient arrives in triage confused, disoriented, and with slurred speech. What category would you assign them?

a) Immediate (red)

b) Delayed (yellow)

c) Minor (green)

d) Expectant (black)

Q13. How would you categorize a patient with a fractured leg and extreme pain during triage?

a) Immediate (red)

b) Delayed (yellow)

c) Minor (green)

d) Expectant (black)

Short Questions

Q1. What are the levels of triage?

Q2. What is the colour coding used in Triage?

Q3. List out logistic support required during disaster.

Long Questions.

Q1. What is triage and what are the principles of triage?

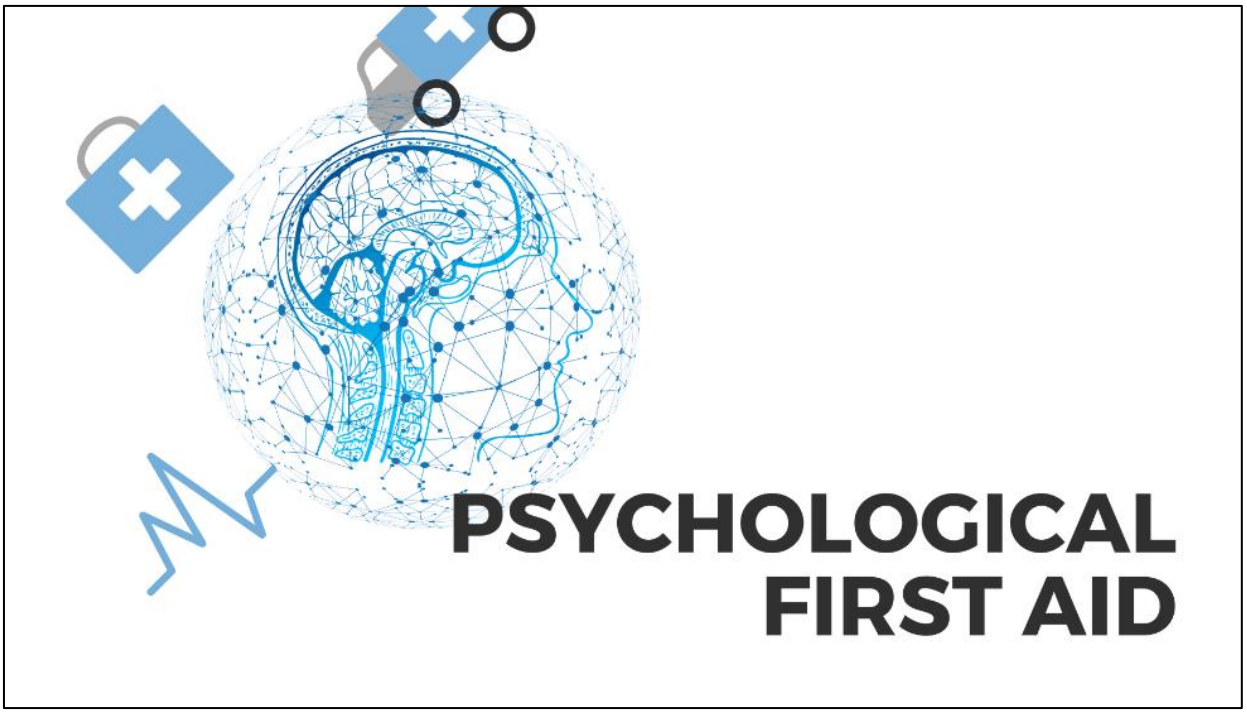
Q2. What is the training required for triage/ medical assistance?

DM VI (SD/SW)

CHAPTER VI : PSYCHOLOGICAL FIRST AID

Mental health is a crucial part of overall health. In times of crisis, extending emotional support can save lives and restore hope."

Dr Manmohan Singh



TEACHING INSTRUCTIONS

Period	:	**Two.**
Type	:	**Lecture and Practice**
Year	:	**SD/ SW (Second Year & Third Year)**
Conducting Officer	:	**ANO**
Training Aids	:	**Power Point Presentation**

Time-Plan

- What is and Why is Psychological First Aid & Key Principles and Components : 20 Min
- Steps in Psychological First Aid and Do's and Don'ts of psychological first aid : 20 Min
- Practical Handling Practice : 40 Min

INTRODUCTION

1. Psychological first aid (PFA) is a technique that can help people recover from a traumatic event or crisis by reducing stress and promoting resilience. It gives additional support to combat disaster and regain self-control. Mental health of a person post trauma helps the individual to be calm and thus avoid post trauma mental stress and further medical conditions. Psychological First Aid (PFA) is an essential approach to supporting individuals who are experiencing emotional distress due to a traumatic event, such as an accident, disaster, or crisis. The goal of PFA is to help individuals feel safe, supported, and able to cope with their immediate emotional needs

PREVIEW

The lecture will be conducted in following parts:-

(a) Part I: Psychological First Aid and Components

(b) Part II: Steps and Do's & Don'ts in PSA

(c) Part III: Practical Handling Practice

LEARNING OBJECTIVES

- **Understanding the Role of PFA Providers in Crisis Situations**
- Understanding the Principles of Psychological First Aid and its need
- Recognizing and Managing Personal Stress and Emotional Responses
- Providing PFA in Different Settings and behaviors and actions to avoid

PART I : PSYCHOLOGICAL FIRST AID AND ITS COMPONENTS

2. **Need for Emotional and Psychological Support**. Emotional and psychological support is important for people affected by traumatic events because it can help them cope and recover:

(a) **Social support**. Social support can help people feel less likely to develop negative psychological outcomes like depression, post-traumatic stress disorder (PTSD), or self-harm. It can also help people recover faster from PTSD.

(b) **Psychological First Aid (PFA).** PFA can help people regain a sense of safety, acknowledge their stress reactions, and make the recovery process quicker. PFA can include education on common stress reactions, connecting people to support networks, and referrals to professional services.

3. Though traumatic events usually have an immediate, mild and transient impact, they also have the potential to impact a person's mental health to a great extent in the long run. Hence, emotional first-aid is crucial for those who have been through a traumatic event. People who experience traumatic events can experience a range of responses, including:

(a) Flashbacks or repeated memories of the event

(b) Nightmares

(c) Intense fear of the event happening again

(d) Withdrawal and isolation

(e) Mood shifts

(f) Anxiety and nervousness

(g) Anger

(h) Denial

(j) Difficulty concentrating

(k) Physical symptoms like headaches, nausea, or chest pain

4. Psychological First Aid (PFA) is a technique that can help people recover from a traumatic event or crisis by reducing stress and promoting resilience:

(a) **What it is**. PFA is a supportive approach that can be used to help people after a crisis, such as a natural disaster, public health emergency, or personal crisis. It's based on the idea that people can be resilient, and it's comparable to providing first aid for physical injuries.

(b) **How it's done**. PFA involves listening to and comforting people, while also helping them feel calm and connect to information. It's important to avoid pressuring people to talk, or making assumptions about how they're feeling.

(c) **When it's used**. PFA can be used in the first days, weeks, or months after a crisis.

(d) **Who can do it**. Anyone in a support role can provide PFA.

(e) **How to learn more**. You can learn more about PFA through courses, such as the Psychological First Aid Course on Coursera. You can also check out the World Health Organization's Psychological First Aid manual for guidance on how to offer PFA.

5. Some tips/ steps for providing PFA include:

(a) **Look**. Assess the safety and security of the situation, and get information about the event and the people who need help. Evaluate signs of distress.

(b) **Listen**. Approach the person, introduce yourself, and actively listen to them.

(c) **Link**. Help the person with their immediate needs and try to solve their issues.

(d) **Avoid**. Don't judge the person, don't give false reassurances, and don't try to solve all of their problems for them. Avoid giving unsolicited advice.

6. The five **key principles** of Psychological First Aid (PFA) are:

(a) **Safety**. Provide a safe environment.

(b) **Calm and Comfort**. Help people feel calm.

(c) Connectedness. Help people build social connections.

(d) **Self-empowerment**. Help people improve their self-esteem.

(e) **Hope**. Promote hope and healing.

7. **The five Components of Psychological First Aid**

(a) **Create a Sense of Safety**. Creating a sense of safety means you communicate to the brain's fight or flight system that the stressful situation is over.

(b) Create Calm.

(c) Create Self and Collective Efficacy.

(d) Create Connection.

(e) Create Hope.

PART II : STEPS FOR PSYCHOLOGICAL FIRST AID AND DO'S & DON'TS

8. The steps of psychological first aid (PFA) are:-

(a) **Look**. Assess the safety of the area and the person in need. Check for people with immediate physical needs or acute mental distress.

(b) **Listen Actively.** Introduce yourself and explain who you are and why you're there in a calm, compassionate tone. Create a Safe Space and encourage the person to share their thoughts and feelings without pressuring them. Use Nonverbal Cues and maintain eye contact. Validate Emotions and acknowledge their feelings by saying things like, "It's understandable to feel this way."

(c) **Link/ Connect**. Connect the person with relevant information, services, and other sources of assistance. Helping survivors access social and community support

(d) **Prepare Yourself.** Understand the Situation and learn about the disaster or crisis context, cultural sensitivities, and potential needs of the affected population. Be clear about your limits and ensure you're not stepping into areas beyond your training.

(e) **Approach Safely.** Make sure the environment is safe for you and the person in distress. Avoid entering areas with ongoing danger. Look for individuals who appear distressed, confused, or in need of help. Approach calmly and respectfully, allowing individuals to feel in control.

(f) **Provide Practical Assistance.** Help individuals address urgent needs such as water, shelter, or medical aid. Assist with practical challenges, such as finding a loved one or accessing resources. Share accurate, simple, and relevant information about what's happening and available support.

(g) **Comfort and Reassure.** Offer calm and empathetic reassurance. Avoid making unrealistic promises. Remind them that distress is a normal response and help is available. Explain that their feelings are valid and common in such situations.

(h) **Encourage Connection.** Assist in connecting individuals with their family or social support network. Encourage talking to trusted friends, family, or community members for emotional comfort.

(j) **Protect from Additional Harm.** Keep conversations confidential and avoid asking intrusive or unnecessary questions. Refrain from assigning fault for the situation or their reactions. Do not expose individuals to distressing details or media coverage of the event.

9. Here are some additional tips for providing PFA:-

(a) **Be respectful**. Ask for permission before entering someone's space or asking questions. Always reassure with age appropriate language, be it child or adult.

(b) **Be a good listener**. Let the person speak first and don't interrupt or rush them.

(c) **Be aware of your boundaries**. Don't touch the person unless it's appropriate.

(d) **Be Non-Judgmental**. Don't judge what the person has done or how they're feeling.

(e) **Don't give False Promises**. Don't make up things you don't know or give false reassurances.

(f) **Don't take away their Strength**. Don't talk about the person in negative terms or make them feel like they can't care for themselves.

(g) **Learn about the crisis**: Learn about the crisis event, available services, and safety and security concerns.

(h) During disaster, address immediate need of food, water and shelter first to comfort the individual and then speak to them.

10. **Do's in Psychological First Aid.** When providing psychological first aid (PFA), you can do the following:-

(a) **Observe**. Politely observe the situation and the person or family before making contact.

(b) **Ask Questions**. Ask simple, respectful questions to understand how you can help.

(c) **Listen**. Actively listen and pay attention to the person's feelings.

(d) **Be Calm**. Speak calmly and remain patient and responsive.

(e) **Be Respectful**. Be courteous and respectful of the person, even if they are not.

(f) **Be Compassionate**. Express compassion and patience, even if the person is difficult.

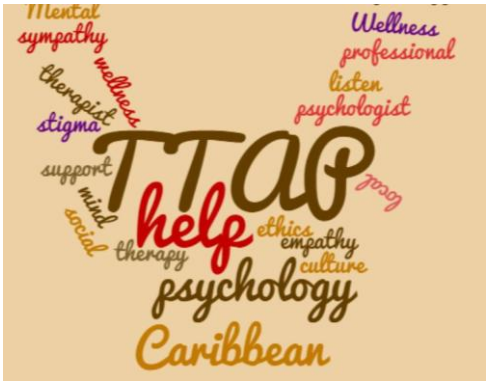
(g) **Be Aware of your Limits**. Don't force your help or try to solve all the person's problems.

(h) **Be Confidential**. Respect the person's privacy and keep their story confidential.

(j) **Be Aware of Culture**. Consider the person's age, gender, and culture.

(k) **Encourage** them to express their emotions.

11. **Don’ts in PFA.**



(a) **Don't make assumptions.** Don't judge the person's actions, feelings, or what they have or haven't done.

(b) **Don't give false Information**. Don't make false promises or give false reassurances.

(c) **Don't talk about Yourself**: Don't talk about your own troubles.

(d) **Don't Touch**. Don't touch the person unless it's appropriate.

(e) **Don't Exploit**. Don't exploit your relationship with the person.

(f) **Don't ask for Money or Favors**. Don't ask the person for money or favors for helping them.

12. **Additional Measures**.

(a) Calm the person in crisis and ask about their needs and concerns. Help the person in crisis with their immediate needs and try to solve their issue(s).

(b) Listen to the individual while providing PFA:-

(i) Approach the person in need of help.

(ii) Introduce yourself.

(iii) Pay attention and listen actively.

(iv) Understand the other person's feelings.

(c) Never make assumptions.

CONCLUSION

13. Psychological First Aid (PFA) is an invaluable tool in addressing the immediate emotional and psychological needs of individuals impacted by traumatic events. Its primary focus on providing support, ensuring safety, and fostering hope underscores its significance in the broader spectrum of disaster response and mental health care. By equipping responders with the skills to listen compassionately, offer practical assistance, and connect individuals to additional resources, PFA helps mitigate the emotional impact of crises and supports the recovery process. Importantly, PFA respects the dignity, cultural values, and unique needs of each person, making it adaptable to diverse populations and settings.

14. As crises and disasters continue to affect individuals worldwide, the importance of PFA cannot be overstated. It not only provides immediate relief but also lays the foundation for resilience and long-term well-being. Training more individuals in PFA ensures that communities are better prepared to handle the psychological challenges that arise during emergencies, fostering a more supportive and empathetic response to trauma.

SUMMARY

- **Psychological First Aid.** Can help individuals cope and recover:
  - Social support.
  - Psychological First Aid (PFA).
- Responses by people who experience traumatic events include:
  - Flashbacks or repeated memories of the event
  - Nightmares
  - Intense fear of the event happening again
  - Withdrawal and isolation
  - Mood shifts
  - Anxiety and nervousness
  - Anger
  - Denial
  - Difficulty concentrating
  - Physical symptoms like headaches, nausea, or chest pain
- Some tips for providing PFA include:
  - Look.
  - Listen
  - Link.
  - Avoid.
- The five key principles of Psychological First Aid (PFA) are:
  - Safety.
  - Calm and Comfort.
  - Connectedness.
  - Self-empowerment.
  - Hope.
- The 5 Components of Psychological First Aid
  - Create a Sense of Safety.
  - Create Calm.
  - Create Self and Collective Efficacy.
  - Create Connection.
  - Create Hope.

Do's.

- Observe.
- Ask questions.
- Listen.
- Be calm.
- Be respectful.
- Be compassionate.
- Be aware of your limits.
- Be confidential.
- Be aware of culture.

- **Don'ts.**
  - Don't make assumptions.
  - Don't give false information.
  - Don't talk about yourself.
  - Don't touch.
  - Don't exploit.
- Don't ask for money or favors.

ASSESSMENT EXERCISE

Multiple Choice Questions

Q1. The Components of Psychological First Aid include

(a) Create a Sense of Safety.

(b) Create Calm.

(c) Create Self and Collective Efficacy.

(d) All of above

Q2. The key principles of Psychological First Aid (PFA) include:

(a) Medicine.

(b) Calm and Comfort.

(c) Rudeness.

(d) Finances.

Q3. PFA means:-

(a) Emotional support

(b) Medical support

(c) Financial support

(d) Educational Support

Q4. What is the primary goal of Psychological First Aid (PFA)?

(a) To diagnose mental health conditions

(b) To provide immediate emotional and practical support

(c) To prescribe medication for trauma

(d) To offer therapy sessions

Q5. Which of the following is NOT a core principle of PFA?

(a) Promote a sense of safety

(b) Encourage self-isolation

(c) Promote a sense of calm

(d) Connect individuals to social support

Q6. Who can provide Psychological First Aid?

(a) Only licensed psychologists

(b) Any trained individual

(c) Only medical doctors

(d) Law enforcement officers

Q7. Which step is part of the PFA approach?

(a) Listen without judgment

(b) Offer financial assistance

(c) Diagnose PTSD

(d) Avoid all discussions of emotions

Q8. What does the 'Look' step in PFA involve?

(a) Observing signs of distress or need for help

(b) Diagnosing psychological disorders

(c) Avoiding interaction with survivors

(d) Administering medical first aid

Q9. In PFA, what does the 'Connect' step focus on?

(a) Building long-term therapeutic relationships

(b) Isolating survivors to ensure calmness

(c) Helping survivors access social and community support

(d) Encouraging survivors to move to a different location

Q10. Which of the following statements aligns with PFA guidelines?

(a) "You shouldn't feel upset about this; it will pass soon."

(b) "I'm here to listen if you'd like to share what you're feeling."

(c) "Let's focus on how you could have avoided this."

(d) "Try not to think about it anymore."

Q11. If a survivor is in acute distress and crying uncontrollably, the PFA responder should:

(a) Tell them to stop crying to stay strong

(b) Encourage them to express their emotions safely

(c) Leave them alone to calm down

(d) Force them to talk about their experience

Q12. What should a PFA responder avoid during a crisis response?

(a) Giving simple, practical information

(b) Making assumptions about how someone feels

(c) Listening actively to concerns

(d) Connecting survivors to available resources

Q13. If a child shows signs of distress after a traumatic event, the PFA responder should:

(a) Ignore the child to focus on the adults

(b) Reassure them with simple, age-appropriate language

(c) Force the child to discuss their trauma in detail

(d) Assume the child will recover without support

Q14. Which of the following actions is a core part of delivering PFA?

(a) Providing ongoing therapy sessions

(b) Addressing immediate needs like food, water, and shelter

(c) Prescribing medications to manage stress

(d) Diagnosing mental health disorders

Short Questions

Q1. What are the principles of PFA?

Q2. How does PFA help people recover?

Q3. List out steps of PFA.

Long Questions

Q1. What is PFA and how do you provide it to affected people?

Q2. List out important dos and donts for PFA.

DM VII (SD/SW)

CHAPTER VII : ORGANISING SKILLS & INTRODUCTION TO COMMAND & CONTROL STRUCTURES

Mental health is a crucial part of overall health. In times of crisis, extending emotional support can save lives and restore hope."

Dr Manmohan Singh

TEACHING INSTRUCTIONS

Period	**:**	**Two.**
Type	**:**	**Lecture**
Year	**:**	**SD/ SW (Second Year & Third Year)**
Conducting Officer	**:**	**ANO**
Training Aids	**:**	**Power Point Presentation**

Time-Plan

- Organising Skills : 40 Mins
- Introduction to Command and Control : 40 Mins

INTRODUCTION

1. Psychological first aid (PFA) is a technique that can help people recover from a traumatic event or crisis by reducing stress and promoting resilience. It gives additional support to combat disaster and regain self-control. Mental health of a person post trauma helps the individual to be calm and thus avoid post trauma mental stress and further medical conditions.

2. Psychological First Aid (PFA) is an essential approach to supporting individuals who are experiencing emotional distress due to a traumatic event, such as an accident, disaster, or crisis. The goal of PFA is to help individuals feel safe, supported, and able to cope with their immediate emotional needs

PREVIEW	LEARNING OBJECTIVES
The lecture will be conducted in following parts:- (a) Part I: Organising Skills (b) Part II: Introduction to Command and Control	➢ Identify the resources available for Disaster management at all levels. ➢ Understand the various parties involved and method of coordination. ➢ Learn the stake holders at all levels for Disaster Management.

PART I - ORGANISING SKILLS

3. Key components of a disaster management command and control system include:

(a) **Incident Command Centers (ICCs).** Serve as hubs for decision-making and coordination.

(b) **Information Management Systems.** Enable real-time data collection, analysis, and dissemination.

(c) **Communication Networks.** Ensure seamless interaction between first responders, government agencies, and the public.

(d) **Resource Allocation Mechanisms.** Optimize the distribution of personnel, equipment, and supplies.

(e) **Standard Operating Procedures (SOPs).** Provide guidelines for coordinated action and role clarity.

4. **Organising Skills Essential & Coordinated Efforts**. Most important is to establish a Command and Control Center. Effective disaster management relies on several key organizing skills to ensure a sufficient and timely response. Here are some essential skills,

by honing these skills, disaster managers can enhance their effectiveness and ensure a more resilient response to emergencies:-

(a) **Planning and Coordination**. Developing comprehensive disaster response plans that outline roles, responsibilities, and procedures. Coordination among agencies, NGOs, and community organizations is crucial.

(b) **Resource Management**. Identifying, allocating, and managing resources (human, financial, equipment) efficiently. This includes logistics for the distribution of supplies.

(c) **Communication Skills**. Establishing clear channels of communication to disseminate information among stakeholders and the public. This includes crisis communication and managing information flow.

(d) **Team Leadership**. Leading and motivating diverse teams, ensuring that everyone understands their roles and responsibilities. Effective leadership fosters collaboration and morale.

(e) **Training and Capacity Building**. Conducting regular training sessions for responders and community members to ensure preparedness and effective response strategies.

(f) **Situational Awareness**. Monitoring and assessing the situation in real-time to make informed decisions. This includes gathering and analyzing data quickly.

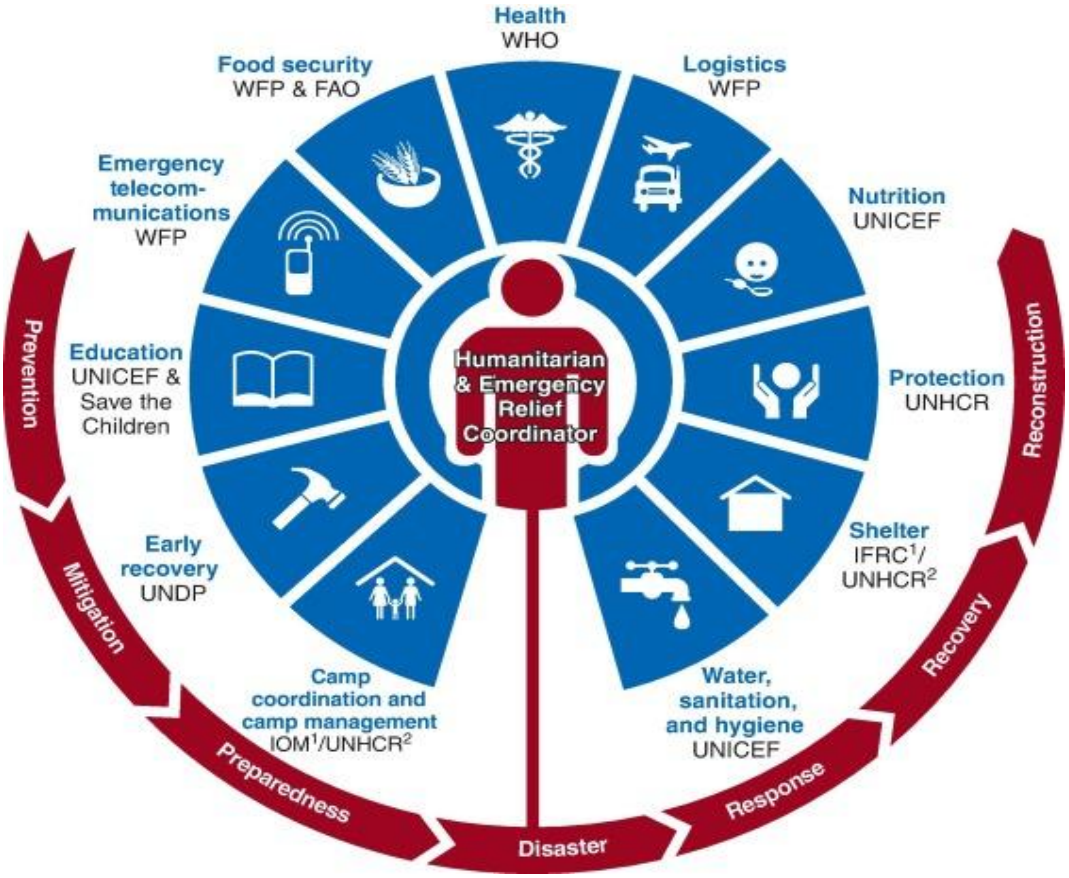
(g) **Problem-Solving.** Developing strategies to address challenges as they arise during a disaster, adapting plans as necessary based on the evolving situation.

(h) **Community Engagement**. Involving local communities in planning and response efforts, leveraging their knowledge and resources for more effective outcomes.

(j) **Documentation and Assessment**. Keeping thorough records of actions taken and outcomes achieved to inform future disaster management efforts and improve strategies.

(k) **Risk Assessment and Management**. Identifying potential hazards and vulnerabilities to mitigate risks before a disaster strikes.

5. **Coordination**. In disaster management, the "Incident Command System (ICS)" is primarily used to Coordinate and streamline the flow of information. Effective disaster management requires coordinated efforts among various stakeholders, including government agencies, NGOs, community organizations, and the private sector. By fostering collaboration and coordination across these areas, stakeholders can create a more effective and integrated approach to disaster management. **Coordination in disaster management** refers to the process of aligning and organizing efforts, resources, and stakeholders to effectively prepare for, respond to, and recover from disasters. It ensures that different organizations, agencies, and individuals work together efficiently, avoiding duplication of efforts and addressing gaps in disaster response. Here are some key areas of coordination:



(a) **Communication and Information Sharing**. Establishing clear communication channels to share timely and accurate information among stakeholders. This includes updates on the situation, resource needs, and response strategies.

(b) **Joint Planning**. Collaborating on disaster response plans that involve all stakeholders. This ensures alignment on roles, responsibilities, and procedures during an emergency.

(c) **Resource Mobilization**. Coordinating the allocation and distribution of resources, such as personnel, supplies, and funding. Stakeholders should identify and leverage each other’s strengths.

(d) **Training and Drills**. Conducting joint training sessions and simulation exercises to ensure all stakeholders are prepared and familiar with their roles during a disaster.

(e) **Community Involvement**. Engaging local communities in planning and response efforts. Their knowledge and involvement can enhance resilience and ensure culturally appropriate responses.

(f) **Public Awareness Campaigns**. Coordinating efforts to raise awareness about disaster preparedness and risk reduction, ensuring consistent messaging across all platforms.

(g) **Data Collection and Analysis**. Collaborating on gathering and analyzing data to assess risks, monitor the situation, and evaluate the effectiveness of response efforts.

(h) **Post-Disaster Evaluation**. Conducting joint assessments after a disaster to evaluate response efforts, identify lessons learned, and improve future planning.

(j) **Legal and Policy Frameworks**. Ensuring that all stakeholders are aware of and adhere to relevant laws, regulations, and policies related to disaster management.

(k) **Resource Sharing Agreements**. Establishing formal agreements for sharing resources, such as equipment and personnel, to enhance response capabilities during disasters.

6. **Planning & Preparedness**. T**he main objective of establishing clear roles and responsibilities in disaster management teams is t**o avoid overlap and confusion in tasks. Disaster management preparedness involves planning, training, and other activities to help people and communities be ready for disasters:

(a) **Identify Threats**. Recognize potential disaster risks and threats

(b) **Create a Plan**. Make a plan that includes where to meet, how to contact family, and how to let others know you're safe

(c) **Practice**. Practice evacuation plans and emergency procedures

(d) **Train**. Train people in first aid and emergency procedures

(e) **Prepare a Kit**. Put together a disaster preparedness kit

(f) **Learn about Warning Systems**. Know how to recognize emergency warning systems like sirens and text alerts

(g) **Find local Resources**. Identify local organizations that manage emergencies and keep their contact information

(h) **Purchase Insurance**. Reduce the risk of disaster loss by purchasing insurance

7. **Coordination Between various Stakeholders**. Collaboration between various areas of expertise and institutions at national and international levels is crucial in disaster management. This field encompasses responding to and recovering from disasters, developing policies for disaster risk reduction and achieving sustainable development goals. Interagency coordination is crucial during disaster management to ensure a unified and effective response. Here are some key aspects and strategies for fostering interagency coordination and by emphasizing these strategies, agencies can enhance their collaboration, leading to more efficient and effective disaster response and recovery efforts.

(a) **Establish Clear Roles and Responsibilities**. Define the specific roles of each agency involved in disaster response to avoid duplication of efforts and gaps in coverage. Create a command structure that includes representatives from all key agencies.

(b) **Unified Incident Command System (ICS)**. Implement a standardized ICS to facilitate coordination among agencies, providing a common framework for command, control, and communication during disasters.

(c) **Regular Communication**. Set up regular meetings and communication channels (e.g, emergency operation centers, joint task forces) to share updates, challenges, and resources. Use technology (e.g, communication apps, shared databases) to enhance real-time information sharing.

(d) **Joint Training and Exercises**. Conduct joint training sessions and disaster simulation exercises to improve coordination and familiarize agencies with each other's procedures and capabilities.

(e) **Resource Coordination**. Develop a system for tracking and sharing resources, including personnel, equipment, and supplies, to optimize their use during a response. Establish mutual aid agreements to facilitate resource sharing among agencies.

(f) **Public Information Coordination**. Designate a lead agency for public information to ensure consistent messaging and reduce confusion among the public.

Coordinate media releases and community outreach efforts to provide accurate information.

(g) **Data Sharing and Situational Awareness**. Implement systems for sharing data on the disaster's impact, resource needs, and response progress, ensuring all agencies have access to the same information. Use GIS and other analytical tools to visualize data and enhance situational awareness.

(h) **Post-Disaster Review and Improvement**. After a disaster, conduct joint evaluations to assess the effectiveness of the response, identify lessons learned, and make improvements for future coordination.

(j) **Engagement with Non-Governmental Organizations (NGOs)**. Collaborate with NGOs and community organizations to leverage their local knowledge and resources, ensuring a more comprehensive response.

(k) **Policy and Framework Development**. Work together to create or refine policies and frameworks that support interagency coordination in disaster management.

8. **Community Engagement in Disaster Management**. Community engagement is a vital component of effective disaster management. It helps ensure that response and recovery efforts are relevant, culturally appropriate, and more likely to succeed. Here are some key aspects of community engagement in disaster management:

(a) **Building Trust and Relationships.** Foster relationships between emergency management agencies and community members to build trust. This can be achieved through regular interactions and participation in local events.

(b) **Involvement in Planning.** Involve community members in the disaster planning process. This includes gathering input on local hazards, vulnerabilities, and resources, ensuring that plans reflect community needs and priorities.

(c) **Education and Awareness.** Conduct outreach programs to educate the community about disaster risks and preparedness measures. Use workshops, seminars, and social media to disseminate information.

(d) **Training and Capacity Building.** Offer training programs to equip community members with skills for disaster preparedness, response, and recovery. This could include first aid, search and rescue, or emergency response drills.

(e) **Community-Based Organizations**. Partner with local organizations and groups that have established relationships and knowledge of the community. These organizations can act as bridges between agencies and residents.

(f) **Feedback Mechanisms**. Create channels for community feedback on disaster management efforts. This can include surveys, public forums, and community meetings to gather insights and adjust strategies accordingly.

(g) **Culturally Relevant Approaches**. Recognize and respect the cultural diversity within the community. Tailor engagement strategies to be inclusive and sensitive to different cultural perspectives and practices.

(h) **Volunteer Involvement**. Encourage community members to participate as volunteers in disaster response efforts. Establish programs that train and organize volunteers for various roles during emergencies.

(j) **Post-Disaster Recovery Involvement**. Involve community members in recovery efforts to ensure that they are part of the decision-making process. Their input can help address specific local needs and priorities.

(k) **Communication and Information Sharing**. Maintain open lines of communication with the community before, during, and after a disaster. Use multiple platforms (e.g., social media, community bulletin boards) to keep everyone informed.

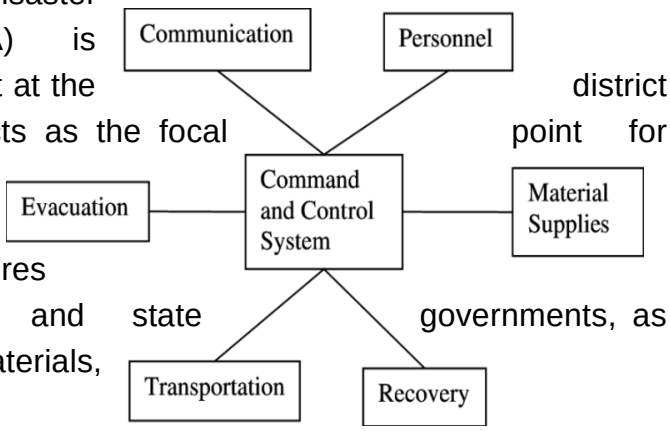
(l) By prioritizing community engagement, disaster management efforts can be more effective, leading to a stronger, more resilient community in the face of emergencies.

PART II : INTRODUCTION TO COMMAND AND CONTROL SYSTEM

9. **Command and Control Structure at State and District Level.** The command and control structure for disaster management at the state and district levels in India is as follows:

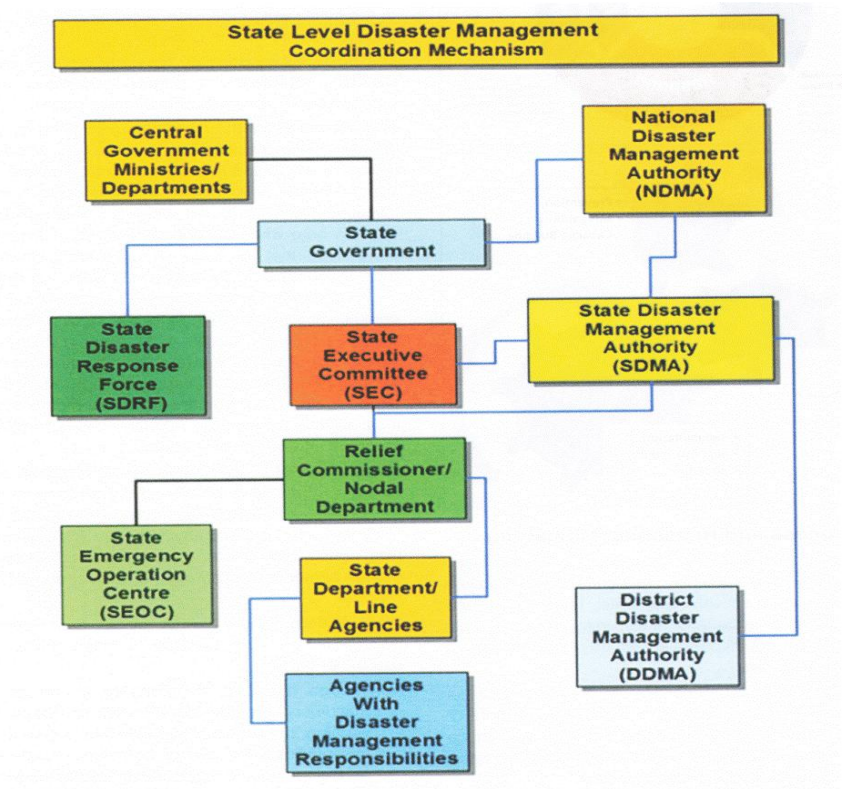
(a) **State level**. The State Disaster Management Authority (SDMA) is responsible for policies, plans, and guidelines for disaster management. The Chief Minister chairs the SDMA, and the Chief Secretary is the Chief Executive Officer.

(b) **District level**. The District Disaster Management Authority (DDMA) is responsible for disaster management at the district level. The Deputy Commissioner acts as the focal point for disaster preparedness, response, and recovery activities. The Deputy Commissioner also ensures participation from the district and state governments, as well as support from NGOs, materials, resources, and managers.



(c) Other organizations involved in disaster management include: State Emergency Operation Centre (State EOC), State steering committees, District Disaster Management Committee, and District Crisis Group.

(d) In the event of an emergency, the Emergency Operation Centre (EOC) will pass information to the District Commissioner (DC-W) for further instructions. The EOC will also inform the DDMA, Emergency Support Functions-team leaders, major hospitals, and the State Disaster Management Authority



10. **Key Functions and Responsibilities**.

(a) **National Disaster Management Authority (NDMA).** The NDMA is the apex body for disaster management in India. It is responsible for laying down policies, plans, and guidelines for disaster management. The NDMA also coordinates the enforcement and implementation of policies and plans.

(b) **State Disaster Management Authorities (SDMAs)**. The Disaster Management Act, 2005 established SDMAs. The harmonisation includes significant movement such as collecting, analysing, generating meaningful information, and identifying and using resources

(c) **District Disaster Management Authorities (DDMAs).** DDMAs coordinate with neighboring district authorities and other state authorities to promote disaster risk reduction and capacity building.

(d) **Community-Based Disaster Management**. This involves collecting baseline information about the community, such as population characteristics, socio-economic characteristics, and physical characteristics. This information helps to analyze the socio-economic conditions of the area and determine the level of vulnerability.

(e) **Volunteers**. Emergency managers must have a system in place for managing volunteers. This includes preparing for spontaneous volunteers with just-in-time training, rapid screening, rapid background checks, and rapid verification of credentials

11. **Indian Armed Forces in Disaster Management**. The command and control structure of the Indian Armed Forces in disaster management plays a pivotal role in providing rapid, efficient, and coordinated responses during natural or man-made disasters.

12. **Role of the Indian Armed Forces in Disaster Management.**

(a) The Indian Armed Forces are a key part of India's disaster response framework, acting under the **Disaster Management Act of 2005** and supporting civil authorities.

(b) Armed Forces provides search and rescue**,** medical aid**,** evacuation, and logistical support in emergencies like earthquakes, floods, cyclones, landslides, and industrial accidents.

(c) The Armed Forces' efficiency, discipline, and ability to operate in challenging conditions make them a crucial responder in disasters.

13. Command and Control at Local/Regional Level of Indian Armed Forces.

(a) **Operational Commands.** India is divided into six army operational commands, two naval operational commands, and five air operational commands. These commands act quickly during regional disasters. Command Headquarters coordinate with civil administration, police, and paramilitary forces.

(b) **Sub-Area Headquarters/ Lead Military Authority (LMA) and Units.** Sub-area headquarters/LMA manage disaster response at district or local levels. Field units like Engineer Regiments and medical teams are mobilized for on-ground operations.

14. **Quick Reaction Teams (QRTs**). Armed forces units maintain QRTs for immediate deployment. These teams are equipped for search and rescue, first aid, and logistical operations.

15. **Engineering and Logistics Expertise**. The Armed Forces provides critical support, including building temporary bridges, restoring roads, and debris clearance. Logistics units ensure the timely delivery of food, water, and other essential supplies.

16. Coordination of Armed Forces with Civil Authorities. The Indian Armed Forces work under the principle of **"Aid to Civil Authorities"** during disasters. Civil authorities request Armed Forces' assistance through established channels, typically via the **Ministry of Home Affairs (MHA)** or local administrators. The Armed Forces assumes operational control only when the situation overwhelms civilian agencies.

17. Integration with Other Agencies

(a) **National Disaster Response Force (NDRF).** The Armed Forces often operates alongside the NDRF, sharing expertise and resources in rescue operations.

(b) **Indian Air Force (IAF) and Navy.** The Army collaborates with the IAF and Navy for aerial and maritime disaster response. For instance, Helicopters for airlifting stranded victims and Navy divers for water rescues.

(c) **Non-Governmental Organizations (NGOs).** The Armed Forces support NGOs by providing infrastructure, medical aid, and transportation.

INTERESTING FACTS

- The **Integrated Defence Staff (IDS)** in India coordinates military support during disasters and provides **centralized command** across the Army, Navy, and Air Force
- The success of disaster management relies on **multi-agency coordination**
- The Indian Army, for instance, has a system for **quick mobilization** of personnel and equipment during disasters
- **Drones** and **satellite technology** have become increasingly important in **command and control operations**.

CONCLUSION

18. Effective disaster management requires a seamless blend of organizing skills and a robust command and control structure. In the face of disasters, swift coordination, clear communication, and timely decision-making are essential to mitigate damage and save lives. Organizing skills are critical in mobilizing resources, coordinating among various agencies, and ensuring that response teams can operate efficiently. It involves structuring operations to streamline logistics, medical support, search and rescue, and humanitarian aid. Strong organizational frameworks help to ensure that essential supplies reach affected areas, rescue operations are carried out swiftly, and communities receive timely assistance.

19. Equally vital is the command and control aspect, which ensures that decisions are made quickly and effectively under pressure. A well-defined command structure in the Armed Forces disaster management operations enables smooth integration between military, government, and civilian agencies. With a hierarchical approach and clear delegation of responsibilities, military and civilian forces can operate in harmony, ensuring that every resource is used optimally. Together, organizing skills and a strong command and control framework form the backbone of any disaster response effort. When executed properly, these elements foster a rapid, cohesive, and well-coordinated approach that significantly improves the chances of saving lives, restoring normalcy, and aiding recovery in the aftermath of a disaster.

SUMMARY

- **Organising Skills essential & Coordinated Efforts**.
  - Planning and Coordination.
  - Resource Management.
  - Communication Skills.
  - Team Leadership.
  - Training and Capacity Building.
  - Situational Awareness.
  - Problem-Solving.
  - Community Engagement.
- **Coordination**.
  - Communication and Information Sharing.
  - Joint Planning
  - Resource Mobilization.
  - Training and Drills.
  - Community Involvement
  - Public Awareness Campaigns.
  - Data Collection and Analysis.
  - Post-Disaster Evaluation.
  - Legal and Policy Frameworks.
  - Resource Sharing Agreements.
- **Planning & Preparedness**.
  - Identify threats.
  - Create a plan.
  - Practice.
  - Train
  - Prepare a kit.
  - Learn about warning systems.
  - Find local resources.
- **Coordination Between various Stakeholders**.
  - Establish Clear Roles and Responsibilities**.**
  - Unified Incident Command System (ICS)**.**
  - Regular Communication**.**
  - Joint Training and Exercises**.**
  - Resource Coordination**. .**
  - Public Information Coordination**.**
  - Data Sharing and Situational Awareness**.**
  - Post-Disaster Review and Improvement**..**
- **Command and Control Structure at State and District Level.**
  - **State level**. SDMA is responsible and The Chief Minister chairs the SDMA
- **District level**. DDMA is responsible for disaster management at the district level and The Deputy Commissioner acts as the focal point.

ASSESSMENT EXERCISE

Q1. The National Disaster Management Authority (NDMA) is headed by

(a) Prime Minister of India

(b) President of India

(c) Governor of States

(d) Chief Minister of States

Q2. Which of the following organization is the apex authority of disaster management in India?

(a) NDA

(b) NDMA

(c) CDMA

(d) INDR

Q3. Armed forces are:

(a) Last responders

(b) Called when free

(c) First responders

(d) All of the above

Q4. Planning and preparedness involves:

(a) Plan

(b) Practice

(c) Train

(d) All of the above

Q5. Which of the following is the most important first step in organizing a disaster management response?

(a) Mobilizing relief teams

(b) Establishing a command center

(c) Allocating funds for aid distribution

(d) Communicating with affected communities

Q6. In disaster management, the "Incident Command System (ICS)" is primarily used to:

(a) Ensure that all responders are properly trained

(b) Coordinate and streamline the flow of information

(c) Identify and track all available resources

(d) Manage all financial aspects of the disaster response

Q7. What is the main objective of establishing clear roles and responsibilities in disaster management teams?

(a) To avoid overlap and confusion in tasks

(b) To ensure that all teams can function independently

(c) To reduce the need for communication

(d) To monitor individual performance

Q8. Which of the following is a critical organizing skill in the preparation phase of disaster management?

(a) Coordinating the delivery of food supplies

(b) Conducting risk assessments and creating response plans

(c) Providing immediate medical care

(d) Communicating with affected individuals

Q9. Which of the following best describes the concept of "unity of command" in disaster management?

(a) One leader makes all decisions for the entire response effort

(b) Each team leader reports to multiple authorities

(c) All responders report to a single designated leader

(d) Teams are allowed to work independently without oversight

Q10. During a disaster, the coordination of emergency medical teams should focus on:-

(a) Managing transportation routes for responders

(b) Directing rescue operations to remote locations

(c) Assigning medical personnel to specific areas for triage

(d) Organizing public information campaigns

Q11. What is the primary responsibility of the Indian Armed Forces during a disaster?

(a) To provide military security

(b) To assist civil authorities in disaster relief operations

(c) To organize national defense operations

(d) To enforce law and order

Q12. Under which authority does the Indian Armed Forces operate during disaster response?

(a) Ministry of Defence (MoD)

(b) Ministry of Home Affairs (MHA)

(c) Ministry of External Affairs (MEA)

(d) Ministry of Disaster Relief (MDR)

Q13. The Indian Armed Forces are part of which of the following in disaster management?

(a) Aid to Civil Authorities

(b) Direct Governance of Affected Areas

(c) Primary Disaster Response Unit

(d) Civilian Resettlement Task Force

Q14. The Indian Army's "Unified Command" system in disaster response ensures:

(a) Centralization of authority under the Indian Army alone

(b) Coordinated efforts between military and civilian agencies

(c) Independent decision-making by the Army

(d) Prioritization of military objectives

Short Questions

Q1. List out the skills required for DM?

Q2. Give out the agencies of relief in DM with their respective heads?

Q3. What is community engagement?

Long questions.

Q1. What involves in planning and preparedness for DM?

Q2. What are the coordination aspects required for DM?

ENVIRONMENTAL & GENERAL AWARENESS

5

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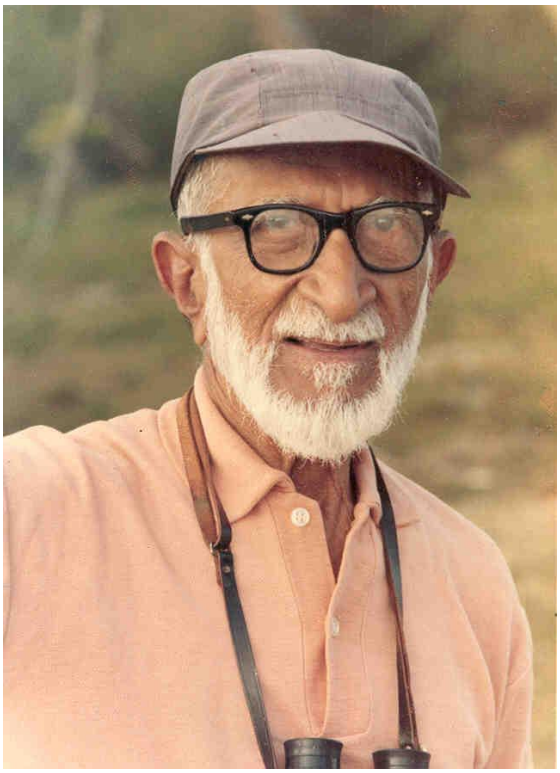
EA I (SD/SW)

CHAPTER I : ENVIRONMENTAL AWARENESS : IMPORTANCE OF CONSERVATION

"I suppose I have done my bit, it's now up to you younger people."

Dr Salim Ali



TEACHING INSTRUCTIONS

Period	:	**One.**
Type	:	**Lecture and Discussion.**
Year	:	**SD/ SW (First Year)**
Conducting Officer	:	**ANO/ CTO.**
Training Aids	:	**Class Room, Computer with OHP, Screen, Presentation, Script or Book Flagged or Lesson Plan in File, Board and Markers.**

Time-plan

- Introduction : 03 minutes
- Part I : 08 minutes
- Part II : 12 minutes
- Part III : 10 minutes
- Conclusion, Summary & Discussion : 07 minutes

INTRODUCTION

1. **Definition of Environmental Awareness**. Environmental awareness refers to the understanding and knowledge of environmental issues and the impact human actions have on the environment. It involves recognizing how our activities affect the natural world and taking steps to reduce negative impacts. Environmental Awareness can be promoted through a thorough understanding of environmental issues that occurs consequent of economic growth such as deforestation, pollution, use of plastics, industrialisation, urbanisation etc

2. **Importance of Understanding Environmental Issues**. Understanding environmental issues is crucial because it helps us to make decisions that protect natural resources and promote sustainability. Being aware of these issues allows us to initiate policies and measures that address problems such as pollution, climate change, and biodiversity loss effectively. Environment awareness promotes the adoption of green initiatives, appropriate technology and other community projects that encourages use of renewable resources, proper waste management techniques, organic farming methods etc. Thus, environment awareness helps to improve various circumstances like Air and water quality, agricultural practices and produce, quality of human life etc.

PREVIEW

The lecture will be conducted in following parts:-

(a) Part I : Importance of Biodiversity, Ecosystems and their Functions

(b) Part II : Environmental Pollution and Climate Change

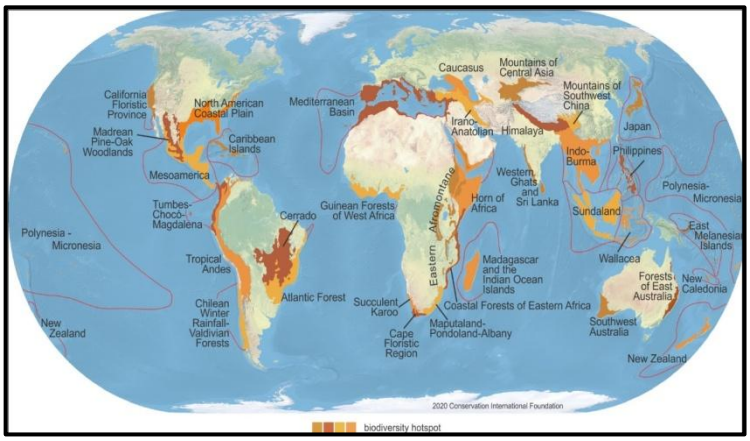
(c) Part III : Conservation, Environment Laws and Future Prospects

LEARNING OBJECTIVES

- Understand Environmental Awareness.
- Recognize the Importance of Biodiversity.
- Comprehend Ecosystem Functions.
- Identify Pollution and Its Impacts.
- Understand Climate Change and Resources.
- Explore Conservation and Sustainable Practices.
- Analyse Future Prospects and Challenges.

PART I : IMPORTANCE OF BIODIVERSITY, ECOSYSTEMS AND THEIR FUNCTIONS

Importance of Biodiversity



3. Biodiversity refers to the richness and variety of life on Earth, including plants, animals, fungi, and microorganisms. It deals with the number of different organisms, its frequencies and organisation at different levels in an ecosystem. It is the most important feature of our planet without which the life on earth would not sustain. Biodiversity which also refers to biological diversity exists at three levels- Species, genetics and ecosystem. Species diversity refers to the variety of different species found in a particular area ranging from plants to different microorganisms. Biodiversity changes over time as extinction occurs and new species evolve. Genetic diversity refers to the variations in the genetic resources of the organisms. E.g. there are varieties in the same species of rice, wheat and even human beings. Ecological diversity refers to the variations in the plants and animal species living together in different ecosystems and are connected by food chains. E.g. diversity in different ecosystems like marine, deserts, rain forests etc.

4. Biodiversity has ecological, economic and ethical significance. It is ecologically significant because it ensures ecosystem stability and materials, and maintains ecological balance. Every species has a specific role in the ecosystem that helps to sustain life on earth. It is economically significant because it also provides us with resources for food, medicine, nourishment, housing, fuel, clothing and several other factors that also generate monetary benefits such as tourism. Finally, it is ethically significant because biodiversity preserves different cultures and spiritual heritage. All species have a right to exist and hence we should conserve it. Thus, knowledge of biodiversity is essential for a sustainable livelihood.

DID YOU KNOW?

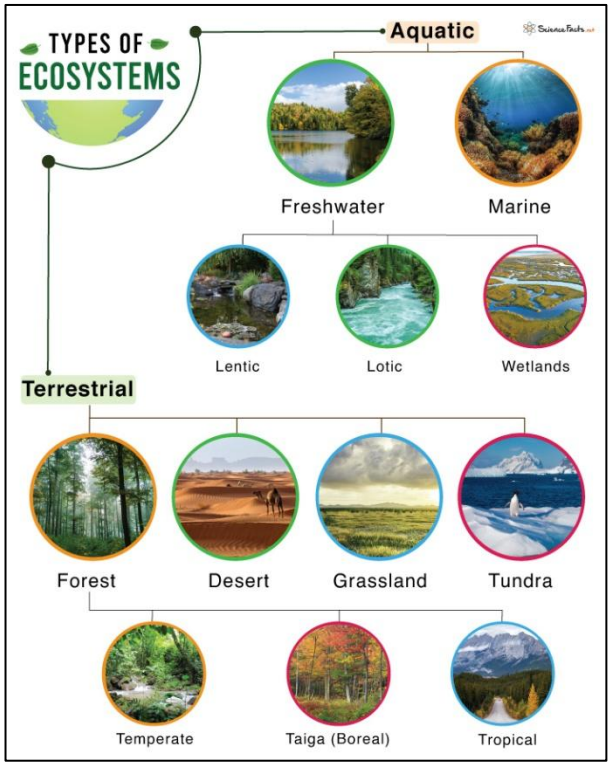
- **Western Ghats Biodiversity.** The Western Ghats, which run along the western coast of India, including Kerala, are one of the world's eight "hottest hotspots" of biological diversity. They are home to more than 7,000 species of plants, 139 mammal species, 508 bird species, 179 amphibian species, that are found nowhere else on Earth. This region's biodiversity is crucial for global ecological health, but it is under threat from deforestation and development.

5. **Threats to Biodiversity**. Threats to biodiversity include habitat destruction, climate change, pollution, overexploitation, and invasive species. These threats can lead to the extinction of species and disrupt ecosystems.

Ecosystems and Their Functions

6. Ecosystems are communities of living organisms interacting with each other and their environment. The term ecosystem was first coined by the British ecologist A.G. Tansley in 1935. Any habitat of nature that includes plants and animals and non-living substances which interact to produce materials that can be exchanged between living and non-living parts of the habitat, is called an ecosystem. An ecosystem can be as small as a drop of pond water (micro-ecosystem) or as large as an ocean. It can be *aquatic* like a pool of freshwater or marine or can be terrestrial like a forest or grasslands. They provide essential functions such as nutrient cycling, pollination, water purification, and climate regulation. Understanding these functions helps us appreciate the importance of protecting ecosystems.

7. There are two basic functions of an ecosystem. One is the *cycling of materials* and the other is *flow of energy* between living organisms and their environment. The plants synthesise complex organic materials from the raw materials which are returned to the environment. Thus, the minerals, nitrogen, carbon dioxide and water are continually cycled through this system. Similarly flow of energy refers to the process whereby energy is transferred from one organism to another. For instance, the solar energy is captured by the green plants. The organisms derive their nutrition and energy from these plants which is further passed on to other organisms. Thus, it regulates and supports different life systems.



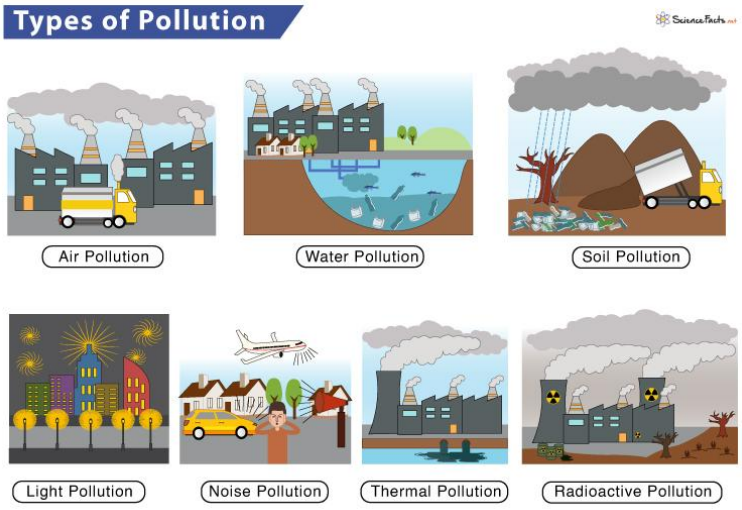
PART II : ENVIRONMENTAL POLLUTION AND CLIMATE CHANGE

Environmental Pollution and Its Impact

8. Environmental pollution refers to any change in the natural quality of the environment (air, water and land) brought about by the chemical, physical or biological factors. It involves the introduction of harmful substances into the environment, leading to adverse effects on health, ecosystems, and the climate.

9. Pollution is differentiated based on the nature of pollutants and include air, water, soil, and noise pollution. The pollutants are basically categorised into Biodegradable and Non-biodegradable pollutants. Biodegradable pollutants are capable of being removed by biological or microbial action for e.g. Sewage whereas the non-biodegradable pollutants cannot be removed in such manner for e.g. Plastics, aluminium cans, pesticides, gases etc. The impact can be severe, causing health problems, loss of biodiversity, and climate change.

10. The various major types of pollution are air pollution, water pollution, soil pollution and noise pollution. These can be natural or man- made.



11. Water pollution is the process of altering the properties of any water which renders it unfit or less fit for the purpose its unaltered form was used. The main water pollutants are bacteria, viruses, parasites, fertilisers and pesticides, plastics, faecal wastes, pharmaceutical products etc. They are mostly invisible pollutants that may not change the colour of the water. Water pollution causes many health hazards like diarrhoea, cholera, dysentery, typhoid etc that affects millions of people worldwide annually.

12. Air pollution is defined by WHO as the contamination of the indoor or outdoor environment by any chemical, physical or biological agent that modifies the natural characteristics of the atmosphere. E.g. Household combustion devices, motor vehicles, industrial smokes and forest fires are common sources of air pollution. Pollutants of major public health concern include particulate matter, carbon monoxide, ozone, nitrogen dioxide and sulphur dioxide. Outdoor and indoor air pollution cause respiratory and other diseases and are important sources of morbidity and mortality. According to WHO data 99% of the global population breaths air that exceeds WHO guideline limits and contains high pollutants especially in the low- and middle-income countries.

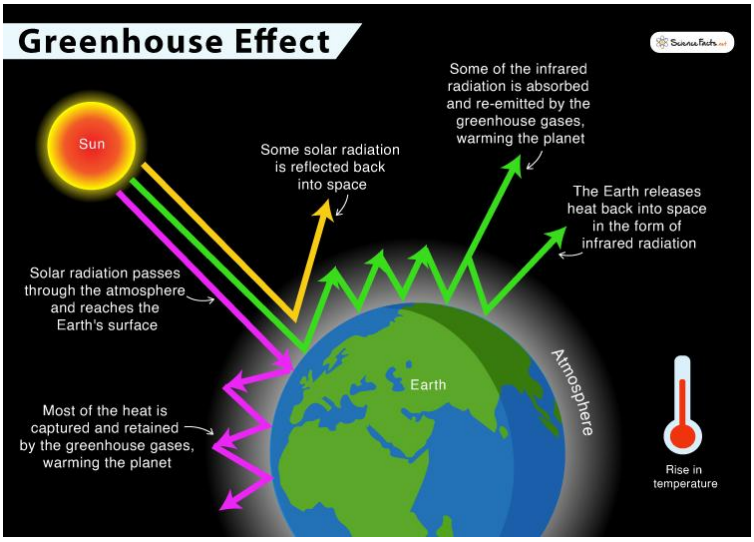
13. Soil pollution occurs when the levels of toxic chemicals like pollutants or contaminants whose amount exceeds the levels that should be present naturally through soil microbial activities or through decomposition of living organisms. For e.g. Metals like Lead, Mercury, Arsenic, Copper, Zinc and many organic compounds like fatty acids, hydrocarbons, PAHs, alcohols, pesticides etc. There are basically 2 causes of soil pollution- Natural and man-made. Man made pollution, which is the major cause, is generally through improper disposal of waste from industries or urban sources and from extensive use of pesticides and chemical fertilisers in agricultural sector. Soil pollution causes many health

effects like headaches, nausea, fatigue, skin rashes, eye irritation and potentially many more serious conditions like kidney and liver damage and many forms of cancer.

14. Noise pollution harmful threshold is above 55 decibels (daytime) and 45 decibels(night time) (WHO). It includes traffic noise, air traffic noise, construction sites, political and cultural rallies, festivals etc. Noise pollution can cause both physical and psychological effects on both human beings and animals. Headaches, hearing impairment, high BP, Colitis, depression, anxiety, hysteria etc are the impacts on human beings. Animals also suffer due to the disturbances in their natural habitats including reproductive problems and altered predator- prey relations leading to their gradual extinction.

Climate Change and Global Warming

15. **Causes and Impact**. Climate change refers to the long-term shifts in the temperature and weather pattern. It can cause naturally as well as due to human interventions leading to the increase in greenhouse gases, primarily carbon dioxide, methane and Chlorofluorocarbons(CFCs) from activities such as rapid industrialisation, burning fossil fuels and deforestation. When the greenhouse gases are maintained within limits, it helps to maintain the earth's mean temperature at 15 degree C which otherwise could fall to -18 degree C and could make life impossible on earth. However, the constant human interventions are changing the earth's natural greenhouse effect with the dramatic increase in the greenhouse gases which traps heat and causes global warming. The impact includes rising temperatures, melting ice caps, and more frequent extreme weather events. The CFCs cause Ozone depletion which shields the earth from the harmful effects of ultra-violet rays and can ultimately induce "Acid rain". It also affects the ecosystem productivity; ecological stability and the resultant climatic change affects the survival and stability of the living organisms and may cause certain physiological changes in man and animals.

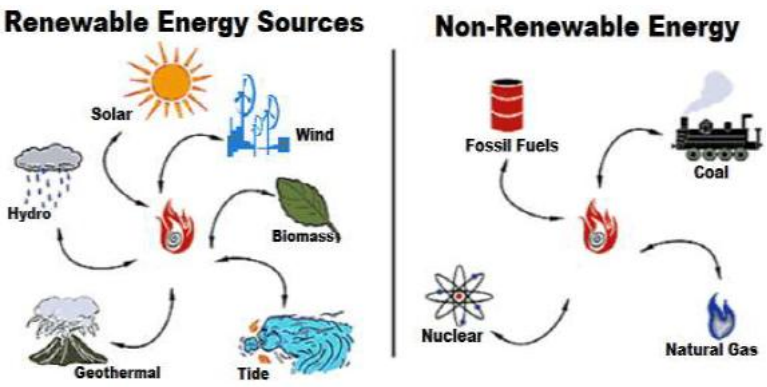


16. **Mitigation and Adaptation Strategies**. Mitigation focuses on avoiding significant human interference with Earth's climate, stabilise greenhouse gas levels and allow ecosystems to adapt naturally to climate change, ensure that food production is not threatened and to enable sustainable economic development. The measure involves reducing greenhouse gas emissions through reducing use of fossil fuels and moving to renewable energy such as solar and wind, enhancing the "sinks" that accumulate and store these gases such as Oceans, forests and soil, adopting energy efficiency measures ranging

from simple daily changes like reusing and recycling to bigger lifestyle changes like switching to electric vehicles and undertaking reforestation.

17. In order to maintain a healthy and sustainable life on earth, it is very essential to adapt to the changing climatic conditions. The goal of any adaptation strategy is to reduce the risks from harmful effects of climate change such as rising sea level, food insecurity, extreme weather conditions etc on the one hand and on the other to exploit the beneficial opportunities arising out of climatic change. Thus, various adaptation strategies at individual, local and government level is being undertaken in the country. They are measures like building flood defences, proper plans to deal with heat waves and high temperatures, improving water storage and use (e.g. Rain water harvesting), building resilient infrastructure and developing early warning systems for extreme weather. Sustainable development plans have been framed to manage disasters like drought and rising sea level, protecting coastal areas, land and forest, energy and infrastructure and develop new crop varieties.

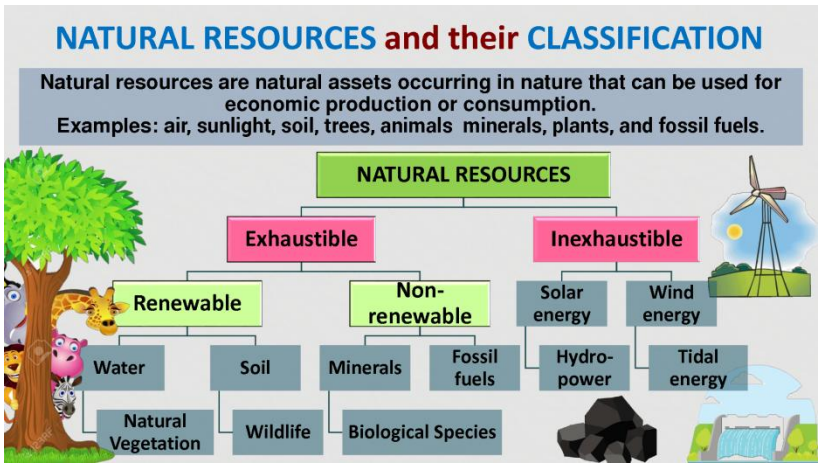
18. **Renewable and Non-renewable Resources**. 'Resource is a form of energy or matter which is essential for the functioning of organisms, populations and ecosystem.' Resources can be Renewable and Non-renewable. Renewable resources, such as solar and wind energy, hydro power etc are those that can be replenished naturally over time. Non-renewable resources, like fossil fuels and minerals, are finite and deplete with use. It is important to shift towards renewable resources to ensure sustainable energy use.



PART III : CONSERVATION, ENVIRONMENT LAWS AND FUTURE PROSPECTS

Conservation of Natural Resources

19. **Importance of Conserving Natural Resources**. Conservation means to stop the unplanned development that breaks the ecological as well as human laws by careless use of natural resources. Conserving natural resources is essential to ensure their availability for future generations and hence to maintain the existence of life on earth. It helps maintain ecological balance, climatic



conditions and supports human well-being. International Union for the Conservation of Nature and Natural Resources is an organisation that focuses on the conservation of natural resources at the Global level. Conservation aims at ensuring preservation and the sustainable utilisation of species (plant and animal) and the ecosystem which helps in human survival.

20. **Methods of Conservation**. Methods of conservation include recycling, reducing waste, adopting sustainable practices, and protecting natural habitats. These actions help reduce our environmental footprint. Important conservation methods include:

(a) Reforestation- planting of trees and vegetation reduces soil erosion

(b) Rainwater harvesting- adopting methods to store rainwater at the household and institutional level

(c) Proper treatment of industrial waste to prevent chemical and thermal pollution of water

(d) Conservation of biodiversity- Protection of plants and animals both within and outside their natural habitat. E.g. maintenance of Zoos, wildlife sanctuaries, national parks on the one hand and on the other taking measures for Gene banks, Tissue culture, DNA preservation etc

(e) Legal measures- Laws like Environment protection act 1986, National Forest Policy Act 1988, Wild life protection act 1972, Water (prevention and control of pollution Z) Act 1974, Forest Conservation Act 1980 etc

(f) Public awareness rallies and campaigns can be conducted

(g) Adopting sustainable development goals and measures which aims at meeting the requirements of present generation without compromising the needs of future generations.

(h) Water conservation techniques through basic awareness spreading like reducing wastage of water and reusing or recycling water for household chores.

(i) Adopting Crop rotation and mixed cropping methods in agricultural sector to maintain soil fertility.

(j) Opting for alternate energy resources that are less polluting. Thus, transforming from Fossil fuels to renewable sources like solar, wind, hydro energy etc.

21. **Role of Individuals, Communities, and Governments**. Individuals can contribute by adopting eco-friendly habits, communities can engage in local conservation projects, and governments can implement policies and regulations to protect natural resources. The following measures can help in pollution control and environment conservation:-

(a) **Individuals**. Individuals can significantly contribute to environmental conservation by adopting simple yet impactful practices. Reducing the use of single-use plastics and promoting reusable alternatives is a crucial step. Conserving energy and water through mindful usage helps reduce resource depletion. Sustainable transportation options such as cycling, carpooling, or using public transport contribute to lowering carbon emissions. Planting trees and maintaining home gardens not only enhance air quality but also create green spaces. Additionally, practicing proper waste segregation and recycling at the household level ensures responsible waste management.

(b) **Communities**. Communities play a vital role in fostering collective environmental responsibility. Organizing clean-up drives for beaches, rivers, parks, and other public spaces helps keep the environment clean and healthy. Awareness campaigns on environmental protection and sustainable practices educate and inspire individuals to act. Community-based waste management systems are effective in handling waste responsibly. Encouraging rooftop gardening and community afforestation programs fosters greenery and biodiversity. Supporting local eco-friendly businesses and initiatives promotes sustainable economic growth.

(c) **Government**. Governments have a pivotal role in driving large-scale environmental change. Enforcing strict laws to curb industrial and vehicular pollution ensures accountability and compliance. Promoting renewable energy sources like solar, wind, and hydro power reduces dependency on fossil fuels. Programs for reforestation, afforestation, and biodiversity conservation contribute to ecological balance. Incentives for industries and individuals adopting green technologies encourage sustainable innovation. Proper regulation of waste disposal systems ensures effective treatment and recycling of solid and liquid waste. Finally, educating citizens through environmental policies and incorporating sustainability into school curricula builds a foundation for long-term environmental stewardship.

INTERESTING FACTS

- **Kerala's Climate Adaptation**. Kerala is known for its innovative approaches to climate adaptation. For instance, the state has implemented a climate change action plan that includes measures like the promotion of sustainable agricultural practices and the development of climate-resilient infrastructure. Kerala also has a significant focus on reforestation and the conservation of its extensive network of rivers and wetlands, which play a vital role in the local climate and biodiversity.

22. **Sustainable Development Practices**. Sustainable development practices aim to meet present needs without compromising future generations' ability to meet theirs. This involves balancing economic growth, environmental protection, and social well-being. Thus, sustainable development aims at reducing the absolute poverty of the world's poor by providing lasting and secure livelihoods through careful and judicial utilisation of natural resources and minimising cultural disruption and social instability. It is our moral responsibility to handover earth in good order to our future generations. The term' Sustainable Development' was coined by the United Nations World Commission on Environment and Development in its Brundtland report called 'Our Common Future" in 1987. Environment sustainability focuses on sustainable resource use, efficient pollution control and maintenance of stock of natural capital such that-

(a) The next generation should inherit such a stock of wealth comprising both man- made and environmental assets.

(b) The next generation should inherit a stock of environmental assets no less than that inherited by the previous generation

(c) Several steps have been taken by our country in this regard such as –

(d) Population control measures by spreading awareness on birth control measures and literacy.

(e) Use of environment supportive fuels to prevent global warming such as CNG, LPG etc

(f) Use of Solar and wind energy

(g) Banning use of one-time plastics

(h) Focussing on Recycling and reusing of industrial and household waste products for environment sustainability

(i) Imposing pollution tax and fines on industries and vehicles

(j) Use of input efficient technology that ensures lesser utilisation of natural resources and promotes growth.

23. **Environmental Laws and Government Policies**. Environmental laws and policies, such as 'Mission LIFE – Lifestyle for The Environment,' promote sustainable practices and environmental protection. They provide guidelines and regulations to address environmental issues and encourage responsible behaviour. In broad terms four general methods have been adopted to frame Government laws and policies- a) moral suasion b) Regulations c) Market pricing or fiscal techniques d) Government investment program

(a) **Moral Suasion** refers to promoting voluntary programs among the firms and households that meets their social responsibility e.g. Voluntary Garbage disposal and recycling programs, carpooling and other energy saving programs, declaring 'litter free zones' at certain specific places of visits etc

(b) **Regulations or Direct controls** includes certain laws and policies that prevents the environment pollution and maintains sustainability. Such as-

- The Air (Prevention and Control of Pollution) Act, 1981.
- The Water (Prevention and Control of Pollution) Act, 1974.
- The Environment (Protection) Act of 1986.
- The National Green Tribunal Act, 2010.
- Biological Diversity Act, 2002.
- Wild Life (Protection) Act, 1972

(c) **Pricing and fiscal techniques** include pollution taxes, subsidies, pollution permits etc.

(d) **Government investment programs** involve installation of waste treatment plans, slum-clearance, reforestation and afforestation, management of wild life (Core and buffer zones) etc.

Future Directions and Challenges in Environmental Conservation

24. Environmental conservation is at a critical juncture, with both challenges and opportunities defining the path forward. As we look to the future, addressing emerging issues such as climate change, resource scarcity, biodiversity loss, and the spread of invasive plants will be paramount.

25. **Challenges in Environmental Conservation**

(a) **Climate Change Impacts**. Rising global temperatures are causing sea-level rise, extreme weather events, and changes in ecosystems. These impacts threaten biodiversity, human settlements, and agriculture, making adaptation and mitigation essential.

(b) **Resource Scarcity**. Overuse of finite resources like fossil fuels, fresh water, and fertile land has led to shortages, emphasizing the urgent need for sustainable resource management.

(c) **Biodiversity Loss**. The extinction of species disrupts ecosystems and the services they provide, such as pollination and nutrient cycling. Factors like deforestation, habitat destruction, and illegal wildlife trade exacerbate this problem.

(d) **Invasive Alien Species**. The spread of non-native plant species disrupts local ecosystems by outcompeting native species, altering habitats, and affecting agriculture and forestry.

26. **Future Directions**

(a) **Innovations in Technology**. Advancements like artificial intelligence, remote sensing, and GIS mapping can improve monitoring and management of natural resources. Renewable energy technologies, such as solar and wind power, are also crucial in reducing dependence on fossil fuels.

(b) **Policy Shifts and Global Cooperation**. Governments must strengthen environmental laws and promote global agreements like the Paris Climate Accord to address shared challenges. Policies encouraging sustainable farming, water conservation, and afforestation are essential.

(c) **Restoration Projects**. Large-scale efforts like reforestation, wetland restoration, and coral reef rehabilitation can reverse some of the damage caused by human activities. Programs like India's National Afforestation Program are examples of proactive measures.

(d) **Community Involvement**. Empowering communities to take part in conservation efforts through education, local initiatives, and participatory projects ensures that change happens at the grassroots level.

27. **A Sustainable Vision**. The future of environmental conservation lies in a holistic approach that integrates technology, policy, education, and individual action. While challenges are significant, human ingenuity and collaboration offer hope. By adopting sustainable practices and fostering a culture of conservation, we can secure a healthier, more resilient planet for future generations.

CONCLUSION

28. In conclusion, environmental awareness and conservation are essential for the health and sustainability of our planet. Understanding the impact of human activities on the environment, recognizing the importance of biodiversity, and acknowledging the functions of ecosystems are critical for effective conservation efforts. Pollution, climate change, and resource depletion pose significant challenges that require both mitigation and adaptation strategies. By transitioning to renewable resources, adopting sustainable practices, and enforcing environmental laws and policies, we can work towards reducing our environmental footprint. The roles of individuals, communities, and governments are vital in driving positive change and ensuring that natural resources are preserved for future generations. Ultimately, embracing environmental stewardship and sustainable development will help balance our needs with the health of the planet. Through informed choices and collective action, we can contribute to a more resilient and equitable world, ensuring a thriving environment for ourselves and generations to come.

SUMMARY

- **Environmental Awareness**. It involves understanding environmental issues caused by activities like deforestation, pollution, and urbanization, and taking measures to reduce their negative impacts.
- **Importance of Biodiversity**. Biodiversity, encompassing species, genetic, and ecosystem diversity, is crucial for ecological balance, economic benefits, and cultural heritage, ensuring the survival of life on Earth.
- **Ecosystem Functions**. Ecosystems, composed of interacting living and non-living components, perform vital functions like nutrient cycling, pollination, and climate regulation, supporting life and natural processes.
- **Environmental Pollution**. Pollution, categorized as air, water, soil, and noise pollution, disrupts ecosystems and poses health hazards due to harmful substances introduced by human and natural activities.
- **Climate Change**. Climate change results from greenhouse gas emissions and human activities, leading to global warming, extreme weather, and threats to ecosystems and biodiversity.
- **Conservation of Natural Resources**. Conservation aims to sustainably utilize resources like forests, water, and biodiversity through methods like reforestation, recycling, and adopting renewable energy.
- **Role of Individuals and Communities**. Eco-friendly practices by individuals, community clean-ups, and public awareness campaigns contribute significantly to conservation efforts.
- **Government Policies**. Policies like the Environment Protection Act, afforestation programs, and incentives for green technologies play a vital role in environmental conservation.
- **Sustainable Development**. It emphasizes balancing economic growth with environmental protection to meet present needs without compromising future generations' ability to thrive.
- **Future Challenges**. Climate change, resource scarcity, biodiversity loss, and invasive species remain critical challenges, requiring innovative technologies and global cooperation for effective conservation.

ASSESSMENT EXERCISE

Multiple-Choice Questions

Q1. What does environmental awareness primarily involve?

a) Understanding economic policies
b) Recognizing the impact of human activities on the environment
c) Learning about historical events
d) Studying technological advancements

Q2. Why is understanding environmental issues important?

a) It helps us make informed decisions that protect natural resources
b) It provides information on global politics
c) It improves our knowledge of ancient cultures
d) It teaches us to cook

Q3. What is biodiversity?

a) The number of technological devices
b) The variety of life on Earth, including plants, animals, and microorganisms
c) The types of languages spoken worldwide
d) The history of human civilizations

Q4. Which of the following is a threat to biodiversity?

a) Habitat destruction
b) Increased literacy rates
c) Technological advancements
d) Improved healthcare

Q5. What is one function of ecosystems?

a) Nutrient cycling
b) Creating internet networks
c) Developing new medicines
d) Urban planning

Q6. Why is it important to understand ecosystem functions?

a) To appreciate the importance of protecting ecosystems
b) To learn about fashion trends

c) To understand political systems

d) To study ancient architecture

Q7. What does environmental pollution involve?

a) The creation of art

b) The development of new technologies

c) The expansion of educational institutions

d) The introduction of harmful substances into the environment

Q.8 Which type of pollution can severely affect health and ecosystems?

a) Air pollution

b) Cultural pollution

c) Technological pollution

d) Historical pollution

Q9. What is a primary cause of climate change and global warming?

a) Higher literacy rates

b) Increase in greenhouse gases

c) Advances in space exploration

d) Growth in urban areas

Q10. Which of the following is a strategy for mitigating climate change?

a) Reducing greenhouse gas emissions through renewable energy

b) Expanding fossil fuel use

c) Increasing deforestation

d) Encouraging industrial pollution

Q11. What is an example of a renewable resource?

a) Solar energy

b) Coal

c) Natural gas

d) Uranium

Q12. Why is it important to shift towards renewable resources?

a) To increase fossil fuel consumption

b) To ensure sustainable energy use

c) To deplete mineral resources

d) To reduce biodiversity

Q13. Why is conserving natural resources important?

a) To ensure their availability for future generations
b) To maximize resource depletion
c) To increase pollution levels
d) To promote habitat destruction

Q14. Which method is a way to conserve natural resources?

a) Recycling
b) Increased waste production
c) Deforestation
d) Littering

Q15. What role can governments play in conservation efforts?

a) Encouraging pollution
b) Implementing policies and regulations to protect natural resources
c) Supporting habitat destruction
d) Encouraging resource overuse

Q16. What is the goal of sustainable development practices?

a) To meet present needs without compromising future generations' ability to meet theirs
b) To maximize resource consumption
c) To focus solely on economic growth
d) To ignore environmental protection

Q17. What is the purpose of environmental laws and policies like 'Mission LIFE'?

a) To increase greenhouse gas emissions
b) To encourage industrial expansion
c) To promote sustainable practices and environmental protection
d) To support resource depletion

Q18. How can individuals contribute to environmental conservation?

a) By increasing waste production
b) By adopting eco-friendly habits
c) By supporting deforestation
d) By promoting pollution

Q19. What role do communities play in conservation?

a) Engaging in local conservation projects
b) Ignoring environmental issues
c) Supporting habitat destruction
d) Encouraging non-sustainable practices

Q20. What is a future challenge in environmental conservation?

a) Urbanisation
b) Increasing resource availability
c) Addressing climate change impacts
d) Promoting historical research

Short Answer Questions

Q1. What is environmental awareness?

Q2. Why is biodiversity important?

Q3. What are the main types of environmental pollution?

Q4. What are renewable resources?

Q5. How can individuals contribute to conservation efforts?

Long Answer Questions

Q1. Discuss the importance of understanding and addressing environmental issues.

Q2. Explain the concept of biodiversity and the threats it faces.

Q3. Describe the impact of climate change and the strategies for mitigation and adaptation.

Q4. What are the roles of individuals, communities, and governments in conservation efforts?

Q5. Explain the concept of sustainable development and its significance.

EA II (SD/SW)

CHAPTER II : MANAGEMENT OF NATURAL RESOURCES (WATER, AIR, SOIL & ENERGY)

"I suppose I have done my bit, it's now up to you younger people."

" Kya hai jangal ke upkar - Mitti, paani aur bayar

Mitti, paani aur bayar - Yeh hain jindagi ke aadhar"

This slogan reverberated in the hills through Tehri Garhwal, from the brave men and women of the Chipko Andolan

"What are the gifts of the forest? Soil, water and air.

Soil, water and air - these are the foundations of life,"

- Sunder Lal Bahuguna (09 Jan 1927 – 21 May 2021) : Leader of the Chipko Movement

TEACHING INSTRUCTIONS

Period : **One.**

Type : **Lecture and Discussion.**

Year : **SD/SW (First Year)**

Conducting Officer : **ANO/ CTO.**

Training Aids : **Class Room, Computer with OHP, Screen, Presentation, Script or Book Flagged or Lesson Plan in File, Board and Markers.**

Time-plan

- Introduction : 03 minutes
- Part I : 07 minutes
- Part II : 08 minutes
- Part III : 07 minutes
- Part IV : 08 minutes
- Conclusion, Summary & Discussion : 07 minutes

INTRODUCTION

1. The management of natural resources is a subject of critical importance, not just for maintaining the balance of our ecosystems but also for ensuring the survival of humankind civilization itself. Natural resources are the essential elements of nature, such as water, air, soil, and energy, which form the foundation of life on Earth. These resources are integral to our daily lives, supporting everything from food production and shelter to transportation and industry. However, rapid population growth and the acceleration of industrialization have placed unprecedented pressure on these finite resources, leading to their depletion at an alarming rate.

2. What Are Natural Resources? Natural resources encompass the raw materials and elements provided by nature that humanity relies on for survival and development. These include:-

(a) Water, vital for drinking, agriculture, and industry.

(b) Air, essential for breathing and maintaining climate balance.

(c) Soil, a cornerstone for agriculture and the growth of vegetation.

(d) Energy, derived from sources like fossil fuels, sunlight, wind, and water to power our modern lifestyles.

3. These resources are finite and, if not managed properly, their scarcity can lead to severe environmental and social consequences, including food and water shortages, pollution, and energy crises.

4. The concept of sustainable development plays a pivotal role in the management of natural resources. Sustainable development refers to meeting the needs of the present without compromising the ability of future generations to meet their own needs. It emphasizes a balanced approach to economic growth, environmental protection, and social equity. Effective resource management ensures that natural resources are used efficiently and equitably, reducing waste and promoting regeneration. Sustainable practices, such as renewable energy adoption, water conservation, pollution control, and soil restoration, are essential to combat the adverse impacts of resource overuse and degradation.

PREVIEW

The lecture will be conducted in following parts:-

(a) Part I : Water Management

(b) Part II : Air Management

(c) Part III : Soil Management

(d) Part IV : Government Initiatives

LEARNING OBJECTIVES

- Significance of natural resource management.
- Learn various water conservation techniques.
- Comprehend air pollution control measures.
- Assimilate conservation of soil.
- Explore government initiatives.
- Adopt environmentally friendly practices

PART I : WATER MANAGEMENT

5. Water management is critical for ensuring the sustainability of this vital resource. Effective water management encompasses two essential components: water conservation and water quality management. Together, these strategies address the challenges of scarcity, pollution, and efficient resource utilization to safeguard water for future generations.

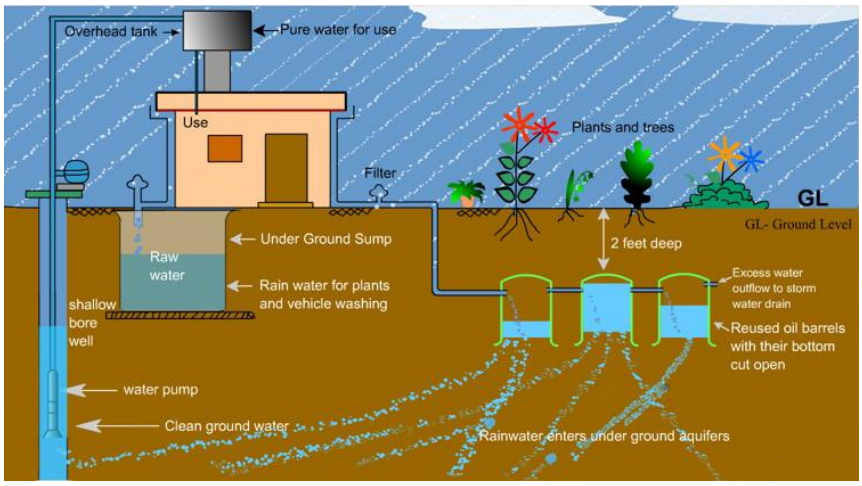
Water Conservation

6. Water conservation focuses on optimizing the use of freshwater resources and reducing unnecessary wastage. While 70% of the Earth's surface is covered with water, only about 2.5% is freshwater, much of which is locked in glaciers and ice caps. Mismanagement of this finite resource has already led to acute water scarcity in various regions worldwide. Implementing effective water conservation strategies is essential for mitigating this crisis.

(a) **Efficient Water Usage**. Innovations in water-saving technologies can significantly reduce consumption. In agriculture, which accounts for nearly 70% of global freshwater use, techniques like **drip irrigation** and **sprinkler systems** deliver water directly to the plant roots, minimizing wastage and evaporation. Similarly, industries and households can install **low-flow faucets**, **aerators**, and **water-efficient appliances** to curb water usage. These technologies not only conserve water but also reduce the energy costs associated with its pumping, processing, and heating.

(b) **Reducing Daily Wastage**. Simple changes in daily habits can lead to significant water savings. Fixing leaking taps and pipes, turning off taps while brushing teeth, and using water saving practices are effective measures. Education campaigns emphasizing the importance of responsible water use can encourage individuals to adopt these practices. Communities can also promote collective actions, such as using **greywater recycling** systems to repurpose wastewater from sinks and showers for gardening or flushing toilets.

(c) **Rainwater Harvesting**.



Rainwater harvesting involves collecting and storing rainwater from rooftops or other catchment areas for later use. This method is especially beneficial in regions with seasonal rainfall patterns, as it can supplement water supply during dry periods. Harvested rainwater can be used for irrigation, washing, or even treated with advanced technology for drinking purposes, reducing dependence on over-exploited groundwater sources.

7. Efficient water usage lessens the strain on freshwater ecosystems, prevents pollution, mitigates drought risks, and ensures economic savings. By conserving every drop today, we secure water availability for future generations.

Water Quality Management

8. While water conservation ensures availability, water quality management focuses on maintaining the health and usability of water resources. Pollution from industrial, agricultural, and household activities has severely impacted freshwater sources, making it imperative to address water contamination effectively.

(a) **Pollution Control through Treatment Plants**. Proper treatment of wastewater is critical to preventing harmful contaminants from entering natural water bodies. Industrial effluents must undergo processes like sedimentation, filtration, and biological treatment before being released. **Sewage treatment plants (STPs)** play a pivotal role in treating municipal wastewater to remove harmful pathogens, chemicals, and solid waste. Advanced technologies, such as **chlorination**, **UV disinfection**, and **reverse osmosis**, are commonly employed to purify water and make it safe for reuse or release.

(b) **Protecting Watersheds and Vegetation**. Watersheds are natural systems that collect and channel rainwater into rivers, lakes, and aquifers. Conserving forests and vegetation in these areas acts as a natural filtration system, preventing soil erosion and reducing pollutants from entering water sources. Healthy ecosystems in watersheds also support biodiversity and maintain the water cycle. Reforestation projects and sustainable land-use practices can help preserve these vital resources.

(c) **Regulatory Measures**. Local water boards and regulatory agencies, such as the Central Pollution Control Board (CPCB) in India, enforce strict standards for water quality. These bodies ensure that industries, municipalities, and households

comply with laws to prevent contamination. Public awareness campaigns and community involvement in monitoring water quality can further enhance compliance and accountability.

9. Managing water quality protects ecosystems, safeguards public health, and ensures the sustainable use of water resources for agriculture, industry, and drinking purposes. Clean water is essential not just for human survival but also for maintaining ecological balance.

10. Effective water management requires a dual focus on conservation and quality. By integrating water-saving technologies, encouraging responsible usage, treating wastewater, and protecting natural ecosystems, we can tackle the pressing challenges of water scarcity and pollution. Holistic water management strategies ensure that this precious resource remains abundant, clean, and accessible for all. Sustainable practices today are the cornerstone of a water-secure future.

PART II : AIR MANAGEMENT

11. Air management is a critical component of environmental sustainability and public health. Effective strategies for air pollution control, green infrastructure development, and reducing vehicular emissions are essential to mitigate the effects of air pollution and maintain ecological balance.

12. **Air Pollution Control.** Clean air is fundamental for human health and environmental stability. However, air pollution has become a pressing issue, particularly in urban areas, where rising pollution levels contribute to respiratory diseases and many other health issues. Tackling air pollution requires a multi-faceted approach:

(a) **Strict Enforcement of Emission Standards**. Governments must enforce stringent emission regulations for factories, power plants, and vehicles to limit the release of pollutants like particulate matter (PM2.5 and PM10), nitrogen oxides (NOx), and sulphur oxides (SOx). Regular inspections and penalties for non-compliance are crucial.

(b) **Avoiding Open Burning**. The practice of burning plastics, agricultural waste, and other trash releases harmful chemicals into the air. Awareness campaigns and legal measures to prohibit open burning are essential to curb this source of pollution.

(c) **Promotion of Renewable Energy**. Transitioning to clean energy sources such as solar, wind, and hydropower can significantly reduce reliance on fossil fuels, which are among the largest contributors to air pollution. Policies supporting renewable energy adoption, subsidies, and research in alternative technologies can accelerate this transition.

(d) **Addressing Agricultural Practices**. Unscientific practices like stubble burning and methane emissions from agriculture and livestock significantly worsen

air quality. Promoting sustainable farming techniques, bio-digesters for methane capture, and incentives for farmers to adopt eco-friendly methods can help address this issue.

(e) **Air Quality Monitoring and Intervention**. Governments and environmental agencies must install air quality monitoring systems in cities to track pollutant levels in real-time. Such systems enable timely interventions, such as traffic restrictions during severe smog episodes, as witnessed in Delhi, India.

AQI Category	AQI	Concentration range*							
		PM_{10}	$PM_{2.5}$	NO_2	O_3	CO	SO_2	NH_3	Pb
Good	0 - 50	0 - 50	0 - 30	0 - 40	0 - 50	0 - 1.0	0 - 40	0 - 200	0 - 0.5
Satisfactory	51 - 100	51 - 100	31 - 60	41 - 80	51 - 100	1.1 - 2.0	41 - 80	201 - 400	0.5 - 1.0
Moderately polluted	101 - 200	101 - 250	61 - 90	81 - 180	101 - 168	2.1 - 10	81 - 380	401 - 800	1.1 - 2.0
Poor	201 - 300	251 - 350	91 - 120	181 - 280	169 - 208	10 - 17	381 - 800	801 - 1200	2.1 - 3.0
Very poor	301 – 400	351 - 430	121 - 250	281 - 400	209 - 748*	17 - 34	801 - 1600	1200 -1800	3.1 - 3.5
Severe	401 - 500	430 +	250+	400+	748+*	34+	1600+	1800+	3.5+

* CO in mg/m^3 and other pollutants in $\mu g/m^3$; 2h-hourly average values for PM_{10}, $PM_{2.5}$, NO_2, SO_2, NH_3, and Pb, and 8-hourly values for CO and O_3.

13. **Green Infrastructure.** Green infrastructure refers to integrating natural elements into urban design to enhance air quality and reduce the environmental impact of development. This approach includes creating parks, planting trees, and constructing energy-efficient buildings that contribute to sustainable air management.

(a) **Urban Greening**. Trees act as natural air filters, absorbing carbon dioxide and other pollutants while releasing oxygen. Planting more trees and creating green spaces in urban areas can significantly improve air quality.

(b) **Mitigating Urban Heat Island Effect (UHI)**. Cities experience higher temperatures due to the absorption and re-emission of heat by concrete, asphalt, and other urban materials. Green infrastructure elements like urban parks, green roofs, and tree-lined streets help reduce the UHI effect, leading to cooler and healthier cities.

(c) **Sustainable Urban Planning**. Incorporating rain gardens, bioswales, and vegetative barriers in city planning not only helps in air purification but also enhances water management. Energy-efficient buildings with green roofs and walls reduce energy consumption and air pollution.

14. **Reducing Vehicular Emissions.** The transportation sector is one of the largest contributors to air pollution due to emissions of carbon monoxide (CO), nitrogen oxides (NOx), and particulate matter from vehicles. Reducing vehicular emissions is pivotal in managing air quality.

(a) **Promoting Public Transport and Carpooling**. Expanding public transport systems and encouraging carpooling can significantly reduce the number of vehicles

on the road. Well-connected and affordable public transit options incentivize people to shift away from private vehicles.

(b) **Encouraging Non-Motorized Transport**. Cycling and walking are eco-friendly modes of transportation that not only reduce air pollution but also improve public health. Developing dedicated cycling tracks and pedestrian-friendly zones can encourage this transition.

(c) **Adopting Electric and Hybrid Vehicles**. Electric vehicles (EVs) and hybrid vehicles offer a sustainable alternative to traditional combustion engine vehicles. Subsidies, tax benefits, and the establishment of EV charging infrastructure can accelerate their adoption. However, the disposal and reuse of EV batteries may pose a strain on recycling resources in the future.

(d) **Combating Climate Change and Smog**. Managing vehicular emissions plays a vital role in mitigating climate change and reducing the frequency of smog and acid rain. Improved air quality directly benefits ecosystems and wildlife while contributing to overall environmental health.

15. By implementing these strategies, India can address the challenges of air pollution and create healthier, more sustainable environments for its citizens. Public participation, coupled with government initiatives, is crucial in achieving these goals for effective air management.

PART III : SOIL MANAGEMENT

16. Soil is one of the most valuable natural resources, integral to agriculture, biodiversity, and ecosystem balance. However, soil degradation, erosion, and pollution are growing challenges that threaten its sustainability. Effective soil management encompasses conservation, fertility enhancement, and pollution prevention to ensure long-term productivity and environmental health.

17. **Soil Conservation**. Soil conservation refers to a set of strategies designed to prevent soil erosion, maintain its structure, and preserve its fertility. Soil erosion, caused by wind, water, and human activities,deforestation results in the loss of nutrient-rich topsoil, which is essential for plant growth. Conservation techniques not only mitigate erosion but also contribute to environmental sustainability by promoting water filtration, carbon sequestration, and biodiversity. Key practices for soil conservation include:

(a) **Contour Ploughing**. Ploughing along the natural contours of the land reduces water runoff and prevents soil erosion.

(b) **Terracing**. Creating stepped levels on hilly terrain minimizes erosion and water loss, allowing agriculture in slope areas.

(c) **Agroforestry**. Integrating trees with crops enhances soil fertility, prevents erosion, and provides additional benefits like shade and timber.

(d) **Crop Rotation**. Alternating crops helps maintain soil health by reducing pest buildup and replenishing nutrients.

(e) **Mulching**. Covering the soil with organic material retains moisture, reduces erosion, and enriches the soil with organic matter.

18. These practices are crucial for sustainable agriculture, ensuring food security, and promoting environmental health. Soil conservation safeguards this finite resource for future generations, enabling resilient ecosystems and productive farming systems.

19. **Soil Fertility Management.** Soil fertility is critical for producing healthy crops and maintaining agricultural productivity. Fertile soil contains essential nutrients, organic matter, and favourable physical and chemical properties that support plant growth. However, intensive farming practices, overuse of chemical fertilizers, and improper irrigation can degrade soil fertility. Key factors affecting soil fertility include:

DID YOU KNOW?

- Jadav Payeng - The "Forest Man of India" single-handedly transformed a barren sandbar in Assam into a 1,360-acre forest, now known as the Molai Forest. His efforts involved planting trees and grasses that prevent soil erosion, enhance soil fertility, and restore the natural ecosystem. Payeng's work exemplifies how individual dedication can result in large-scale soil and environmental conservation.

(a) **Nutrient Availability and Retention**. Ensuring soil contains adequate levels of nitrogen, phosphorus, and potassium **(N ,P ,K)** while minimizing nutrient loss.

(b) **Soil pH**. Maintaining a balanced pH level to optimize nutrient absorption by plants.

(c) **Organic Matter Content**. Incorporating compost, green manure, and crop residues improves soil structure and nutrient levels.

(d) **Water-Holding Capacity**. Managing irrigation to prevent waterlogging and improve soil's ability to retain moisture.

(e) **Topsoil Conservation**. Preventing erosion to retain the nutrient-rich upper soil layer.

20. Practices like **crop rotation** and the use of **organic fertilizers** such as compost and manure are eco-friendly alternatives that enhance soil fertility without harming the environment. Balanced fertilizer application, tailored to the soil's specific needs, ensures crops get the nutrients they require while preventing overuse of chemicals. By actively managing soil fertility, we not only boost agricultural productivity but also promote a healthier environment and sustainable food systems.

21. **Preventing Soil Pollution.** Soil pollution, caused by industrial waste, excessive chemical fertilizers, and pesticide use, has far-reaching effects on agriculture, ecosystems, and human health. Polluted soils lose their fertility, disrupt food chains, and contaminate groundwater sources. Preventing soil pollution is, therefore, an essential component of soil management. Steps to manage and reduce soil pollution include:

(a) **Limiting Chemical Fertilizers and Pesticides**. Using eco-friendly biofertilizers and biopesticides reduces the buildup of harmful chemicals in the soil.

(b) **Proper Disposal of Industrial Waste**. Ensuring industries treat and dispose of waste responsibly to avoid contaminating surrounding soil.

(c) **Adopting Organic Farming**. Transitioning to organic farming methods minimizes chemical inputs and promotes sustainable soil health.

(d) **Reducing Household Waste**. Following the "Reduce, Reuse, Recycle" principle to lower the volume of waste that ends up in landfills, thereby decreasing soil contamination.

(e) **Preventing Plastic Pollution**. Encouraging the use of biodegradable alternatives reduces plastic waste, which contributes significantly to soil degradation.

DID YOU KNOW?

- Padma Shri Awardee Tulsi Gowda - The "Encyclopedia of Forests" is a tribal environmentalist from Karnataka, has planted and nurtured over 30,000 trees in her lifetime. Her efforts extend to soil conservation, as she promotes afforestation and sustainable practices that improve soil quality and prevent erosion. Her work highlights how individual efforts can have a large-scale impact on soil health and biodiversity.

22. By integrating these practices into farming, industrial operations, and daily life, we can significantly curb soil pollution. A collective effort toward reducing the reliance on harmful substances and encouraging sustainable waste management practices will create a healthier environment and ensure soil remains a viable resource for generations to come.

23. Soil management is vital for maintaining agricultural productivity, environmental health, and ecosystem balance. Conservation techniques protect against erosion, fertility management ensures long-term crop growth, and pollution prevention safeguards soil quality. Through a combination of education, policy enforcement, and sustainable practices,

we can address soil degradation challenges and ensure this precious resource continues to support life on Earth.

PART IV : GOVERNMENT INITIATIVES

24. **National Action Plan on Climate Change (NAPCC)**. Launched in Jun 2008, the **NAPCC** is a comprehensive policy framework to address climate change and promote sustainable development. It comprises eight core missions, focusing on water, energy efficiency, afforestation, agriculture, and ecosystem protection. Key missions include the **National Solar Mission**, **National Mission for a Green India**, and the **National Water Mission**.

25. **National Afforestation Programme (NAP)**. The **NAP** aims to restore degraded forest areas through community participation. The program encourages afforestation and eco-restoration in areas affected by deforestation, desertification, and land degradation, contributing to the conservation of biodiversity and the enhancement of natural resources.

26. **Compensatory Afforestation Fund Management and Planning Authority (CAMPA)**. This initiative was introduced to ensure compensatory afforestation when forest land is diverted for non-forest purposes. **CAMPA** funds are used to plant new trees, restore biodiversity, and maintain wildlife habitats. The fund has been a significant resource for afforestation and environmental restoration efforts across India.CAMPA is governed by **Compensatory Afforestation Act, 2016.**

27. **Namami Gange Programme**. Launched in 2014, **Namami Gange** is an integrated mission to clean and rejuvenate the Ganga River, a lifeline for millions of Indians. The program focuses on treating sewage, managing industrial waste, river surface cleaning, and creating awareness about pollution prevention. It also includes efforts to conserve aquatic biodiversity and improve the overall ecosystem of the river basin.

28. **Green India Mission (GIM)**. A part of the **NAPCC**, the **Green India Mission** focuses on increasing forest cover, restoring ecosystems, and enhancing biodiversity across the country. The mission also aims to improve the livelihoods of forest-dependent communities by promoting sustainable forest management practices.

29. **Swachh Bharat Mission (SBM)**. Though primarily focused on cleanliness and sanitation, the **Swachh Bharat Mission** also emphasizes solid waste management and environmental protection. By encouraging waste segregation, composting, and the elimination of open defecation, it plays a critical role in improving public health and protecting natural resources, such as water bodies, from contamination.

30. **National Mission for Clean Ganga (NMCG)**. The **NMCG** is a dedicated mission for the rejuvenation of the Ganga River. It focuses on wastewater management, afforestation, biodiversity conservation, and the development of a river basin management plan. The mission includes strict regulation of industries along the river to reduce pollution.

31. **Atal Mission for Rejuvenation and Urban Transformation (AMRUT)**. The **AMRUT** program, launched in 2015, aims to provide urban infrastructure that improves the quality of life in cities. It focuses on water supply, sewage, stormwater drainage, and urban green spaces, contributing to sustainable urban development and environmental protection.

32. **National River Conservation Plan (NRCP)**. The **NRCP** aims to reduce pollution levels in rivers across India by implementing sewage treatment plants, promoting bio-remediation, and enhancing the quality of water bodies. It focuses on cleaning rivers by preventing untreated sewage and industrial waste from flowing into them.

33. **Bharat Stage Emission Standards (BSES)**. India's vehicle emission standards, known as **Bharat Stage** standards, are intended to regulate the output of air pollutants from internal combustion engine vehicles. The transition to **BS-VI** norms in 2020 was a major leap in reducing vehicular emissions, playing a crucial role in air quality improvement.

34. **National Wetland Conservation Programme (NWCP)**. The **NWCP** was established to conserve and manage the country's wetlands, which are crucial for biodiversity, water recharge, and climate mitigation. This program identifies critical wetlands and develops action plans to protect them from encroachment, pollution, and degradation. NWCP is merged into **National Plan for Conservation of Aquatic Ecosystems (NPCA)**.

35. **Pradhan Mantri Krishi Sinchayee Yojana (PMKSY)**. **PMKSY** aims to improve water use efficiency in agriculture, promote sustainable irrigation, and conserve water resources. The program also emphasizes watershed management and rainwater harvesting to ensure better water availability for farmers and sustainable agricultural practices achieving **" Per Drop More Crop".**

36. **National Biodiversity Action Plan (NBAP)**. The **NBAP** provides a strategic framework for conserving biological diversity and ensuring its sustainable use. It aligns with India's commitments under the Convention on Biological Diversity (CBD) and addresses key issues like species conservation, habitat protection, and sustainable use of natural resources.

37. **Soil Health Card Scheme**. This scheme, launched in 2015, aims to promote soil health and sustainable agricultural practices by providing farmers with detailed soil health data. The goal is to improve crop productivity and minimize environmental degradation caused by overuse of fertilizers and poor farming practices.

38. **Plastic Waste Management Rules, 2016**. These rules regulate the generation, use, and disposal of plastic waste. They promote recycling, encourage the reduction of single-use plastics, and require producers to take responsibility for managing plastic waste. Several states in India have introduced bans on specific types of plastics as part of their broader waste management efforts. In 2022 single use plastic was banned.

39. These government initiatives reflect India's commitment to addressing environmental challenges, conserving natural resources, and promoting sustainable development across the country.

CONCLUSION

40. Effective management of natural resources such as water, air, and soil is crucial for India's sustainable development and environmental health. Water conservation techniques like rainwater harvesting, afforestation, and reducing pollution are vital to address the water scarcity crisis. Ensuring clean air requires measures to combat pollution through reduced emissions, cleaner technologies, and awareness campaigns. Soil management, through conservation, fertility enhancement, and pollution prevention, is essential for sustainable agriculture and food security. Collaborative efforts between the government, private sectors, and individuals have led to various initiatives in resource conservation. NCC cadets, as future leaders and responsible citizens, can play a pivotal role in these efforts. They can promote environmental awareness through campaigns, assist in tree plantation drives, participate in water conservation projects, and advocate for sustainable practices in their communities. By embodying discipline, leadership, and service, NCC cadets can inspire others to join the movement for conserving India’s natural resources and ensuring a healthier, more sustainable future.

SUMMARY

- Natural resource management is essential to maintaining the delicate balance between human needs and environmental health.
- This class explored key topics such as water conservation, water quality management, air pollution control, soil preservation, and the role of renewable energy in reducing environmental damage.
- Water conservation practices like rainwater harvesting and drip irrigation help save precious freshwater resources.
- Air quality can be improved through emission standards, renewable energy, and reducing vehicular pollution.
- Soil management focuses on conservation, maintaining fertility, and preventing soil pollution through sustainable agricultural practices.
- Additionally, government initiatives such as the Namami Gange Programme show India's commitment to preserving its natural resources.
- Sustainable management practices ensure the availability of these resources for current and future generations.

ASSESSMENT EXERCISE

Multiple Choice Questions

Q1. What percentage of Earth's water is freshwater?

a) 2.5%

b) 10%

c) 25%

d) 50%

Q2. Which of the following is a method of water conservation?

a) Over-irrigation

b) Rainwater harvesting

c) Deforestation

d) None of the above

Q3. What is the main cause of soil erosion?

a) Over-irrigation

b) Deforestation

c) Fertilization

d) Crop rotation

Q4. Which of the following energy sources contributes the least to air pollution?

a) Coal

b) Solar

c) Diesel

d) Gasoline

Q5. Which government program aims to clean the Ganga River?

a) Swachh Bharat Abhiyan

b) Namami Gange Programme

c) Clean India Initiative

d) Green India Mission

Q6. What is the main purpose of emission standards?

a) To control the quality of air

b) To monitor soil fertility

c) To conserve water resources

d) To manage energy consumption

Q7. Which of the following methods helps improve soil fertility?

a) Over-irrigation

b) Crop rotation

c) Excessive pesticide use

d) Soil erosion

Q8. What is a key strategy in air pollution control?

a) Using fossil fuels

b) Encouraging public transport

c) Deforestation

d) Increased industrial activity

Q9. Green infrastructure involves:

a) Planting more trees

b) Building more factories

c) Expanding cities

d) Using more plastic

Q10. How can individuals help reduce vehicular emissions?

a) Use public transport

b) Drive individual cars

c) Increase air conditioner usage

d) Use plastic products

Q11. What is the key benefit of rainwater harvesting?

a) Wasting water

b) Flooding

c) Reducing water demand from natural sources

d) Increasing water bills

Q12. What is the best way to control water pollution?

a) Dumping waste in rivers

b) Using water treatment plants

c) Ignoring industrial waste

d) Building more dams

Q13. Which of the following is not a renewable energy source?

a) Wind energy

b) Solar energy

c) Coal

d) Hydropower

Q14. Which practice helps in preventing soil erosion?

a) Over-irrigation

b) Terracing

c) Monoculture farming

d) Soil pollution

Q15. Air pollution contributes to which of the following?

a) Cleaner environment

b) Respiratory problems

c) Soil fertility

d) Higher crop yields

Q16. Which of the following actions would reduce air pollution?

a) Burning fossil fuels

b) Planting trees

c) Deforestation

d) Using plastic products

Q17. The main goal of the Namami Gange Programme is to:

a) Build new dams

b) Clean the Ganga River

c) Promote industrialization

d) Increase water consumption

Q18. Which of the following activities depletes soil fertility?

a) Overuse of chemical fertilizers

b) Crop rotation

c) Agroforestry

d) Organic farming

Q19. A key feature of sustainable water management is:

a) Wasting water

b) Efficient water usage

c) Allowing leaks

d) Removing vegetation

Q20. What role do forests play in water management?

a) Pollute water

b) Act as natural filters

c) Destroy watersheds

d) Reduce rainfall

Short Answer Questions

Q1. Explain the significance of rainwater harvesting as a water conservation method.

Q2. What are the key challenges in air pollution control, and how can renewable energy help?

Q3. How does soil erosion impact agricultural productivity?

Q4. Describe the impact of vehicular emissions on air quality.

Q5, What is the importance of green infrastructure in managing natural resources?

Long Answer Questions

Q1. Discuss the importance of water quality management and how treatment plants contribute to reducing water pollution.

Q2. Explain the role of government initiatives like the Namami Gange Programme in managing natural resources.

Q3. Analyse the importance of soil fertility management in agriculture and food security.

Q4. What are the main strategies for controlling air pollution in urban areas, and how can individuals contribute to reducing air pollution?

Q5. Discuss the benefits and challenges of implementing renewable energy sources in the context of natural resource management.

EA III (SD/SW)

CHAPTER III: WASTE MANAGEMENT & RECYCLING

“I suppose I have done my bit, it’s now up to you younger people.”

"Change begins with individual action; every small step in waste management can lead to significant environmental benefits."

- Almitra Patel : Often called the 'Grandmother of Solid Waste Management in India'

TEACHING INSTRUCTIONS

Period : **One.**

Type : **Lecture and Discussion.**

Year : **SD/SW (Second Year)**

Conducting Officer : **ANO/ CTO.**

Training Aids : **Class Room, Computer with OHP, Screen, Presentation, Script or Book Flagged or Lesson Plan in File, Board and Markers.**

Own Time Work : **Cadets must be told to prepare for this class prior to conduct.**

Time-plan

- Introduction : 03 minutes
- Part I : 07 minutes
- Part II : 08 minutes
- Part III : 07 minutes
- Part IV : 08 minutes
- Conclusion & Summary : 07 minutes

INTRODUCTION

1. Waste management is the process of collecting, transporting, processing, and properly disposing of waste materials generated by human activity. It involves a systematic approach to ensure that waste is handled in ways that minimize its impact on the environment and public health. A crucial aspect of waste management is **recycling**, which involves converting waste into reusable materials, reducing the need for raw materials and cutting down on environmental pollution. In a country like India, where rapid urbanization and a large population generate enormous amounts of waste daily, managing this waste efficiently presents significant challenges. The lack of infrastructure, awareness, and resources further complicates the situation, making it essential to develop sustainable waste management solutions.

2. **Waste Management**. Proper waste management is essential for protecting air, water, and soil from pollution and preventing ecological harm. It promotes resource conservation through recycling and reuse, reduces strain on natural resources, and enhances community health and well-being.

3. **Recycling**. Recycling reduces the need for new raw materials, conserves energy, and lowers greenhouse gas emissions. It helps combat climate change, decreases waste sent to landfills, and alleviates pressure on disposal systems.

4. **Challenges in India**. With rapid urbanization and a large population, India faces issues like poor waste segregation, limited treatment facilities, and reliance on landfills. These challenges harm the environment and health, emphasizing the need for efficient waste management for a cleaner, sustainable future.

PREVIEW

The lecture will be conducted in following parts:-

(a) Part I : Waste Management in India

(b) Part II : Challenges in Waste Management

(c) Part III : Recycling and Government Initiatives

(d) Part IV : Public Awareness and Use of Future Technology in Waste Management

LEARNING OBJECTIVES

- Understand the importance of waste management and recycling.
- Identify the key components of an effective waste management.
- Analyse the current state of waste generation in India.
- Recognize the major challenges.
- Explore government initiatives.
- Discuss future technological advancements.

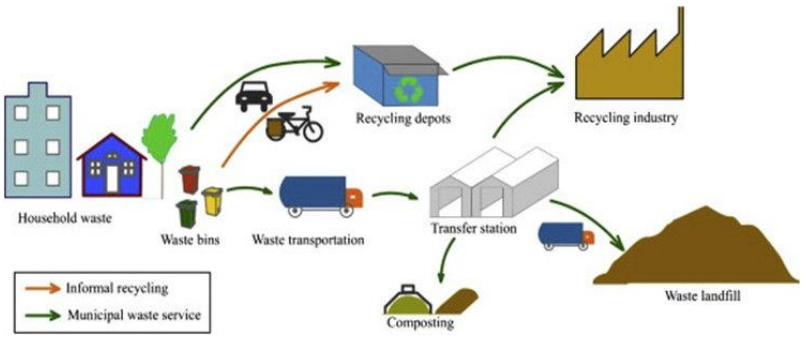
PART I : WASTE MANAGEMENT IN INDIA

Waste Generation and Composition

5. India is grappling with a burgeoning waste management crisis as it produces over 62 million tonnes of municipal solid waste (MSW) annually, with projections indicating this number will soar to 165 million tonnes by 2030 due to rapid urbanization and population growth. The composition of waste in India is diverse, comprising organic matter (50-60%), recyclable materials such as paper, glass, and metals (20-30%), hazardous waste like batteries and medical waste (10-15%), and inert construction debris. The improper handling of organic waste is particularly concerning as it decomposes to release methane, a potent greenhouse gas that exacerbates climate change, and leachate, a liquid pollutant that can contaminate soil and water. Recycling, though crucial, faces significant challenges due to poor segregation at the source, which results in valuable recyclables being contaminated. Hazardous waste management remains inadequate due to a lack of infrastructure and specialized facilities, further intensifying environmental and health hazards.

Waste Collection

6. Waste collection systems in India exhibit stark contrasts between urban and rural areas. In some urban regions, upto 90% of waste is collected, but the practice of mixed waste collection undermines efforts to recycle or compost effectively. Initiatives under the Swachh Bharat Mission have significantly enhanced door-to-door waste collection services in cities, raising awareness about the importance of proper disposal practices. However, in rural areas, waste management remains informal and largely unregulated. Organic waste is often composted using traditional methods, while non-biodegradable waste is either burned, leading to air pollution, or dumped in open areas, causing environmental degradation. Across both urban and rural settings, the primary challenge lies in the lack of source segregation at the household level. Without separating biodegradable, recyclable, and hazardous waste, downstream processes such as recycling and composting cannot achieve their full potential.



Waste Disposal

7. Disposal methods in India are far from sustainable, with most waste ending up in unscientific open dumps that are poorly managed. These open landfills contribute to significant environmental and health issues, including groundwater contamination from leachate seepage and methane emissions from decomposing organic waste. Composting and biogas generation are effective disposal solutions for organic waste, converting it into nutrient-rich compost and energy, respectively. However, these methods face significant

hurdles due to contamination from mixed waste, which reduces their efficiency and economic viability. Waste-to-energy plants are gaining traction as an innovative solution, converting non-recyclable waste into electricity. Yet, their success depends heavily on ensuring waste is adequately segregated and free of moisture or contaminants. The informal recycling sector plays an essential role in India's waste management ecosystem, with waste pickers recovering a significant portion of recyclables like plastics, metals, and glass. Despite their contributions, informal workers often operate in unsafe conditions without protective gear or access to health benefits, underscoring the need for their integration into formal waste management systems to ensure better safety, dignity, and efficiency.

8. Effective waste management in India demands a multi-pronged approach involving improved infrastructure, robust policies, and widespread public participation. Source segregation at the household level, combined with investments in sustainable waste processing technologies and the formalization of the informal recycling sector, can pave the way for a cleaner and more sustainable future.

INTERESTING FACTS

- **India's Largest Landfill is Comparable to the Taj Mahal in height**. The **Ghazipur landfill** in Delhi has grown to over 65 meters tall, comparable to the height of the Taj Mahal. This massive pile of waste is a symbol of the country's struggle with effective waste disposal and the need for more sustainable waste management practices, such as composting and waste-to-energy technologies.

PART II : CHALLENGES IN WASTE MANAGEMENT

9. **Lack of Waste Segregation**. A fundamental challenge in India's waste management system is the lack of segregation of waste at the source. Most households and businesses fail to separate biodegradable waste, recyclable materials, and hazardous waste. This lack of segregation hampers downstream processing and prevents the efficient recovery of valuable resources. Mixed waste often contaminates recyclables, rendering

them unfit for reuse, and makes composting or biogas generation from organic waste less effective. Hazardous waste, when disposed of alongside general waste, poses significant health and environmental risks, including soil and water contamination and the release of toxic gases during decomposition. Awareness campaigns and strict enforcement of segregation policies are critical to addressing this issue.

10. **Insufficient Infrastructure**. India's waste management infrastructure is woefully inadequate to handle the growing volumes of municipal solid waste. Cities lack sufficient waste treatment plants, composting units, and recycling facilities, resulting in a heavy reliance on landfills, many of which are overburdened and poorly maintained. These unscientific dumps cause severe pollution, including groundwater contamination from leachate and air pollution from landfill fires. The absence of modern technologies and processing plants for waste-to-energy conversion and advanced recycling further aggravates the problem. Investments in sustainable infrastructure, such as integrated waste management facilities, are essential to modernize the system and reduce the environmental impact of waste.

11. **Funding Constraints**. Urban local bodies, which are primarily responsible for waste management, often face severe budget limitations. Insufficient funding and under utilization of existing schemes like the Swachh Bharat Mission have stalled efforts to upgrade infrastructure and adopt modern waste management practices. Financial constraints also hinder the ability of municipalities to conduct awareness campaigns, provide adequate waste collection services, or maintain existing infrastructure. The lack of private sector participation and innovative financing models further limits the resources available for tackling the waste crisis. Addressing these financial challenges requires a combination of increased government investment, public-private partnerships, and efficient utilization of available funds.

12. **Low Public Awareness**. Public awareness and participation in waste management remain low, contributing to improper disposal practices and widespread littering. Despite government efforts through initiatives like the Swachh Bharat Mission, many citizens are unaware of the importance of waste segregation, recycling, and responsible disposal. Common practices such as throwing waste in open areas or burning it, exacerbate the problem. Without active community involvement, even the most advanced waste management systems cannot function effectively. Comprehensive educational campaigns, incentivizing responsible behaviour, and engaging communities in local waste management programs are necessary to increase public participation and accountability.

13. **Informal Sector Issues**. The informal sector plays a crucial role in waste recycling in India, with millions of waste pickers recovering valuable materials like plastic, metal, and glass. However, these workers often operate under unsafe conditions, without access to protective equipment, healthcare, or formal recognition. The lack of integration of the informal sector into the formal waste management system limits their efficiency and reduces their potential contribution to sustainable waste management. Furthermore, the

absence of legal protections and fair wages leaves these workers vulnerable to exploitation and health hazards. Formalizing the informal sector, providing safety training and equipment, and ensuring fair compensation can significantly enhance their contributions while improving their quality of life.

14. Addressing these challenges requires a holistic approach involving policy reforms, capacity building, community engagement, and investments in technology and infrastructure. By tackling these issues, India can move towards a more sustainable and efficient waste management system that not only protects the environment but also improves public health and economic outcomes.

15. **Multi-Faceted Approach For Effective Waste Management**

(a) **Government Policies**. Policies set standards for waste collection, treatment, and disposal, reducing environmental and health risks. Initiatives like Swachh Bharat Mission and Solid Waste Management Rules 2016 promote segregation, infrastructure, and waste-to-energy technologies.

(b) **Public Participation**. Citizens play a key role by segregating waste, recycling, and reducing consumption. Public awareness campaigns encourage sustainable habits and collective responsibility in waste management.

(c) **Private Sector Investment**. Private companies improve waste management through technology, infrastructure, and Public-Private Partnerships (PPP), introducing innovations like smart bins and waste-to-energy plants for greater efficiency.

(d) **Infrastructure Improvement**. Modern landfills, recycling facilities, and waste-to-energy plants are essential for reducing environmental hazards and processing waste sustainably, addressing both waste management and energy needs.

(e) **Integrating the Informal Sector**. Recognizing and empowering waste pickers can improve recycling rates and reduce the burden on municipal systems. Providing legal status, safety gear, and better resources creates an inclusive, efficient system.

PART III : RECYCLING AND GOVERNMENT INITIATIVES

Recycling Initiatives In India

16. India's escalating waste management crisis has prompted concerted recycling efforts across the government, community, and private sectors. These initiatives aim to reduce the strain on landfills, conserve natural resources, and foster a culture of sustainability and circular economy practices. Recycling of resources from solid waste in India is

mostly undertaken by the informal sector. The formal recycling set-up in India in a minor fraction and is only in its initial stages, experimenting different models. Informal recycling in developing nations like India is a consequence of the increased gap in waste service provision and the resultant ease of access to secondary raw materials which have immediate economic value. The informal sector comprises of waste pickers, itinerant waste buyers, dealers and recycling units. Waste pickers constitute the largest population in the informal sector. Generally, recyclables are collected in two ways; paper, glass and metal are collected before they enter the Municipality solid waste stream from households on an instant payment basis by local junk dealers, commonly referred as 'Kabadiwalas' and plastics are generally collected by waste-pickers from litter on streets or from heaps of waste in landfills. Shopkeepers sell recyclable items, such as newspaper, cardboard, glass containers, tin cans etc. to junk dealers too. Waste pickers retrieve recyclable materials like milk bags, plastic cups and containers, glass, etc from what is discarded by households, commercial establishments and industries. Larger commercial establishments and industries sell the recyclable waste to waste dealers in bulk, who then sell it to recycling units.

17. The recyclables collected are separated by pickers and collectors daily and transferred to small, medium and large dealers. Usually, the pickers and collectors sell to small dealers in the slums, near their residence. The small dealers sell the waste to medium or large dealers and finally the waste will be sold to the recycling units. There are almost 2000 known plastic recycling units in India. Most of these known units are in Tamil Nadu, Gujarat, Karnataka, Kerala and Madhya Pradesh. The total number of plastic recycling units (will be much higher) and the capacity of each of these units is yet to be ascertained.

18. **Government Initiatives**. The government has implemented robust policies and programs to enhance recycling and promote sustainable waste management practices:

(a) **Waste Segregation**. The Solid Waste Management Rules 2016 emphasize the segregation of waste into biodegradable, recyclable, and hazardous categories at the source. This foundational step improves recycling efficiency and facilitates better waste processing. Cities like Indore have emerged as role models, achieving 100% door-to-door collection of segregated waste, setting benchmarks for waste management across the country.

(b) **Waste Treatment Plants**. The government has promoted the establishment of composting and waste-to-energy plants to manage organic waste sustainably. These facilities convert biodegradable waste into nutrient-rich compost or energy, reducing landfill reliance. Additionally, Material Recovery Facilities (MRFs) play a critical role in sorting recyclables such as plastic, metal, and glass, streamlining the recycling process.

Other Government Initiatives

(c) **Swachh Bharat Mission (SBM)**. Launched in 2014, it focuses on eliminating open defecation and improving solid waste management through segregation, door-to-door collection, recycling plants, and public awareness campaigns.

INTERESTING FACTS

- **India Has One of the Highest Plastic Recycling Rates:** India recycles around 60% of its plastic waste, which is significantly higher than the global average of 20%. This is primarily due to the informal sector of waste pickers, who collect, sort, and sell plastic for recycling, playing a vital role in reducing plastic pollution despite working in challenging conditions.

(d) **Solid Waste Management Rules, 2016**. Mandates waste segregation at the source, composting, waste-to-energy technologies, and extended producer responsibility (EPR) for manufacturers.

(e) **Plastic Waste Management Rules, 2016**. Targets plastic pollution by restricting single-use plastics, promoting recycling, and requiring producers to manage their plastic waste.

(f) **Extended Producer Responsibility (EPR)**. Requires manufacturers to manage waste from their products, particularly plastic, electronic, and hazardous waste, through recycling programs and safe disposal.

(g) **Waste-to-Energy Plants**. Converts municipal waste into electricity or fuel, reducing waste volume and generating renewable energy.

(h) National Clean Energy Fund (NCEF). Supports renewable energy projects, including waste-to-energy plants, and encourages public-private partnerships for waste management infrastructure.NCEF has been subsumed under **GST Compensation Fund 2017.**

(i) **E-Waste Management Rules, 2016**. Regulates e-waste collection and recycling, requiring producers to meet targets and promote safe disposal through formal channels.

(j) **Namami Gange Programme**. Focuses on cleaning the Ganga River by preventing waste dumping, building treatment plants, and improving waste disposal infrastructure.

(k) **Smart Cities Mission**. Promotes smart waste management with automated systems, smart bins, and real-time monitoring for better segregation and recycling.

(l) **Clean India Green India (CIGI)**. Encourages rural and urban communities to adopt eco-friendly waste practices like composting, recycling, and waste-to-energy technologies.

19. **NGO and Community Efforts**. Non-governmental organizations (NGOs) and local communities have been instrumental in creating awareness and fostering grassroots recycling initiative:

(a) **Education and Awareness**. Organizations like *Waste Warriors and Chintan* work actively to educate communities about waste segregation, recycling, and the environmental impact of improper waste disposal. These groups also collaborate with waste pickers to integrate them into recycling systems, enhancing their livelihoods and efficiency.

(b) **Composting and Plastic Recycling**. Initiatives such as *Daily Dump and Paryavaran Mitra* encourage households to adopt home composting, reducing organic waste sent to landfills. Similarly, these organizations promote innovative ways to recycle plastics, creating new products while reducing environmental pollution.

(c) **Clean-Up Campaigns**. Community-driven clean-up efforts like the *Versova Beach Clean-Up* have achieved remarkable results, removing thousands of tonnes of plastic waste from beaches and waterways. These initiatives also serve as powerful tools to raise public awareness about the importance of recycling and sustainable waste management practices.

20. **Private Sector Contributions**. Private enterprises are playing a pivotal role in advancing recycling technologies and integrating circular economy principles:

(a) **Technological Investment**: Companies such as GEM Enviro and Attero Recycling leverage advanced technologies to process materials like plastic and e-waste. These technologies enable the recovery of valuable resources, such as rare metals from electronics, reducing the dependency on virgin raw materials.

(b) **Circular Economy Models**. Innovators in the private sector are redefining waste as a resource. For instance, Reliance Industries has developed a system to transform discarded plastic bottles into fabrics, showcasing the potential of upcycling in fashion and textiles. Similarly, start-ups like *Banyan Nation* produce eco-friendly products by recycling industrial and consumer waste, demonstrating the viability of sustainable business models.

21. Recycling initiatives in India represent a collaborative effort involving the government, civil society, and the private sector. While significant progress has been made, scaling these efforts requires further investment in infrastructure, public awareness, and innovation. Strengthening policies, fostering community participation, and promoting

technological advancements will be key to achieving a sustainable waste management system that aligns with India's environmental and economic goals.

PART IV : PUBLIC AWARENESS AND USE OF FUTURE TECHNOLOGY IN WASTE MANAGEMENT

Public Awareness

22. Public education and awareness campaigns are essential for promoting responsible waste management in India. These initiatives bridge the gap between policy and community involvement, encouraging citizens to participate in waste segregation, recycling, and reducing single-use plastics.

23. **Public Education Campaigns**. Public education campaigns play a pivotal role in fostering a cultural shift toward sustainable waste management practices. By educating individuals about recycling, waste reduction, and proper disposal methods, these campaigns empower communities to adopt eco-friendly habits. Nationwide initiatives, such as the Swachh Bharat Mission, leverage mass media and grassroots activities to raise awareness on a broad scale, driving significant behavioural changes. Social media platforms like Facebook and Instagram further amplify these messages, utilizing hashtags like **#SayNoToPlastic** to engage younger audiences and create viral movements around recycling and waste reduction. At the local level, city-specific campaigns employ community meetings, awareness rallies, and neighbourhood drives to inform residents about the importance of waste segregation and responsible disposal. These localized efforts ensure that even small communities actively contribute to the national goal of sustainable waste management.

DID YOU KNOW?

- Several local bodies in Kerala have adopted community-based composting systems and introduced decentralized waste treatment plants. Alappuzha, known as the "Venice of the East," is a standout example, having nearly eliminated landfills by focusing on waste segregation and home composting initiatives.

24. **Role of Schools, NGOs, and Social Media**. Schools, NGOs, and social media collectively serve as influential agents of change in waste management education. Educational institutions are uniquely positioned to instil sustainable habits from an early age, with programs like the Green Schools Programme incorporating hands-on activities such as waste audits, composting, and recycling projects. These initiatives not only teach students about waste management but also encourage them to become ambassadors of change within their communities. NGOs like Chintan and Waste Warriors play a crucial role by organizing workshops, cleanup drives, and educational campaigns to engage diverse audiences and promote responsible practices. Meanwhile, social media platforms act as powerful tools for dissemination, where influencers and organizations share practical recycling tips, promote eco-friendly behaviours, and run creative campaigns to inspire

action. This multifaceted approach ensures that waste management awareness reaches all sections of society.

25. **Successful Initiatives**. Certain cities and institutions in India have demonstrated remarkable success in waste management, serving as models for others to emulate. Indore, repeatedly ranked as India's cleanest city (2017-2023), owes its success to a combination of effective policies, community participation, and rigorous waste segregation practices. The city's innovative waste management systems, which include door-to-door collection and composting, have significantly reduced landfill dependency. Similarly, schools like The Riverside School have implemented exemplary practices such as waste segregation and composting, setting benchmarks for educational institutions and inspiring nearby communities to adopt similar measures. These success stories highlight the transformative impact of well-planned initiatives and collective action.

26. **Reducing Single-Use Plastics and Composting**. Public education campaigns have been instrumental in reducing single-use plastics and promoting composting. India's ban on specific single-use plastic items is supported by widespread educational efforts that advocate for eco-friendly alternatives like cloth bags, biodegradable packaging, and reusable products. Campaigns emphasize the environmental dangers of plastic pollution while encouraging individuals and businesses to adopt sustainable practices. Composting is another critical focus area, with public education initiatives teaching households and communities to manage organic waste effectively. Home and community composting programs not only reduce the burden on landfills but also produce nutrient-rich compost for agricultural and gardening purposes, creating a circular economy for organic waste.

27. **Proper Disposal Methods for Hazardous Waste**. Hazardous waste, including e-waste, poses significant environmental and health risks if not managed properly. Public education campaigns emphasize the importance of safe disposal methods for such waste. E-waste collection drives, often organized in collaboration with local authorities and NGOs, ensure that harmful materials like batteries, electronics, and medical waste are processed responsibly. Awareness efforts also educate individuals about designated drop-off points, recycling programs, and the long-term benefits of proper hazardous waste management. These initiatives are essential for minimizing the toxic impact of hazardous waste on the environment and public health while fostering a culture of responsibility and sustainability.

DID YOU KNOW?

- Indore has been ranked the cleanest city in India for six consecutive years under the Swachh Survekshan rankings(2017-2023). The city has achieved this by implementing effective waste segregation at source, door-to-door collection, and processing almost 100% of its waste through composting and recycling.

Future Technological Advancements In Waste Management

28. As India continues to grapple with mounting waste management challenges, technological innovations offer transformative solutions that can revolutionize how waste is processed, recycled, and managed. These advancements focus on enhancing resource recovery, reducing environmental degradation, and increasing operational efficiency, setting the stage for a cleaner and more sustainable future.

29. **Waste-to-Energy Technologies.** Waste-to-energy (WTE) technologies play a pivotal role in addressing the dual challenge of reducing landfill dependency and generating renewable energy.

(a) **Overview**. WTE processes convert non-recyclable waste into electricity, heat, or fuel, significantly lowering landfill volumes while creating sustainable energy.

(b) **Incineration Plants**. Incineration remains a popular method for converting waste into energy. For instance, the Timarpur-Okhla plant in Delhi processes 1,950 tonnes of waste daily to generate 16 MW of power. However, concerns about air pollution and the release of toxic emissions necessitate advanced filtration and pollution control measures.

(c) **Biogas Production**. Organic waste, such as food scraps and agricultural residue, can be effectively managed through anaerobic digestion to produce biogas. A notable example is the Indore Bio-CNG plant, which processes 550 tonnes of organic waste daily to generate compressed natural gas (CNG) for vehicles, reducing reliance on fossil fuels.

(d) **Emerging Methods**. Advanced technologies like pyrolysis and gasification are gaining traction. Pyrolysis converts waste into bio-oil, while gasification produces syngas, which can be used for energy generation. These methods are versatile, capable of handling diverse waste types, including plastics, with reduced emissions compared to traditional incineration.

30. **Smart Waste Management Systems.** Smart technologies leveraging Artificial Intelligence (AI) and the Internet of Things (IoT) are revolutionizing the efficiency and transparency of waste management processes.

(a) **AI and IoT Integration**. AI-driven optimization of waste collection routes and sorting processes enhances efficiency while reducing costs. For example, smart bins equipped with IoT sensors can notify waste collectors when full, ensuring timely pickups and avoiding unnecessary trips. These systems are being piloted in cities like Bengaluru and Pune to streamline collection processes.

(b) **Data-Driven Approaches**. Real-time monitoring and data analytics empower municipalities to track waste generation, monitor disposal sites, and optimize resource allocation. Cities like Mumbai and Hyderabad are exploring smart waste

management systems to improve urban waste management efficiency and responsiveness.

31. **Advanced Recycling Technologies.** Recycling technologies are evolving to tackle the challenges of processing contaminated, complex, or mixed waste, particularly plastics, which are notoriously difficult to manage.

(a) **Chemical Recycling**. Unlike traditional mechanical recycling, chemical recycling breaks down plastics into their basic chemical components, enabling the recycling of mixed or contaminated plastics. Companies like Reliance Industries are spearheading initiatives to implement this cutting-edge technology(Pilot Stage) in India.

(b) **Plastics-to-Fuel**. Through pyrolysis, plastic waste can be converted into liquid fuels, offering an alternative energy source while reducing plastic pollution. This approach aligns with circular economy principles, turning waste into a valuable resource.

(c) **Innovations in Polymer Recycling**. Emerging enzymatic processes and other advanced methods enable the recycling of complex plastics, such as multi-layered packaging, which typically ends up in landfills due to their challenging composition. These innovations promise to significantly enhance recycling rates and material recovery.

CONCLUSION

32. In conclusion, waste management and recycling are essential for protecting the environment, conserving natural resources, and addressing India's growing waste problem. We have discussed the importance of managing waste effectively, the current challenges, such as improper waste segregation, inadequate infrastructure, and low public awareness, and the need for a multifaceted approach involving government policies, public participation, and private sector investment.

33. Public education campaigns, innovative recycling technologies, and waste-to-energy solutions hold promise for addressing these issues. However, success largely depends on everyone contributing to waste reduction and recycling efforts. The role of public participation is crucial—citizens need to segregate waste, reduce single-use plastics, and support recycling initiatives.

34. For **NCC cadets**, there are many ways to contribute to better waste management in your daily life. Start by **reducing waste** wherever possible, such as avoiding single-use

plastics. Practice **reuse** by finding creative ways to give items a second life. **Recycle** as much as you can, segregating your waste properly at home and school. Cadets can also play a key role in raising awareness within their communities, promoting responsible waste disposal and encouraging others to adopt eco-friendly habits. By taking small yet meaningful actions, each of us can help make India cleaner, greener, and more sustainable for future generations.

SUMMARY

- **Definition and Importance of Waste Management and Recycling.** Waste management involves the collection, transportation, processing, and disposal of waste, while recycling focuses on converting waste materials into reusable forms. These practices are essential for preventing environmental pollution and conserving natural resources.
- **Challenges in Waste Management in India**. Major challenges include lack of waste segregation at the source, inadequate infrastructure for waste treatment, insufficient funding, low public awareness, and unsafe working conditions for informal waste workers.
- **Waste Composition and Current Scenario in India**. India generates around 62 million tonnes of waste annually, comprising organic waste (50%), recyclables like paper and plastic (20%), and non-recyclables. Waste collection rates are improving, but proper treatment and disposal remain inadequate.
- **Government Initiatives**. Programs like the **Swachh Bharat Mission** have significantly improved sanitation and waste management through awareness campaigns, waste segregation drives, and investments in waste processing facilities.
- **Role of Public Participation**. Citizens play a critical role in waste management by segregating waste at the source, reducing waste generation, and adopting recycling practices. Public awareness campaigns by schools, NGOs, and social media are key to fostering behavioural change.
- **Recycling Initiatives**. The government, NGOs, and private companies are actively involved in promoting recycling. Initiatives include composting organic waste, developing recycling plants, and addressing challenges like single-use plastic and e-waste.
- **Technological Advancements**. Future solutions include waste-to-energy plants for renewable energy generation, smart waste management systems using AI and IoT, and advanced recycling methods like chemical recycling for plastics.
- **Success Stories in Indian States**. States like Kerala have excelled in decentralized waste management through community-driven composting and recycling efforts, serving as a model for other regions.
- **Role of Informal Waste Workers**. Informal waste pickers contribute significantly by recovering recyclables, reducing landfill waste, and promoting recycling. Their integration into formal waste management systems is crucial for improving efficiency and safety.
- **Call to Action for NCC Cadets and Communities**. To address waste management challenges, individuals are encouraged to adopt sustainable practices, such as waste segregation, composting, reducing single-use plastics, and raising awareness about the importance of recycling.

ASSESSMENT EXERCIS

Multiple Choice Questions

Q1. Which Indian city has been ranked the cleanest city in India for multiple years under the Swachh Survekshan rankings?

a) Delhi

b) Mumbai

c) Indore

d) Chennai

Q2. What percentage of India's plastic waste is typically recycled?

a) 20%

b) 30%

c) 50%

d) 60%

Q3. Which initiative aims to clean up cities and rural areas in India?

a) Clean India Mission

b) Green India Mission

c) Swachh Bharat Mission

d) Sustainable Development Goals

Q4. What is a significant challenge in waste management in India?

a) Overuse of raw materials

b) Excessive recycling

c) Lack of proper waste segregation

d) Overproduction of biodegradable waste

Q5. Which Indian state is known for its decentralized waste management systems?

a) Tamil Nadu

b) Maharashtra

c) Kerala

d) Karnataka

Q6. How much organic waste does India generate approximately?

a) 25%

b) 40%

c) 50%

d) 75%

Q7. What does the Swachh Bharat Mission aim to achieve?

a) Increase industrial productivity

b) Promote sustainable agriculture

c) Improve sanitation and waste management

d) Boost tourism

Q8. What is a major component of India's waste composition?

a) Glass

b) Hazardous waste

c) Organic waste

d) E-waste

Q9. Which sector contributes significantly to recycling efforts in India but often works in hazardous conditions?

a) Government workers

b) Private sector employees

c) Informal waste workers

d) Educational institutions

Q10. What is the primary benefit of recycling waste?

a) Increasing waste production

b) Reducing energy consumption

c) Enhancing pollution levels

d) Depleting natural resources

Q11. What is the primary source of waste-to-energy plants in India?

a) Organic waste

b) Recyclable materials

c) Plastic waste

d) E-waste

Q12. Which of the following is NOT a challenge in waste management in India?

a) Adequate funding

b) Low public awareness

c) Insufficient infrastructure

d) Informal sector involvement

Q13. Which community-based initiative is prominently used in Kerala for waste management?

a) Landfill expansion

b) Decentralized composting

c) Large incinerators

d) Waste-to-energy plants

Q14. Which organization plays a significant role in promoting waste segregation and recycling at the grassroots level?

a) Central Pollution Control Board

b) Ministry of Environment

c) Waste Warriors

d) TERI

Q15. What is the primary goal of Extended Producer Responsibility (EPR) in India?

a) Increase production rates

b) Reduce product costs

c) Hold companies accountable for their products' waste

d) Promote international trade

Q16. Which of the following materials is considered hazardous waste?

a) Paper

b) Plastic bottles

c) Batteries

d) Glass jars

Q17. What role do smart waste management systems use to improve waste handling?

a) Manual monitoring

b) AI and IoT technology

c) Paper-based systems

d) Traditional methods

Q18. What is one significant technological advancement in waste management?

a) Manual sorting of waste

b) Waste-to-energy technology

c) Increased landfilling

d) Reduced recycling efforts

Q19. Which of the following is NOT typically a component of the informal recycling sector?

a) Waste pickers

b) Recycling centres

c) Waste brokers

d) Informal workers

Q20. What is the estimated daily capacity of the largest waste-to-energy plant in Delhi?

a) 1,000 tonnes

b) 1,500 tonnes

c) 2,000 tonnes

d) 2,500 tonnes

Short Answer Questions

Q1. Explain the significance of the Swachh Bharat Mission in improving waste management in India.

Q2. Describe the role of informal waste workers in India's recycling sector.

Q3. What are the primary challenges faced in implementing effective waste management systems in India?

Q4. How does decentralized composting contribute to waste management, particularly in Kerala?

Q5. What are the benefits of using waste-to-energy plants for waste management?

Long Answer Questions

Q1. Discuss the impact of rapid urbanization on waste generation and management in India. Include specific challenges and potential solutions.

Q2. Evaluate the effectiveness of government initiatives like the Swachh Bharat Mission in enhancing waste management practices in Indian cities. What improvements can be made?

Q3. Analyse the role of public awareness and participation in waste management. How can educational campaigns and community involvement improve recycling rates and waste reduction?

Q4. Compare and contrast the waste management strategies of different Indian states, focusing on successful initiatives and areas needing improvement. Use Kerala as a case study.

Q5. Explore future technological advancements in waste management and recycling. How might innovations such as smart waste management systems and chemical recycling shape the future of waste handling in India?

GA I (SD/SW)

CHAPTER I : SUSTAINABLE DEVELOPMENT GOALS (SDG)

EFFORTS TOWARDS ACHIEVEMENT

"We have to build a new world, a new economy based on human values, on the values of the earth and the people."

Smt. Indira Gandhi

TEACHING INSTRUCTIONS

Period : **One.**

Type : **Lecture and Discussion**

Year : **SD/ SW (Third Year)**

Conducting Officer : **ANO/ CTO.**

Training Aids : **Class Room, Computer with OHP, Screen, Presentation, Script or Book Flagged or Lesson Plan in File, Board and Markers.**

Own Time Work : **Cadets must be told to prepare for this class prior to conduct.**

Time-plan

- Introduction : 03 minutes
- Part I : 07 minutes
- Part II : 10 minutes
- Part III : 07 minutes
- Part IV : 06 minutes
- Conclusion, Summary & Discussion : 07 minutes

INTRODUCTION

1. Imagine a world where we consume all the water, cut down every tree, and deplete every natural resource today, leaving nothing for future generations. It is a troubling scenario, isn't it? This is where sustainability becomes not just an ideal but a necessity. Sustainability ensures that resources are used wisely and responsibly, so there is enough to meet the needs of people today without compromising the ability of future generations to meet their own.

2. In today's rapidly changing world, we are faced with mounting challenges. Climate change is causing extreme weather events, rising sea levels, and biodiversity loss. Pollution is contaminating our air, water, and soil, affecting both ecosystems and human health. Simultaneously, poverty and inequality persist, depriving millions of accesses to necessities like clean water, nutritious food, and education. These issues, if left unaddressed, will significantly diminish the quality of life for future generations and may lead to irreversible environmental damage.

3. Sustainability is about finding the right balance—integrating economic growth with environmental protection and ensuring social well-being. It calls for innovative solutions, collective action, and a shift in mindset to recognize that the planet's resources are finite and must be managed with care.

4. To address these global challenges, in 2015, all United Nations (UN) member states adopted the Sustainable Development Goals (SDGs) as part of the 2030 Agenda for Sustainable Development. These 17 goals provide a comprehensive framework for tackling issues like poverty, inequality, environmental degradation, and climate change. They emphasize a universal commitment to building a better, more equitable world by 2030.

5. The SDGs are more than just targets—they are a call to action for governments, businesses, communities, and individuals. By addressing these interconnected challenges holistically, we can pave the way for a future where economic development thrives alongside environmental conservation and social equity. Sustainability is not just about the survival of the planet; it is about creating a better quality of life for everyone. It is a promise to leave a legacy of health, prosperity, and harmony with nature for generations to come.

PREVIEW

The lecture will be conducted in following parts:-

(a) Part I : Aim of SDGs

(b) Part II : The 17 SDGs

(c) Part III : Key Characteristics, Implementation & Monitoring

(d) Part IV : India's Progress towards the SDGs

LEARNING OBJECTIVES

- Understand the SDGs Framework.
- Recognize the Importance of a Sustainable Future by 2030.
- Learn the Aim of the SDGs.
- Identify and explain the 17 SDGs.
- Familiarize Monitoring and Evaluation Processes of the SDGs.
- Appreciate the Long-term Impact of Achieving the SDGs.

PART I : THE AIM OF THE SUSTAINABLE DEVELOPMENT GOALS

6. The Sustainable Development Goals (SDGs) are a bold and transformative global framework designed to address the most pressing challenges facing humanity. Adopted by all United Nations member states in 2015 as part of the 2030 Agenda for Sustainable Development, the SDGs outline an ambitious blueprint of 17 interconnected goals aimed at fostering a better, more sustainable future for all.

7. At their core, the SDGs aim to resolve critical global issues, encompassing social, economic, and environmental dimensions. They serve as a roadmap to:

(a) Eradicate poverty and hunger, ensuring that no one is left behind in the fight against deprivation.

(b) Ensure access to quality education and healthcare for all, fostering lifelong learning opportunities and healthy societies.

(c) Reduce inequalities, promoting fairness and equity regardless of gender, ethnicity, or socioeconomic status.

(d) Advance gender equality, empowering women and girls to participate fully in all aspects of life.

(e) Encourage sustainable economic growth, creating jobs and improving livelihoods while preserving the environment.

(f) Combat climate change by reducing greenhouse gas emissions and promoting resilience to its impacts.

(g) Protect the environment, safeguarding ecosystems, biodiversity, and natural resources for future generations.

8. The SDGs recognize that global challenges are interconnected and require holistic, inclusive, and sustainable solutions. The goals emphasize three key pillars for achieving sustainability:

(a) **Social Inclusion**. Social inclusion is at the heart of the SDGs. It involves creating a world where everyone, regardless of their background or circumstances, has access to opportunities, resources, and rights. This includes ensuring equal access to education, healthcare, clean water, and energy. By fostering inclusive societies, the SDGs strive to build a foundation of dignity, equality, and empowerment for all individuals.

(b) **Economic Development**. The SDGs emphasize the importance of fostering economic growth that benefits all sections of society without depleting resources or harming the environment. This approach seeks to create jobs, reduce income inequalities, and promote innovation while maintaining ecological balance.

Sustainable economic development focuses on advancing industries, infrastructure, and technology in ways that ensure long-term prosperity for communities.

(c) **Environmental Protection**. Recognizing the finite nature of Earth's resources, the SDGs stress the need to preserve and restore natural systems. This includes protecting forests, oceans, and wildlife, reducing pollution, and promoting renewable energy. Environmental protection ensures that future generations inherit a planet capable of sustaining life and thriving ecosystems.

9. By addressing these key dimensions - social inclusion, economic development, and environmental protection—the SDGs aim to create a balanced and equitable world. Their holistic approach highlights the interdependence of these factors, reinforcing that sustainable progress in one area cannot be achieved without considering its impact on others.

DID YOU KNOW?

- Each of the 17 SDGs is represented by a unique color and icon, making them visually distinctive and easy to recognize, contributing to a more engaging way to communicate their importance.

10. The SDGs are more than just goals; they are a shared vision of a sustainable and inclusive world. Through collective action and global cooperation, these goals inspire nations, communities, and individuals to work together toward a future where prosperity, equality, and environmental health coexist harmoniously.

Sustainable Future for All by The Year 2030

11. The year **2030** is significant because it represents a **strategic, time-bound target** for solving many of the world's most urgent challenges. Many of the challenges that the SDGs aim to solve, such as climate change, poverty, inequality, and environmental degradation, are pressing and will worsen if not addressed quickly. 2030 is seen as a critical tipping point, beyond which the negative impacts of inaction could become irreversible, especially in areas like climate change (SDG 13) and biodiversity loss (SDG 14 and SDG 15). By 2030, the global population is expected to reach around **8.5 billion people**. Meeting the needs of this growing population requires urgent advancements in **sustainable agriculture** (SDG 2), **education** (SDG 4), **healthcare** (SDG 3), and **infrastructure** (SDG 9). The year 2030 is viewed as the **last opportunity** for current generations to implement policies and practices that will prevent catastrophic consequences for future generations.

PART II : THE 17 SUSTAINABLE DEVELOPMENT GOALS

12. **SDG 1 - No Poverty.**

(a) Goal. End poverty in all its forms everywhere.

(b) Focus. Eradicating extreme poverty, reducing the number of people living in poverty, ensuring equal access to economic resources.

13. **SDG 2 - Zero Hunger.**

(a) Goal. End hunger, achieve food security, improve nutrition, and promote sustainable agriculture.

(b) Focus. Ending hunger, improving agricultural productivity, ensuring access to nutritious food.

14. **SDG 3 - Good Health and Well-being.**

(a) Goal. Ensure healthy lives and promote well-being for all at all ages.

(b) Focus. Reducing child mortality, combating diseases like HIV/AIDS and malaria, improving mental health, and ensuring universal health coverage.

15. **SDG 4 - Quality Education.**

(a) Goal. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.

(b) Focus. Universal access to education, improving literacy and numeracy, enhancing educational facilities.

16. **SDG 5 - Gender Equality.**

(a) Goal. Achieve gender equality and empower all women and girls.

(b) Focus. Ending discrimination against women and girls, promoting women's leadership, ensuring equal opportunities.

17. **SDG 6 - Clean Water and Sanitation.**

(a) Goal. Ensure availability and sustainable management of water and sanitation for all.

(b) Focus. Universal access to safe drinking water, adequate sanitation, improving water quality, protecting water ecosystems.

INTERESTING FACTS

- **Eradication of Open Defecation**. Through the Swachh Bharat Mission, India has made significant progress toward achieving SDG 6 (Clean Water and Sanitation). The country declared itself open defecation free in 2019, building over 110 million toilets in rural areas, improving sanitation, and promoting hygiene.

18. **SDG 7 - Affordable and Clean Energy.**

(a) Goal. Ensure access to affordable, reliable, sustainable, and modern energy for all.

(b) Focus. Expanding renewable energy, improving energy efficiency, ensuring universal access to electricity.

19. **SDG 8 - Decent Work and Economic Growth.**

(a) Goal. Promote sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work for all.

(b) Focus. Creating jobs, promoting entrepreneurship, reducing unemployment, improving labour conditions.

20. **SDG 9 - Industry, Innovation, and Infrastructure.**

(a) Goal. Build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation.

(b) Focus. Developing sustainable industries, promoting innovation, improving infrastructure.

21. **SDG 10 - Reduced Inequality.**

(a) Goal. Reduce inequality within and among countries.

(b) Focus. Ensuring equal opportunities, reducing income inequalities, enhancing social, economic, and political inclusion.

22. **SDG 11 - Sustainable Cities and Communities.**

(a) Goal. Make cities and human settlements inclusive, safe, resilient, and sustainable.

(b) Focus. Improving housing, transportation, urban planning, reducing environmental impacts of cities.

23. **SDG 12 - Responsible Consumption and Production.**

(a) Goal. Ensure sustainable consumption and production patterns.

(b) Focus. Reducing waste, encouraging recycling, promoting sustainable management of natural resources.

24. **SDG 13 - Climate Action.**

(a) Goal. Take urgent action to combat climate change and its impacts.

(b) Focus. Reducing greenhouse gas emissions, strengthening climate resilience, integrating climate measures into policies.

INTERESTING FACTS

- **International Solar Alliance (ISA) for Climate Action (SDG 13):** India co-founded the **International Solar Alliance (ISA)** in 2015, aiming to mobilize countries around the world to promote **solar energy** solutions. This reflects India's leadership in addressing **SDG 13 (Climate Action)** and promoting sustainable energy globally

25. **SDG 14 - Life Below Water.**

(a) Goal. Conserve and sustainably use the oceans, seas, and marine resources for sustainable development.

(b) Focus. Reducing marine pollution, protecting marine ecosystems, addressing ocean acidification.

26. **SDG 15 - Life on Land.**

(a) Goal. Protect, restore, and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, halt and reverse land degradation, and halt biodiversity loss.

(b) Focus. Protecting biodiversity, managing forests, restoring degraded land, reducing the loss of natural habitats.

27. **SDG 16 - Peace, Justice, and Strong Institutions.**

(a) Goal. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all, and build effective, accountable, and inclusive institutions at all levels.

(b) Focus. Reducing violence, combating corruption, ensuring equal access to justice, strengthening institutions.

28. **SDG 17 - Partnerships for the Goals.**

(a) Goal. Strengthen the means of implementation and revitalize the global partnership for sustainable development.

(b) Focus. Increasing cooperation between governments, the private sector, and civil society, improving financing for development, and sharing technologies.

PART III : KEY CHARACTERISTICS, IMPLEMENTATION AND MONITORING OF THE SUSTAINABLE DEVELOPMENT GOALS

29. **Key Characteristics of the Sustainable Development Goals**. The SDGs are a landmark framework designed to address the world's most pressing challenges and pave the way for a sustainable future.

(a) **Universal and Inclusive**. One of the defining features of the SDGs is their universality. Unlike previous frameworks, the SDGs apply to every country, irrespective of their level of development. They recognize that sustainability is a shared responsibility and that no nation, rich or poor, is exempt from the challenges of climate change, poverty, or inequality. Inclusivity lies at the heart of the SDGs, emphasizing the principle of **"leaving no one behind."** This means ensuring that progress reaches the most marginalized and vulnerable populations, including women, children, indigenous communities, and people with disabilities. By being universally relevant, the SDGs unite all nations under a common vision of prosperity, peace, and sustainability.

(b) **Integrated and Interconnected**. The SDGs recognize that global challenges are interconnected and cannot be addressed in isolation. For example, achieving **Goal 1: No Poverty** is closely linked to providing quality education (Goal 4), promoting decent work (Goal 8), and ensuring access to clean water and sanitation (Goal 6). Similarly, **Goal 13: Climate Action** directly impacts health outcomes (Goal 3), food security (Goal 2), and sustainable cities (Goal 11). This integrated approach ensures that efforts to achieve one goal do not inadvertently hinder progress on another. By fostering collaboration across sectors, the SDGs encourage holistic solutions that address multiple challenges simultaneously, promoting efficiency and effectiveness in global development efforts.

(c) **Focus on Sustainability**. At its core, the SDG framework is deeply rooted in the principles of sustainability. It emphasizes the importance of balancing the three pillars of development: **social equity, economic growth, and environmental protection.** The goals aim to create solutions that not only address current challenges but also ensure long-term benefits without depleting natural resources or causing harm to future generations. For instance, promoting renewable energy (Goal 7) supports economic growth while reducing environmental degradation. By prioritizing sustainability, the SDGs provide a blueprint for progress that respects ecological limits and fosters resilience in communities and ecosystems.

(d) **Time-bound with a 2030 Target**. The SDGs are ambitious yet time-bound, with specific targets aimed at achieving substantial progress by 2030. Each goal is supported by measurable targets and indicators, enabling nations to track their progress and identify areas needing improvement. The 2030 timeline reflects the global consensus that immediate action is critical to addressing pressing challenges such as climate change, inequality, and resource depletion. By setting a clear deadline, the SDGs inspire accountability and foster momentum to drive transformative change within the given timeframe.

30. The SDGs are more than just a list of goals; they represent a universal vision for a sustainable, equitable, and prosperous world. Their universal, integrated, and time-bound nature ensures that nations work together cohesively while balancing current needs with

the well-being of future generations. The SDGs are a call to action for all of humanity, urging us to act collectively to create a brighter future for the planet and its people.

31. **Implementation and Monitoring**

(a) **Implementation.** The responsibility for implementing the SDGs falls on all sectors—governments, private sector, civil society, and international organizations—each playing a role in driving progress. Key implementation strategies include:

- **National Action Plans**. Governments are encouraged to incorporate SDGs into national policies, strategies, and budgets to drive localized progress.
- **Multi-Stakeholder Partnerships**. Collaboration between governments, businesses, non-governmental organizations (NGOs), and other stakeholders is crucial to achieving the SDGs.
- **Private Sector Involvement**. The private sector is increasingly recognized as a key player in achieving the SDGs, with companies innovating and investing in sustainable solutions.

INTERESTING FACTS

- **India's SDG Index**: India has developed its own SDG India Index, which ranks the performance of its states and Union Territories on achieving the SDGs. This index, created by NITI Aayog, measures progress across all 17 goals and promotes healthy competition among states to achieve better outcomes. Kerala consistently ranks as one of the top performers.

(b) **Monitoring.** Tracking progress toward the SDGs is vital to ensure accountability and identify areas needing improvement. The United Nations High-Level Political Forum (HLPF) oversees global progress, while individual countries are encouraged to:

- **Submit Voluntary National Reviews (VNRs)**. These reports allow countries to showcase their progress and share challenges and lessons learned.
- **Use Indicators**. The SDGs have a set of indicators to measure progress for each goal, helping track whether targets are being met.

PART IV : INDIA'S PROGRESS TOWARD THE SDGs

32. As the second-most populous country in the world with over 1.4 billion people, India's progress toward achieving the Sustainable Development Goals (SDGs) is critical not only for its own development but also for the global realization of these goals. India's success in meeting the SDGs will have a profound ripple effect on the planet, showcasing its ability to balance rapid development with sustainability.

(a) **Eradicating Poverty**. India has made significant strides in reducing poverty, aligning with SDG 1 (No Poverty). Programs such as the Pradhan Mantri Garib Kalyan Yojana (PMGKY) and the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) have been instrumental in supporting vulnerable populations. PMGKY provides financial relief and essential services, while MGNREGA guarantees 100 days of wage employment annually to rural households, promoting livelihood security. These initiatives have helped lift millions out of extreme poverty and build resilience in rural and urban areas.

(b) **Enhancing Education and Digital Inclusion**. India's commitment to SDG 4 (Quality Education) is evident through initiatives like the Samagra Shiksha Abhiyan, which focuses on strengthening school infrastructure, teacher training, and access to education for marginalized groups. Additionally, the Digital India campaign has revolutionized access to digital technology, improving e-learning opportunities and bridging the digital divide between rural and urban areas. This dual approach ensures that every child has access to quality education, a crucial foundation for sustainable development.

(c) **Empowering Women and Ensuring Health Equity**. India has made progress on SDG 5 (Gender Equality) by increasing women's participation in politics, education, and workforce initiatives. The Beti Bachao, Beti Padhao campaign aims to change societal attitudes toward the girl child, ensuring equal opportunities for education and survival. In health, India's efforts toward SDG 3 (Good Health and Well-being) include enhanced maternal and child healthcare services and expanded vaccination drives under the National Health Mission, significantly reducing infant mortality rates.

(d) **Leadership in Renewable Energy**. In line with SDG 7 (Affordable and Clean Energy) and SDG 13 (Climate Action), India has emerged as a global leader in renewable energy. The country has set ambitious targets for increasing renewable energy capacity, especially in solar power. The International Solar Alliance (ISA), headquartered in India, demonstrates the nation's leadership in fostering international collaboration to promote solar energy. India's initiatives, such as the National Solar Mission, have contributed to reducing carbon emissions and enhancing energy sustainability.

(e) **Environmental Conservation**. India has shown dedication to SDG 6 (Clean Water and Sanitation) and SDG 15 (Life on Land) through large-scale projects like Namami Ganga (Clean Ganga). This initiative aims to restore and preserve the Ganga River, addressing issues like water pollution, deforestation, and ecosystem degradation. By integrating scientific approaches and community participation, the project has improved water quality and supported biodiversity. Reforestation programs and the promotion of sustainable agricultural practices further highlight India's commitment to environmental sustainability.

(f) **Addressing Urbanization and Sustainable Development**. With rapid urbanization, India has focused on achieving SDG 11 (Sustainable Cities and Communities) through programs like the Smart Cities Mission and AMRUT (Atal Mission for Rejuvenation and Urban Transformation). These initiatives aim to create sustainable urban infrastructure, improve public transportation, and enhance waste management systems. By adopting innovative solutions, India is paving the way for greener, more liveable cities.

33. India's journey toward achieving the SDGs reflects its dedication to sustainable development while addressing its unique challenges. From reducing poverty and enhancing education to championing renewable energy and environmental conservation, India's efforts serve as a model for balancing economic growth with sustainability. However, continued progress will require stronger collaboration between the government, private sector, and civil society to ensure inclusive and equitable development for all. If India continues this path, it will not only transform its own future but also contribute significantly to global sustainability efforts. The **SDG India Index**, developed by NITI Aayog, is a comprehensive tool to monitor the progress of states and union territories in India toward achieving the **Sustainable Development Goals (SDGs)** set by the United Nations. The index was first launched in **2018**, making India the first country to develop a sub-national index for SDGs. It uses **115+ indicators** to track the performance across **17 SDGs**. States and UTs are ranked in categories such as **Achiever, Front Runner, Performer, and Aspirant**, encouraging healthy competition to foster sustainable development. **Kerala** consistently ranks at the top, while states like **Bihar** often need significant improvements. The 2023 edition aligns closely with **India's G20 Presidency**, emphasizing global collaborations for sustainable development. This index not only highlights disparities among regions but also serves as a powerful planning tool for policymakers.

CONCLUSION

34. The Sustainable Development Goals (SDGs) provide a comprehensive framework for addressing global challenges such as poverty, inequality, climate change, and environmental degradation by 2030. These 17 goals emphasize the need for inclusive development, environmental protection, and sustainable economic growth, all while ensuring that no one is left behind. The SDGs are not only a vision of a better future—they are a necessity for ensuring that future generations inherit a world where poverty, hunger, and inequality have been reduced, and the environment is protected. Reaching these goals by 2030 is crucial for avoiding irreversible damage to our societies, economies, and ecosystems. They serve as a roadmap for balanced development that prioritizes people, the planet, prosperity, peace**,** and partnerships**.**

SUMMARY

- The Sustainable Development Goals (SDGs) represent a global agenda aimed at addressing critical issues such as poverty, inequality, and environmental degradation.
- Their primary aim is to foster a better and more sustainable future for all by tackling these challenges and promoting social, economic, and environmental well-being by 2030.
- Comprising 17 specific goals, the SDGs provide a comprehensive framework for achieving sustainability across various sectors.
- These goals are characterized by their universal, interconnected, and inclusive nature, ensuring that all aspects of global development are considered.
- Success in achieving the SDGs requires effective implementation and regular monitoring, along with a collective effort from all nations, as exemplified by India's ongoing initiatives toward these objectives

ASSESSMENT EXERCIS

Multiple Choice Questions (20 Questions)

Q1. What year were the Sustainable Development Goals (SDGs) adopted?

a) 2012

b) 2015

c) 2020

d) 2023

Q2. How many Sustainable Development Goals are there?

a) 15

b) 17

c) 19

d) 21

Q3. Which SDG aims to eradicate poverty in all its forms everywhere?

a) SDG 1

b) SDG 2

c) SDG 3

d) SDG 4

Q4. The aim of the SDGs is to create a sustainable future for:

a) Only developed countries

b) Only developing countries

c) All people

d) Future generations only

Q5. What is the target year for achieving the SDGs?

a) 2025

b) 2030

c) 2035

d) 2040

Q6. Which of the following is a key characteristic of the SDGs?

a) They are specific to one country

b) They are universal and applicable to all countries

c) They only focus on environmental issues

d) They do not consider economic factors

Q7. Which SDG focuses on quality education?

a) SDG 4

b) SDG 5

c) SDG 6

d) SDG 7

Q8. What is the primary purpose of monitoring and evaluation in the context of the SDGs?

a) To punish countries not achieving the goals

b) To assess progress and adjust strategies as needed

c) To collect data only

d) To compare countries against each other

Q9. Which SDG aims to promote sustainable cities and communities?

a) SDG 9

b) SDG 10

c) SDG 11

d) SDG 12

Q10. NITI Aayog is responsible for:

a) Creating the SDGs

b) Implementing and monitoring SDGs in India

c) Only reporting on SDG progress

d) None of the above

Q11. Which goal focuses on ensuring healthy lives and promoting well-being for all at all ages?

a) SDG 1

b) SDG 2

c) SDG 3

d) SDG 4

Q12. Which of the following is NOT one of the 17 SDGs?

a) Climate Action

b) Gender Equality

c) Technological Advancement

d) Quality Education

Q13. What does SDG 12 focus on?

a) Responsible consumption and production

b) Affordable and clean energy

c) Decent work and economic growth

d) Industry, innovation, and infrastructure

Q14. Which SDG aims to combat climate change and its impacts?

a) SDG 13

b) SDG 14

c) SDG 15

d) SDG 16

Q15. Which of the following SDGs addresses life below water?

a) SDG 13

b) SDG 14

c) SDG 15

d) SDG 16

Q16. The "leave no one behind" principle is fundamental to which aspect of the SDGs?

a) Financing

b) Implementation

c) Inclusivity

d) Monitoring

Q17. Which SDG focuses on ending hunger, achieving food security, and improved nutrition?

a) SDG 1

b) SDG 2

c) SDG 3

d) SDG 4

Q18. Which organization is responsible for leading the global effort to achieve the SDGs?

a) World Health Organization

b) United Nations

c) International Monetary Fund

d) World Bank

Q19. SDG 17 emphasizes the importance of:

a) Global partnerships for sustainable development

b) Environmental sustainability

c) Quality education

d) Economic growth

Q20. In India, which body is responsible for monitoring progress toward the SDGs?

a) Ministry of Environment

b) NITI Aayog

c) Reserve Bank of India

d) Ministry of Education

Short Answer Questions

Q1. What are the Sustainable Development Goals (SDGs)?

Q2. What is the primary aim of the SDGs?

Q3. Why is 2030 a crucial target year for the SDGs?

Q4. What are the 17 Sustainable Development Goals?

Q5. How is India's progress toward achieving the SDGs monitored?

Long Answer Questions

Q1. What are the Sustainable Development Goals (SDGs) and why were they established?

Q2. What is the primary aim of the SDGs?

Q3. How does the SDGs framework envision a sustainable future for all by 2030?

Q4. What are the key characteristics of the Sustainable Development Goals (SDGs)?

Q5. What progress has India made toward achieving the Sustainable Development Goals (SDGs)?

GA II (SD/SW)

CHAPTER II : ADVENTURE ACTIVITIES

"Adventure is the essence of life; it teaches us to face fear, conquer challenges, and emerge stronger."

Colonel Narendra 'Bull' Kumar

TEACHING INSTRUCTIONS:

Period	:	**One.**
Type	:	**Lecture and Discussion**
Year	:	**SD/ SW (First Year)**
Conducting Officer	:	**ANO/ CTO.**
Training Aids	:	**Class Room, Computer with OHP, Screen, Presentation, Script or Book Flagged or Lesson Plan in File, Board and Markers.**
Own Time Work	:	**Cadets must be told to prepare for this class prior to conduct.**

Time-plan

- Introduction : 03 minutes
- Part I : 07 minutes
- Part II : 08 minutes
- Part III : 07 minutes
- Part IV : 08 minutes
- Conclusion, Summary & Discussion : 07 minutes

INTRODUCTION

1. Adventure activities are more than just thrilling experiences; they are powerful tools for holistic development, combining physical, mental, and social growth. Activities like trekking, rock climbing, rafting, paragliding, and mountaineering encourage individuals to step out of their comfort zones, providing a platform to build essential life skills and improve overall well-being. Engaging in adventure activities promotes excellent physical health. Trekking and rock climbing enhance stamina, strength, and endurance, while activities like rafting improve cardiovascular fitness and coordination. These high-energy activities challenge the body in diverse ways, leading to improved agility, balance, and flexibility. Beyond fitness, they foster a deep connection with the natural world, encouraging healthier lifestyle choices and a greater appreciation for outdoor physical activity. Adventure activities play a significant role in reducing stress and boosting mental clarity. Immersing oneself in nature and facing personal challenges helps individuals break free from daily routines and fosters mindfulness. The adrenaline rush during these activities enhances focus and concentration, while the sense of accomplishment that follows boosts self-esteem and confidence. Overcoming obstacles in an adventurous setting fosters resilience, teaches perseverance, and cultivates a positive mindset.

2. Adventure activities are a natural training ground for critical life skills. They demand quick decision-making, strategic thinking, and creative problem-solving, often under pressure. Participants develop leadership skills as they take initiative and guide others, while teamwork and cooperation are strengthened through group challenges. These skills are transferable to various aspects of life, from academics and professional settings to personal relationships. On a social level, adventure activities bring people together, encouraging collaboration and building camaraderie. Whether navigating a mountain trail or coordinating a raft through rapids, participants must communicate effectively and rely on each other. These shared experiences foster trust, improve communication, and create lasting bonds. Such activities often bring together diverse groups of people, promoting inclusivity and mutual respect, which enrich participants' social interactions and networks. Many adventure activities occur in natural settings, fostering a sense of environmental stewardship among participants. Through direct interaction with pristine landscapes, individuals become more conscious of the importance of conserving natural resources and protecting ecosystems.

PREVIEW

The lecture will be conducted in following parts:-

(a) Part I : Physical & Mental Health Benefits of Adventure.

(a) Part II : Personal and social development through adventure activities.

(a) Part III : Various Adventure Activities.

(a) Part IV : Safety Aspects

LEARNING OBJECTIVES

- Understand the SDGs Framework.
- Recognize the Importance of a Sustainable Future by 2030.
- Learn the Aim of the SDGs.
- Identify and explain the 17 SDGs.
- Familiarize Monitoring and Evaluation Processes of the SDGs.
- Appreciate the Long-term Impact of Achieving the SDGs.

PART I : PHYSICAL & MENTAL HEALTH BENEFITS OF ADVENTURE ACTIVITIES

3. Adventure activities provide a unique and engaging way to enhance both physical and mental health. By combining outdoor exploration with physical exertion, these activities challenge the body and mind, leading to holistic well-being.

4. **Physical Health Benefits.** Adventure activities are dynamic and often involve rigorous physical exertion, providing a multitude of health benefits:

(a) **Cardiovascular Fitness**. Engaging in activities like hiking, mountain biking, or rafting helps increase heart rate and improve circulation. These activities strengthen the heart and lungs, enhancing cardiovascular endurance and reducing the risk of conditions like hypertension, heart disease, and stroke. Regular participation contributes to a healthier cardiovascular system, promoting longevity and vitality.

(b) **Muscle Strength and Endurance**. Activities such as rock climbing, trekking, and kayaking require the use of multiple muscle groups simultaneously. For instance, rock climbing strengthens upper body muscles like the arms and shoulders while also engaging core muscles for stability. Trekking builds lower body strength, and kayaking tones the arms, chest, and back. Over time, these activities improve muscle endurance, allowing participants to sustain physical effort for extended periods.

(c) **Coordination and Flexibility**. Adventure sports like surfing, skiing, demand precision, balance, and agility. These activities train the body to coordinate movements effectively, enhancing motor skills. Dynamic motions, such as those in climbing or yoga-based adventure programs, improve flexibility, reducing the risk of muscle strain and injury during everyday activities or other physical endeavours.

(d) **Weight Management and Body Composition**. Adventure activities are excellent for burning calories and managing body weight. Whether it is cycling up a challenging trail or paddling in a river, these activities increase metabolism and contribute to fat loss. At the same time, they build lean muscle mass, leading to a healthier and more balanced body composition.

5. **Mental Health Benefits.** In addition to physical fitness, adventure activities offer profound psychological advantages that contribute to mental well-being:

(a) **Stress Reduction**. Physical activities, especially those conducted in natural outdoor settings, are known to release endorphins—hormones that alleviate stress and promote happiness. Adventure activities provide a refreshing escape from daily life’s monotony and pressures, fostering relaxation and mental rejuvenation. Immersing oneself in nature adds an element of calmness, reducing anxiety and elevating mood.

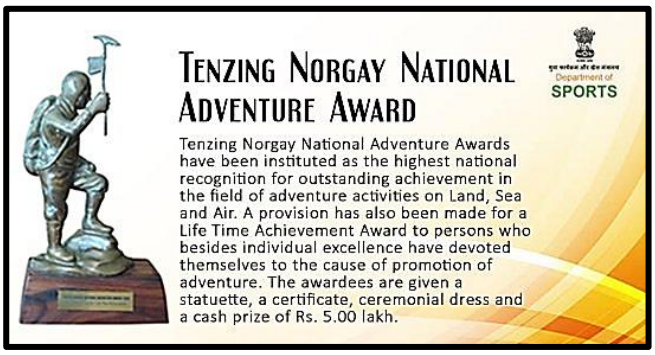
(b) **Boosting Self-Confidence**. Conquering physical and mental challenges in adventure sports, such as scaling a rock face or completing a long hike, instils a strong sense of accomplishment. These experiences build self-confidence, helping individuals feel empowered to tackle challenges in other aspects of life. The newfound resilience gained through these achievements creates a positive and motivated outlook.

(c) **Enhancing Focus and Concentration**. Adventure activities often demand acute mental engagement, whether it is navigating a trail, strategizing for a climb, or executing precise movements in an obstacle course. This need for focus and quick decision-making sharpens mental clarity and concentration. Over time, these skills enhance cognitive function, benefiting academic, professional, and personal endeavours.

6. Awards for adventure activities in India are conferred by both government and private organizations to recognize individuals and institutions for their courage, leadership, and contribution to promoting adventure sports and outdoor activities.

7. **Government Awards for Adventure Activities**

(a) **Tenzing Norgay National Adventure Award**. The Tenzing Norgay National Adventure Award, instituted by the Government of India under the Ministry of Youth Affairs and Sports, is the highest national honour for adventure sports in India. Named after Tenzing Norgay, one of the first individuals to scale Mount Everest in 1953, the award celebrates extraordinary achievements in adventure sports and efforts to promote a spirit of adventure among youth. It is presented in four categories: Land Adventure, Water Adventure, Air Adventure, and Lifetime Achievement. Recipients are honoured with a cash prize, a citation, and a bronze statuette of Tenzing Norgay.



(b) **Arjuna Award (Adventure Sports)**. The Ministry of Youth Affairs and Sports, Government of India, recognizes exceptional performance in adventure sports as one of the eligible disciplines for its awards. This recognition is based on outstanding achievements over four years in the field. The award includes a statuette, a citation, and a cash prize, honouring athletes who excel in various sports, including adventure disciplines, and celebrating their contributions to the sporting landscape.

8. **Private and Non-Governmental Awards**

(a) **Himalayan Club Awards**. The Himalayan Club is dedicated to recognizing outstanding mountaineering expeditions and significant contributions to Himalayan exploration. Its awards honour achievements across categories, including lifetime accomplishments and exceptional expeditions, celebrating excellence and commitment in the field.

(b) **National Adventure Foundation Awards**. The National Adventure Foundation (NAF) recognizes institutions and individuals dedicated to promoting adventure activities, with a special emphasis on encouraging participation among women and children. To honour their contributions, the NAF presents a prestigious trophy and citation, aiming to foster grassroots involvement and enthusiasm for adventure pursuits.

(c) **Indian Mountaineering Foundation (IMF) Awards**. The Indian Mountaineering Foundation recognizes and honours mountaineers and climbers who have successfully completed challenging expeditions. Through awards comprising plaques, citations, and occasional sponsorships, the institution encourages innovation and exploration in mountaineering, fostering a spirit of adventure and excellence in the field.

9. **Corporate and Adventure Tourism Awards**

(a) **Adventure Tour Operators Association of India (ATOAI) Awards**. The Adventure Tour Operators Association of India (ATOAI) recognizes excellence in adventure tourism and eco-tourism through its prestigious awards. These accolades are categorized into areas such as Best Adventure Operator and Best Adventure Destination, among others. By honouring outstanding achievements, ATOAI plays a significant role in boosting quality standards within the adventure tourism sector, fostering innovation and sustainability in this dynamic industry.

(b) **Corporate-Sponsored Awards**. Corporates like Tata, Red Bull, and others sponsor awards for specific activities such as marathons, extreme sports, and endurance events. Examples: Red Bull X-Alps Challenge, Tata Mumbai Marathon Adventure Categories.

PART II : PERSONAL AND SOCIAL DEVELOPMENT THROUGH ADVENTURE ACTIVITIES

10. **Building Confidence.** Many adventure activities, like group expeditions or team sports, require cooperation and collaboration. Participants learn to communicate effectively, respect diverse viewpoints, and work towards common goals, strengthening their teamwork skills.

11. **Developing Leadership Qualities.** Participants often take turns leading group activities, making decisions, and guiding others, which fosters leadership. Adventure settings encourage individuals to take initiative, manage resources, and inspire others, essential qualities in any leader.

12. **Improving Problem-Solving Abilities.** Adventure activities often present unexpected challenges that require quick thinking and creative solutions. Participants learn to assess situations, evaluate options, and implement effective strategies to overcome obstacles.

13. **Resilience and Perseverance.** Participants often face setbacks or difficulties during adventure activities (e.g., bad weather, challenging terrains). Overcoming these obstacles teaches individuals the importance of perseverance and adaptability, essential traits for personal growth.

14. **Communication Skills.** Clear communication is crucial in team settings, especially during activities that require coordination (e.g., rock climbing, rafting). Participants learn to articulate ideas, listen actively, and provide constructive feedback, which are valuable skills in all aspects of life.

15. **Cultural Awareness and Sensitivity.** Engaging in activities in diverse environments often involves interacting with people from different backgrounds. This exposure fosters appreciation and understanding of various cultures, enhancing empathy and social harmony.

16. **Trust-Building.** Activities like zip-lining or trust falls require participants to rely on teammates, fostering mutual trust. Building trust enhances group dynamics, leading to stronger relationships both in and out of adventure settings.

17. **Goal Setting and Achievement.** Adventure activities often involve setting specific goals (e.g., reaching a summit, completing a difficult hike). Achieving these goals teaches participants the value of planning, dedication, and the satisfaction of accomplishment.

18. **Environmental Stewardship.** Engaging with nature during adventure activities fosters a sense of responsibility towards the environment. Participants often learn the importance of preserving natural resources and can become advocates for sustainable practices.

19. **Creativity and Innovation.** Facing new challenges requires participants to think outside the box and come up with creative solutions. This process enhances cognitive flexibility and encourages innovative thinking, which can be applied in other areas of life.

20. **Self-Discovery.** Engaging in challenging situations helps individuals understand their strengths, weaknesses, and preferences. This self-awareness is crucial for personal development and helps guide future life choices.

PART III : VARIOUS ADVENTURE ACTIVITIES

21. Land Adventure Activities

Hiking/ Trekking. Hiking or trekking involves walking along natural trails, often in mountainous, hilly, or forested regions. While hiking usually refers to shorter, easier trails, trekking is typically more challenging and involves multi-day journeys. It requires basic fitness, navigation, and endurance and is popular in destinations like the Roop Kund Trek and Valley of Flowers in Uttarakhand, as well as the Hampta Pass in Himachal Pradesh. Benefits include physical fitness, mental rejuvenation, and a connection with nature.

(a) **Camping**. Camping involves staying outdoors in tents, often in natural settings such as forests, mountains, or riversides. It combines activities like cooking over a fire, stargazing, and storytelling, requiring survival skills and the ability to set up tents. Popular locations include Rishikesh, Tso Moriri Lake in Ladakh, and Coorg in Karnataka. Camping fosters self-reliance and bonding with nature.

(b) **Mountaineering**. Mountaineering combines hiking, trekking, and climbing to reach mountain summits, often navigating glaciers, snow, and extreme weather conditions. It requires high endurance, technical climbing skills, and knowledge of survival techniques. Popular peaks include Stok Kangri in Ladakh, Mount Everest Base Camp, and Kanchenjunga in Sikkim. The activity fosters adventure, personal growth, and teamwork.

(c) **Mountain Biking**. Mountain biking involves cycling on off-road trails through forests, hills, or rugged terrains using specialized bikes with shock absorbers and rugged tires. Requiring proficiency in cycling, stamina, and balance, it is popular on trails such as the Manali-Leh Highway, Coorg in Karnataka, and Munnar in Kerala. The activity promotes cardiovascular health, adventure, and scenic exploration.

(d) **Caving (Spelunking)**. Caving or spelunking is the exploration of underground caves and passages, requiring crawling, climbing, and sometimes swimming. It demands navigation skills, safety awareness, and physical agility. Famous locations include the Meghalaya caves(Siju , Mawsmai). It allows the exploration of geological wonders and enhances problem-solving abilities.

(e) **Zip Lining**. Zip lining involves gliding on a steel cable using a harness across trees, rivers, or valleys. It requires basic fitness and the ability to overcome a fear of heights. Popular locations include Neemrana Fort in Rajasthan, Rishikesh in Uttarakhand, and Jodhpur in Rajasthan. It offers a thrilling experience with panoramic views.

(f) **Bungee Jumping**. Bungee jumping is an adrenaline-pumping activity where participants jump from a high platform with an elastic cord tied to their feet. This activity demands mental preparation and courage and is popular in Rishikesh, Lonavala, and Bangalore. It helps in overcoming fear and provides an intense adrenaline rush.

(g) **Rock Climbing**. Rock climbing involves ascending natural rock faces or artificial climbing walls using specialized equipment like ropes, harnesses, and carabiners. This activity demands strength, balance, and problem-solving skills and is popular in places such as Hampi in Karnataka, Shey Rock in Ladakh, and Malshej Ghat in Maharashtra. It enhances physical strength, focus, and confidence.

(h) **Off-Roading**. Off-roading involves driving specially designed vehicles over unpaved and challenging terrains like mud, sand, and rocks. It demands vehicle handling skills, terrain assessment, and technical driving. Popular routes include Spiti Valley in Himachal Pradesh, the Rann of Kutch in Gujarat, and the sand dunes of Rajasthan. It combines adventure, mechanical skills, and exploration of remote areas.

(i) **Horseback Riding**. Horseback riding along wilderness trails offers a peaceful and adventurous way to explore natural landscapes. Requiring riding proficiency and knowledge of horse care, it is popular in Gulmarg in Kashmir, Munnar in Kerala, and Udaipur in Rajasthan. It promotes bonding with animals, improves posture, and provides relaxation.

(j) **Safari**. A safari is a wildlife exploration activity focused on observing animals in their natural habitat, often through guided tours in vehicles. It requires wildlife awareness and patience and is popular in Jim Corbett National Park, Kaziranga National Park, and Ranthambore National Park. It enhances understanding of biodiversity and conservation.

(k) **Skiing**. Skiing involves gliding on snow-covered trails using skis for recreation or competition. It requires balance, coordination, and skiing techniques and is popular in Gulmarg, Auli, and Solang Valley. Skiing combines adventure, physical fitness, and scenic snow-clad landscapes.

22. **Water Adventure Activities.**

(a) **Scuba Diving**. Scuba diving involves exploring underwater ecosystems using a self-contained breathing apparatus (scuba). It requires swimming proficiency, breathing techniques, and basic training. Popular destinations include the Andaman and Nicobar Islands, Lakshadweep, and Goa. It allows an up-close experience of marine biodiversity and improves breathing control.

(b) **Snorkelling**. Snorkelling is a surface water activity using a mask and snorkel to observe marine life. It requires basic swimming skills and breathing techniques. Popular locations include Netrani Island, Elephant Beach, and Tarkarli. It offers easy access to marine ecosystems without the need for deep diving.

(c) **Kayaking**. Kayaking involves manoeuvring a narrow boat through water using a double-bladed paddle. It requires upper body strength and navigation skills and is popular in places like the Zanskar River, Ganga River, and Alleppey backwaters. Kayaking builds strength, relieves stress, and offers scenic exploration.

(d) **Rafting**. Rafting involves paddling through rivers in inflatable rafts, often tackling white-water rapids. It requires teamwork, quick reflexes, and endurance. Popular locations include Rishikesh, the Teesta River, and the Beas River. Rafting provides thrills and the joy of conquering natural challenges.

(e) **Surfing**. Surfing involves riding waves on a specially designed board while balancing and manoeuvring. Requiring balance, core strength, and wave judgment, it is popular in Kovalam, Pondicherry, and Varkala. Surfing enhances fitness and offers an adrenaline rush.

(f) **Wakeboarding**. Wakeboarding is an exciting activity where participants glide on a wakeboard while being pulled by a motorboat, often performing stunts. It demands core strength, balance, and agility and is popular in Goa, Rishikonda Beach, and the Andaman Islands. It combines thrill with skill development.

(g) **Kitesurfing**. Kitesurfing involves riding a surfboard while being pulled by a large kite. It requires wind judgment, balance, and coordination and is popular in Rameshwaram, Mandwa, and Goa. Kitesurfing offers a high-energy activity that blends windsurfing with kite flying.

(h) **Jet Skiing**. Jet skiing involves riding a motorized watercraft at high speeds on open waters. It requires hand-eye coordination and basic navigation skills. Popular destinations include Goa, the Andaman Islands, and the Kerala Backwaters. Jet skiing combines high-speed thrill with exploration of scenic coastlines.

(i) **Canyoning**. Canyoning is an adventure sport that involves hiking, climbing, rappelling, and swimming to traverse natural canyons. It requires physical fitness, rope-handling skills, and swimming proficiency. Popular locations include Vashisht, Sandhan Valley, and Sohra Canyons in Meghalaya. Canyoning combines multiple adventure skills in one thrilling activity.

(j) **Windsurfing**. Windsurfing merges surfing and sailing, requiring balance, wind judgment, and agility. Popular locations include Rameshwaram, Mandwa, and Goa. Windsurfing builds endurance and provides an exciting blend of surfing and sailing.

23. **Air Adventure Activities.**

(a) **Skydiving**. Skydiving involves jumping from an airplane and free-falling through the air before deploying a parachute to descend safely to the ground. This activity requires physical fitness, mental courage, and proper training to ensure the safe deployment of the parachute. Popular locations for skydiving in India include Mysore in Karnataka, Dhana in Madhya Pradesh, and Aamby Valley in Maharashtra. The experience provides an unparalleled adrenaline rush, helps individuals overcome fear, and offers a thrilling sense of freedom.

(b) **Paragliding**. Paragliding is the art of gliding through the air with a lightweight, parachute-like wing, often launched from a hill or cliff. To engage in this activity, one needs to understand wind patterns, steer the glider effectively, and have basic navigation skills. Bir-Billing and Manali in Himachal Pradesh, as well as Kamshet in Maharashtra, are renowned paragliding spots in India. The activity allows participants to enjoy breathtaking aerial views and the exhilaration of soaring like a bird.

(c) **Hot Air Ballooning**. Hot air ballooning offers a serene and panoramic adventure by floating high above the ground in a large balloon filled with hot air. While piloting is managed by trained professionals, passengers can simply relax and take in the unique views without any prior experience. Some of the best places in India for hot air ballooning include Jaipur in Rajasthan, Lonavala in Maharashtra, and Hampi in Karnataka. This peaceful adventure is suitable for all age groups, providing unique aerial perspectives and a tranquil experience above the landscapes.

24. **Adventure Activities Undertaken by NCC**

(a) **Trekking Expeditions.** Organized in various terrains, including mountains and forests, to instil endurance and team spirit.

(b) **Mountaineering Expeditions.** NCC cadets participate in mountaineering, scaling peaks in the Himalayan and other ranges. Specialized training is provided to cadets in rock climbing and high-altitude survival in India's prestigious mountaineering institutes.

(c) **Para Sailing.** Cadets participate in parasailing activities, allowing them to glide through the air using a parachute towed by a vehicle.

(d) **Para Jumping.** NCC organizes para jumping activities where cadets learn and experience parachute jumps, usually from aircraft or high platforms. Cadets are trained at Army Airborne Training School (AATS) Agra.

(e) **Sailing Expeditions.** Sailing camps and expeditions are conducted, especially for naval wing cadets, to develop maritime skills and sea navigation.

(f) **Scuba Diving.** NCC naval wing cadets are trained in scuba diving, focusing on underwater exploration and survival skills.

(g) **White Water Rafting.** Cadets are exposed to the thrills of white-water rafting, particularly in rivers in northern India like the Ganges.

(h) **Cycling Expeditions.** Long-distance cycling expeditions are held to promote endurance, fitness, and eco-awareness.

(i) **Rock Climbing.** Rock climbing camps are organized to train cadets in basic climbing techniques and build confidence in handling tough terrains.

(j) **Horse Riding.** NCC cadets, particularly in the Remount & Veterinary (R&V) wing, undergo horse riding training, developing balance and control in challenging conditions.

(k) **Skiing.** Skiing camps are organized in snow-clad regions like Kashmir, where cadets learn to navigate snow-covered terrains.

(l) **Desert Safari with Camels.** NCC organizes camel safaris in desert regions, such as Rajasthan, to expose cadets to life in arid environments. Cadets also learn how to navigate and survive in desert environments, covering long distances using camels, which teaches resilience in harsh climates.

(m) **Motorcycle Expeditions.** NCC organizes motorcycle expeditions across challenging terrains to instill road safety awareness and promote adventure travel.

(n) **All India Cycle Expeditions.** Large-scale cycle expeditions across multiple states, promoting fitness, camaraderie, and national integration.

(o) **Micro-light Flying.** Air wing cadets receive training in microlight flying, introducing aviation and flying small aircraft.

(p) **Gliding.** Air wing cadets also experience gliding, learning the basics of flying non-powered aircraft in air currents.

(q) **River Crossing.** Cadets participate in river-crossing activities, learning to navigate swift currents using ropes and other techniques. This builds teamwork and resilience in challenging conditions.

(r) **Sea Swimming.** Especially for naval cadets, sea swimming teaches survival techniques in open water and strengthens their endurance and swimming skills.

(s) **High-Altitude Camping & Snow and Ice Climbing.** Cadets experience high-altitude camping in mountainous regions, which includes cold weather survival training and acclimatization exercises. Various activities focusing on climbing snow-capped peaks and glaciers, teaching cadets how to handle cold environments, ice axes, and other climbing gear, are conducted

(t) **All-India Hot Air Ballooning.** Cadets get to experience hot air ballooning, learning basic principles of flight and navigation while floating above landscapes.

(u) **Winter Expeditions.** Cadets participate in winter expeditions, often in snow-covered mountainous regions, where they learn snow navigation, cold survival, and group coordination.

(v) **Watermanship Training.** Aimed at naval cadets, watermanship involves handling various watercraft such as sailboats, rowboats, and powerboats, teaching watercraft navigation and safety.

(w) **Yachting.** Cadets are taught the basics of handling and navigating yachts, with a focus on wind directions, tacking, and crewing skills.

(x) **Rappelling.** Rappelling is a technique used for descending steep slopes or cliffs using ropes. It is commonly taught in NCC mountaineering or rock-climbing camps.

(y) **Paddle Sports.** Paddle sports, such as canoeing and kayaking, are included in the NCC curriculum, especially for naval wing cadets. These activities help build water navigation and paddling skills.

PART IV : SAFETY ASPECTS WHILE UNDERTAKING ADVENTURE ACTIVITIES

25. **Proper Training and Supervision.** Before participating in any adventure activity, thorough training is essential. Instructors should be certified professionals who can teach the proper techniques and procedures. All activities should be supervised by experienced guides or professionals, especially for beginners. Adequate supervision ensures immediate action in case of emergencies.

26. **Use of Appropriate Safety Gear.** For activities like rock climbing, cycling, and rafting, helmets are crucial to protect the head from impacts. For climbing and rappelling, ensure that harnesses, ropes, and carabiners are of high quality and correctly fastened. For water activities like rafting, kayaking, and scuba diving, life jackets are mandatory to prevent drowning. Weather-appropriate clothing, such as wet suits, thermal wear, or UV-protective gear, should be used to prevent exposure to cold, heat, or water.

27. **Pre-Activity Health Check.** Participants should undergo a medical fitness check before engaging in strenuous activities like trekking or skydiving. Certain medical conditions (e.g., heart issues, asthma) may disqualify individuals from some activities. Ensure that participants are well-hydrated and have adequate nutrition before starting the activity to avoid exhaustion or dehydration.

28. **Environmental Awareness.** Always check weather conditions before starting any activity. Avoid venturing into extreme weather (heavy rains, storms, etc.) that can pose risks, especially in outdoor activities like trekking or paragliding. Know the terrain and natural hazards of the area. Whether it is a mountain, river, or forest, understanding the environment reduces the chances of accidents. In wilderness areas, be cautious of local wildlife. Avoid disturbing animals, and know how to respond in case of encounters.

29. **Emergency Preparedness.** A well-stocked first aid kit should always be available, and at least one person should know how to use it. Ensure easy access to emergency contact numbers, including local medical services, park rangers, and rescue teams. Carry reliable communication devices, such as radios, satellite phones, or mobile phones with GPS tracking, especially in remote areas.

30. **Risk Assessment.** Conduct a risk assessment before starting an activity. Identify potential hazards (like unstable rock formations or rapid water currents) and plan measures to mitigate them. Ensure all participants understand the risks involved in the activity and are comfortable proceeding. Psychological readiness is as important as physical readiness.

31. **Group Coordination.** Participants should operate in pairs or small groups to keep track of one another. This is especially important in high-risk activities like scuba diving or trekking. Establish clear signals or communication methods to use in case of emergencies or when assistance is needed.

32. **Proper Hydration and Nutrition.** Carry sufficient water, especially for high-endurance activities like hiking or cycling. Dehydration is a common issue during such activities. Energy-rich snacks should be carried for long activities to maintain stamina and prevent fatigue.

33. **Physical Conditioning.** Ensure that participants have the physical fitness required for the activity. Weakness or exhaustion can lead to accidents. Engage in proper warm-up exercises before activities like rock climbing, biking, or hiking to prevent muscle injuries.

34. **Respect for Rules and Regulations.** Participants must adhere to the instructions provided by the activity leaders or instructors. Ignoring safety instructions can lead to serious accidents. Many adventure spots have specific rules to protect the environment and the safety of participants. Following them is crucial for personal safety and environmental conservation.

35. **Know Your Limits.** Participants should be aware of their own physical limits. It is important not to push beyond what they are trained or capable of, especially in endurance-based activities. Fear and hesitation can impair judgment. Participants should assess whether they are mentally prepared for the activity and should not be pressured into participation.

36. **Contingency Plans.** Have a clear exit or evacuation plan in case weather conditions deteriorate or someone gets injured. For trekking or climbing, it is advisable to have an alternate route in case the primary path becomes too dangerous.

37. **Water Safety.** For water-based activities like rafting, kayaking, or scuba diving, participants should have basic swimming skills. Non-swimmers should be disclosed to the instructors beforehand. Understand the water conditions, such as river currents, tides, or depth, before engaging in any water activity.

38. **Altitude Safety (High-Altitude Activities).** When engaging in high-altitude activities like trekking or mountaineering, gradual acclimatization is critical to avoid altitude sickness. Ensure access to supplemental oxygen if ascending to very high altitudes where oxygen levels are low.

39. **Use of Safety Guidelines and Certifications.** Ensure that all equipment used, whether for climbing, water sports, or flying, meets international safety standards. Guides and instructors should be certified by recognized authorities to lead adventure activities safely.

CONCLUSION

40. Adventure activities offer more than just a thrill—they are a powerful way to boost your overall well-being. Trekking, rock climbing, and rafting strengthen your body, improve endurance, and keep your heart healthy. Mentally, these activities reduce stress and anxiety by releasing feel-good endorphins, building resilience, and boosting your confidence. They are also a great way to discover your strengths, develop leadership skills, and create lasting connections through teamwork and shared experiences. Of course, safety is the key! With proper gear, guidance, and precautions, adventure becomes a safe path to growth, fun, and lifelong friendships.

SUMMARY

- Adventure activities play a crucial role in enhancing overall well-being and personal growth.
- Adventure activities encourage individuals to step out of their comfort zones.
- Physically, these activities improve fitness, strength, and cardiovascular health.
- Mentally, they help reduce stress and boost emotional resilience.
- Adventure activities also promote personal development by fostering teamwork and social connections among participants.
- A diverse range of adventure activities, such as trekking, climbing, and water sports, cater to various interests.
- The National Cadet Corps (NCC) organizes specific adventure activities that further enhance skills and camaraderie among cadets. Safety is paramount, necessitating adherence to essential protocols and measures to ensure a secure experience.
- To sum up, adventure activities provide a holistic approach to personal development, offering physical, mental, and social benefits that contribute to overall well-being and resilience in the face of life's challenges.

ASSESSMENT EXERCISE

Multiple Choice Questions

Q1. What is a primary benefit of engaging in adventure activities?

(a) Enhances social media skills

(b) Promotes physical fitness

(c) Increases screen time

(d) Improves memorization skills

Q2. Which of the following best describes adventure activities?

(a) Activities that require no physical effort

(b) Activities that are only for the elite

(c) Challenging experiences that promote personal growth

(d) Activities primarily done indoors

Q3. Which physical benefit is associated with activities like trekking and rock climbing?

(a) Improved flexibility

(b) Decreased stamina

(c) Reduced muscle strength

(d) Increased body fat

Q4. Adventure activities primarily enhance which aspect of health?

(a) Emotional well-being

(b) Cardiovascular fitness

(c) Intelligence quotient

(d) Academic performance

Q5. How do adventure activities impact mental health?

(a) They increase stress levels

(b) They reduce feelings of anxiety and depression

(c) They lead to social isolation

(d) They require constant supervision

Q6. Which chemical is released during adventure activities that can improve mood?

(a) Adrenaline

(b) Cortisol

(c) Endorphins

(d) Serotonin

Q7. Adventure activities can help build which of the following skills?

(a) Time management

(b) Leadership and teamwork

(c) Technical writing

(d) Data analysis

Q8. Which of the following is a social benefit of adventure activities?

(a) Decreased social interaction

(b) Development of strong friendships

(c) Increased competition

(d) Limited teamwork

Q9. Which of the following is NOT typically considered an adventure activity?

(a) Rock climbing

(b) Skydiving

(c) Painting

(d) White-water rafting

Q10. Which of these activities is often categorized under adventure sports?

(a) Running

(b) Paragliding

(c) Yoga

(d) Reading

Q11. Which adventure activity is commonly organized by the NCC?

(a) Chess tournaments

(b) Mountaineering expeditions

(c) Painting competitions

(d) Cooking classes

Q12. The NCC encourages cadets to participate in which of the following activities?

(a) Video gaming

(b) Sailing and kayaking

(c) Blogging

(d) Office work

Q13. What is the primary focus of safety protocols in adventure activities?

(a) Maximizing excitement

(b) Minimizing risks

(c) Increasing competition

(d) Reducing equipment costs

Q14. Which of the following is essential for ensuring safety during adventure activities?

(a) Proper training and gear

(b) Ignoring weather conditions

(c) Rushing through activities

(d) Avoiding supervision

Q15. Adventure activities ultimately aim to promote what?

(a) Isolation and competition

(b) Personal growth and resilience

(c) Academic success

(d) Technical skills

Q16. What is a key takeaway regarding the importance of adventure activities?

(a) They are only for thrill-seekers

(b) They offer holistic benefits for body and mind

(c) They are too risky for most people

(d) They do not foster social connections

Q17. Which of the following activities is known for promoting cardiovascular fitness?

(a) Sleeping

(b) Meditation

(c) Hiking

(d) Sitting

Q18. In terms of mental health, which benefit is primarily linked with adventure activities?

(a) Increased anxiety

(b) Improved self-esteem

(c) Decline in mood

(d) Decreased motivation

Q19. Adventure training often involves which type of learning?

(a) Theoretical learning

(b) Experiential learning

(c) Memorization

(d) Passive learning

Q20. What is the role of teamwork in adventure activities?

(a) It is not necessary

(b) It enhances collective problem-solving and support

(c) It creates competition among participants

(d) It increases the risk of failure

Short Answer Questions

Q1. What are the key physical health benefits of adventure activities?

Q2. How do adventure activities impact mental health?

Q3. What personal and social development can result from adventure activities?

Q4. What safety measures should be considered during adventure activities?

Q5. What types of adventure activities are typically undertaken by the NCC?

Long Answer Questions

Q1. What is the significance of adventure activities in enhancing overall well-being?

Q2. How do adventure activities contribute to personal growth and development?

Q3. What are the mental health benefits associated with participating in adventure activities?

Q4. What safety measures should individuals take when participating in adventure activities?

Q5. How do adventure activities promote teamwork and social skills among participants?

GA III (SD/SW)

CHAPTER III : FINANCIAL LITERACY

"Financial independence is paramount. My mom always says that when a woman is financially independent, she has the ability to live life on her own terms. I think that was the soundest advice that I ever got. No matter where you go in life or who you get married to, you have to be financially independent — whether you use it or not."

– Actress Priyanka Chopra

NCC Signs MOU With SBI To Open Zero Balance Accounts For Cadets

TEACHING INSTRUCTIONS

Period	:	**One.**
Type	:	**Lecture and Discussion.**
Year	:	**SD/ SW (3rd Year)**
Conducting Officer	:	**ANO/ CTO.**
Training Aids	:	**Class Room, Computer with OHP, Screen, Presentation, Script or Book Flagged or Lesson Plan in File, Board and Markers.**
Own Time Work	:	**Cadets must be told to prepare for this class prior to conduct.**

Time-plan

- Introduction : 03 minutes
- Part I : 07 minutes
- Part II : 09 minutes
- Part III : 06 minutes
- Part IV : 05 minutes
- Part V : 04 minutes
- Conclusion, Summary & Discussion : 06 minutes

INTRODUCTION

1. Financial literacy involves understanding financial concepts and managing personal finances effectively. For young people, acquiring financial literacy early on is crucial for long-term financial stability and success. It is the first step towards becoming independent and self-reliant.

Benefits of Early Financial Literacy.

2. **Improved Money Management**. Learning to budget helps manage expenses, allocate funds for savings, and avoid unnecessary debt. Early budgeting skills help in understanding how to live within one is means. Knowing the importance of saving money for emergencies and future goals. Early saving habits can lead to a secure financial future.

3. **Debt Avoidance**. Understanding how credit works, including interest rates and repayment terms, can prevent the accumulation of high-interest debt. Early awareness helps in making informed borrowing decisions. Being knowledgeable about the risks of payday loans and other high-interest borrowing options helps avoid financial pitfalls.

4. **Investment Awareness**. Familiarity with different types of investments, such as stocks, bonds, and mutual funds, enables better decision-making for growing wealth. Understanding the concept of compounding can encourage saving and investing early, which maximizes returns over time.

5. **Future Planning**. Financial literacy helps in setting and achieving financial goals such as higher education, buying a car, or owning a home. Early planning for retirement can lead to a more comfortable and financially secure retirement.

PREVIEW

The lecture will be conducted in following parts:-

(a) Part I : Opening Bank Accounts & Applying for PAN Card

(b) Part II ; Money transactions & Avoiding Financial Fraud

(c) Part III : Pehli Udaan scheme

(d) Part IV : Debit Card & KYC

(e) Part V : FDs, MFs & IT Filing

LEARNING OBJECTIVES

- Understand the importance of financial literacy
- procedure for opening bank accounts and linking Aadhar
- procedure for applying for a PAN card
- Learn the procedure to transfer money
- avoiding financial frauds
- Familiarise with Pehli Udaan Scheme
- Learn how to use debit cards
- Understand the concept of KYC
- Familiarising with FDs, MFs & IT filing

PART I : OPENING BANK ACCOUNTS & APPLYING FOR PAN CARD

Steps to Open a Bank Account

6. **Choose a Bank**.

(a) **Research Banks.** Compare banks based on services, fees, and interest rates. Consider factors such as branch locations, online banking facilities, and customer service.

(b) **Account Types.** Decide on the type of account needed (savings, current, etc.) based on personal requirements.

7. **Visit the Bank.** Go to the selected bank branch to start the account opening process. Some banks also offer online account opening options.

8. **Fill Out an Application Form.** Complete the application form with necessary details like name, address, date of birth, and employment status.

9. **Required Documents**

(a) **Aadhar Card.** Provides a unique identification number linked to personal details and serves as proof of identity and address. The Aadhar card is often used to link with the bank account for verification purposes.

(b) **Proof of Address.** The accepted documents are utility bills, rental agreements, or government-issued documents showing your current address.

(c) **Passport-sized Photographs.** Typically, two passport-sized photographs are needed for the account opening process.

(d) **PAN Card.** Used to verify income and for tax purposes. Required for accounts with certain minimum balances or specific services.

(e) **Proof of Age.** Birth certificate or school certificate for minors to establish age and guardianship details.

Linking Aadhar and Phone Number

10. **Aadhar Linkage**. During the account opening process, you will be required to provide your Aadhar number, which is a unique 12-digit identification number issued by the Government of India. The bank will link your Aadhar to your account to verify your identity, as well as for regulatory compliance purposes. This linkage ensures smooth integration with government schemes and subsidies, and allows you to access various financial services, such as direct benefit transfers (DBT), easily. Additionally, linking Aadhar helps to meet KYC (Know Your Customer) requirements, which are essential for preventing fraud and maintaining security in financial transactions.

11. **Phone Number Registration**. It is equally important to register your mobile number with the bank when opening an account. The registered mobile number will be used to send real-time alerts for every transaction, ensuring that you stay informed of all activities on your account. This is critical for both personal security and account management. Additionally, the registered phone number is often needed for two-factor authentication (2FA) when accessing online banking or carrying out digital transactions. Without a registered phone number, accessing online banking services and making secure transactions would be more challenging. Both Aadhar and phone number linkage are fundamental steps to ensure your banking experience is secure, seamless, and integrated with modern financial systems.

Procedure for Applying for a PAN Card

12. Applying for a PAN (Permanent Account Number) card is a vital process for individuals and entities in India for tax-related transactions. The following outlines the steps involved in the application procedure.

Steps to Apply for a PAN Card

13. **Online Application.** Start by visiting the official **Income Tax Department's** website for PAN card services or the **UTI Infrastructure Technology and Services Limited (UTIITSL)** portal. Both platforms are authorized to process PAN card applications.

14. **Fill Out Form 49A.** Complete **Form 49A** with accurate personal information such as your full name, date of birth, gender, residential address, and your Aadhaar number. Make sure all the details match the documents you are submitting to avoid any rejection of the application.

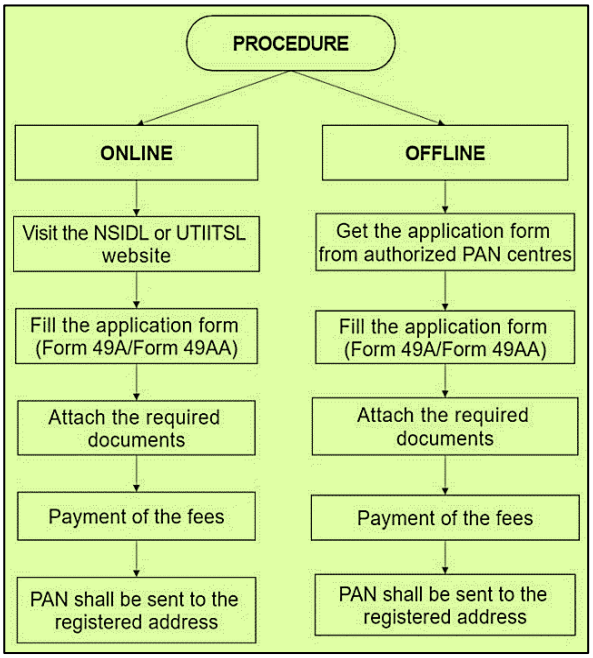
15. **Submit Required Documents.**

(a) **Identity Proof.** Provide identity verification using documents like your Aadhaar card, voter ID, passport, or driver's license.

(b) **Address Proof.** Address proof can be given through utility bills, such as electricity, water, or gas bills, or a bank statement from the last three months.

REQUIREMENT OF LINKING PAN TO AADHAAR

- **Mandate:** As per the guidelines of the Income Tax Act, linking your PAN with your Aadhaar number is mandatory. It ensures smoother tax filings and helps the government track tax fraud and prevent the duplication of PAN cards.
- **Process:**
  - ➢ You can easily link your PAN to Aadhaar online via the Income Tax Department's e-filing website.
  - ➢ Many banks and financial service providers also offer PAN-Aadhaar linking



(c) **Age Proof.** Submit proof of age with documents like a birth certificate, passport, or any other official certificate indicating your date of birth.

16. **Make the Payment.** After filling out the form and uploading the required documents, pay the necessary application fee. Payments can be made using net banking, debit/credit cards, or UPI. The fee varies if the PAN is to be delivered abroad.

17. **Verification Process.** Once your application is submitted, it will undergo verification by the Income Tax Department. If all details are correct, a PAN card will be issued and delivered to the provided address. In the meantime, you can also receive an e-PAN via email, which is legally valid for online transactions.

ILLUSTRATIVE EXAMPLE

Scenario: Judith Smith, a college student, needs to apply for a PAN card to open a bank account for her new part-time job. She has her Aadhaar card and wants to apply online.

Steps Judith follows:

- **Online Application.** Judith visits the official NSDL PAN application portal and selects "Apply for New PAN" under the individual category.
- **Filling Out Form 49A.** Judith carefully enters her personal details like her full name, date of birth, Aadhaar number, and address into **Form 49A**. She double-checks to ensure all details match her Aadhaar card.
- **Document Submission.** Judith uploads a scanned copy of her Aadhaar card as both proof of identity and address. Since her Aadhaar has her birthdate, it serves as her age proof as well.
- **Payment.** She pays the nominal fee of ₹110 using UPI.
- **Verification.** Her documents are verified by the authorities, and within a week, she receives an **e-PAN** via email. The physical PAN card is delivered to her address within two weeks.

PART II : MONEY TRANSACTIONS & AVOIDING FINANCIAL FRAUD

18. Transferring money is an essential financial operation, whether it is done through traditional methods like cheques or modern digital transactions. Here is an overview of both methods and how to execute them.

Transferring Money through Cheque

19. **Fill Out the Cheque.** A cheque is a written instruction directing your bank to pay a specified amount from your account to another person or organization. Here's what needs to be filled out:

(a) **Date.** Write the current or post-dated date at the top of the cheque.

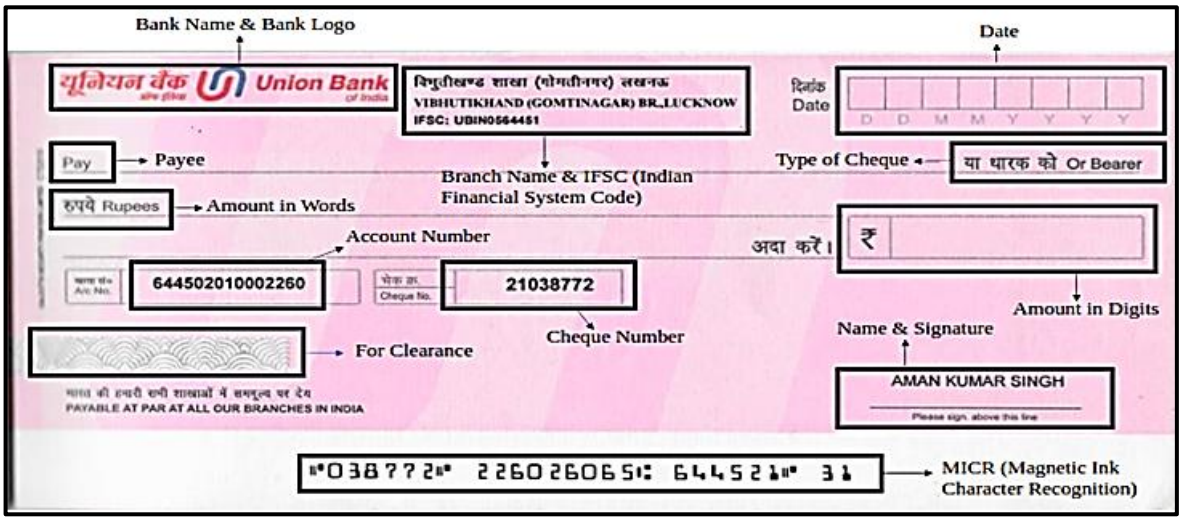
(b) **Payee's Name.** Write the name of the person or organization receiving the payment. If you want to make it payable to yourself for cash withdrawal, you can write "Self."

(c) **Amount in Figures.** Mention the amount in numbers in the designated box.

(d) **Amount in Words.** Write the exact amount in words to prevent tampering or misunderstanding.

(e) **Signature.** Sign the cheque in the signature area to authorize the payment.

20. **Submit the Cheque and Deposit.** After filling out the cheque, you can hand it over to the payee, or they can deposit it into their own account. If you are giving a cheque to someone, they will either deposit it physically in their bank or use digital cheque deposit services (if available). For self-withdrawals, you may submit the cheque to your bank's counter or ATM.



Parts of a Cheque Leaf

21. **Processing Time.** Once deposited, the cheque typically takes **1-3 working days** to clear, depending on whether it is an intra-bank or inter-bank transaction. Local cheques might clear within a day, but outstation cheques may take longer.

Transferring Money via Online Transactions

22. **Log In.** To initiate an online transfer, log in securely to your bank's **online banking portal** or mobile banking application. Ensure that you are using a safe network and avoid public Wi-Fi for security reasons.

23. **Add Beneficiary.** Before transferring money, you need to add the recipient (or beneficiary) to your account. The following details are required:

(a) **Beneficiary Name.** The full name of the person or organization.

(b) **Bank Account Number.** Double-check to ensure accuracy.

(c) **IFSC Code.** This unique identifier for the beneficiary's bank branch ensures the money is routed to the correct branch. It can usually be found on the beneficiary's cheque leaf or online.

(d) **Other Details (Optional).** Some banks may ask for additional information like email or phone number.

IMPORTANT CONSIDERATIONS FOR MONEY TRANSFERS

- **Security Measures.** Always ensure the banking portal or app you are using is secure (look for **"https://"** in the website address) to avoid phishing or unauthorized access. Keep your banking passwords, PINs, and OTPs confidential. Do not share them with anyone.
- **Transfer Limits.** Each bank may have daily transaction limits depending on the method (e.g., UPI might have a lower limit compared to NEFT or RTGS). Be sure to check your bank's policy if transferring large amounts.
- **Charges and Fees.** While many online transactions (like UPI) are free, other methods (such as NEFT or RTGS) may have small transaction fees based on the transfer amount. Always check with your bank for applicable charges.

24. **Initiate Transfer.** Once the beneficiary is added and approved (this may take a few minutes to 24 hours depending on the bank's policies), you can start the money transfer. Here are the common methods available for online transfers in India:

(a) **NEFT (National Electronic Funds Transfer).** Ideal for transactions that are not time-sensitive. NEFT usually takes a few hours or one working day.

(b) **RTGS (Real-Time Gross Settlement).** Used for large, time-critical transfers. RTGS transfers are immediate but may require a minimum transaction amount (e.g., ₹2 lakh).

(c) **IMPS (Immediate Payment Service).** For instant, 24/7 transfers. IMPS can be used for lower-value transactions.

(d) **UPI (Unified Payments Interface).** A fast-growing payment system for instant, low-value transfers via mobile apps.

25. **Transaction Verification.** After entering the amount to transfer, the system will prompt you to confirm the transaction using a security method, such as:

(a) **Secure PIN.** A personal identification number set by you.

(b) **OTP (One-Time Password).** Sent to your registered mobile number or email for each transaction to add an extra layer of security.

26. **Confirmation.** After completing the transaction, you will receive an acknowledgment in the form of a receipt. This may be in the form of an SMS or email, which confirms the transfer with a reference number for future tracking.

EXAMPLE SCENARIO FOR ONLINE TRANSFER

Let us say Raj needs to pay his utility bill using his mobile banking app.

- **Log In.** Raj securely logs in to his mobile banking app using his credentials.
- **Add Beneficiary.** He adds the utility company as a beneficiary by entering the company's bank account number and IFSC code (provided on the bill).
- **Initiate Transfer.** After the beneficiary is approved, he selects the amount due and initiates the payment using the **NEFT** option.
- **Confirmation.** Raj receives an SMS with a transaction reference number confirming that the payment has been made successfully.

Safety Aspects to Avoid Financial Frauds

27. With the rise of digital banking and online transactions, safeguarding personal financial information is more important than ever. The following tips outline key strategies to avoid financial fraud and protect yourself from common cyber threats.

Tips to Ensure Financial Safety

28. **Secure Personal Information.** Avoid sharing sensitive financial information such as PINs, passwords, CVV numbers, or your bank account details over the phone, via email, or through text messages. Legitimate organizations, including banks, will never ask for these details through unsolicited communications.

29. **Use two-factor authentication (2FA)** for added security when accessing online banking services or making payments. This ensures that even if someone gains access to your password, they still need a second form of verification (e.g., an OTP).

30. **Use Trusted Websites.** Always ensure the websites you use for online purchases or financial transactions are secure. Look for "**https://"** in the URL, as this indicates that the site uses encryption to protect your data. Avoid using public Wi-Fi for financial transactions, as public networks are often less secure. If necessary, use a **virtual private network (VPN)** to add a layer of protection.

31. **Regular Monitoring.** Regularly review your bank statements and transaction history for any unauthorized activity or discrepancies. Early detection of fraudulent transactions can help prevent further losses. Set up **transaction alerts** via SMS or email to notify you of all activities related to your bank account or credit card. These alerts will immediately inform you of any suspicious transactions.

32. **Beware of Phishing.** Do not click on suspicious links or open email attachments from unknown sources. Phishing attempts often masquerade as legitimate companies (such as banks or government agencies) to steal your personal information. Be cautious of emails or messages asking you to "verify your account" or "update your information," especially if they create a sense of urgency. Always verify the source by contacting the organization directly using their official communication channels.

ADDITIONAL PRECAUTIONS FOR DIGITAL TRANSACTIONS

- **Avoid Oversharing on Social Media.** Be cautious of sharing too much personal information on social media platforms. Scammers can use these details to guess security questions or impersonate you in fraud attempts.
- **Be Wary of Investment Scams.** Be cautious when dealing with unknown investment schemes that promise high returns with low risk. Always research and verify the legitimacy of investment platforms and ensure they are registered with proper regulatory authorities (e.g., SEBI in India).

33. **Use Strong Passwords and Update Regularly.** Create strong, unique passwords for all your financial accounts. Avoid using easily guessable information like birthdays or simple sequences (e.g., 12345). Consider using a **password manager** to store and generate strong passwords securely. Regularly update your passwords to reduce the risk of unauthorized access.

34. **Enable Credit and Debit Card Controls.** Many banks and financial institutions offer services that allow you to temporarily block or limit the usage of your debit or credit cards. This can be useful if you suspect fraud or if you want to restrict online transactions. You can also set spending limits for your cards and disable international transactions unless needed, which adds an extra layer of security.

35. **Be Aware of Social Engineering.** Scammers may use emotional manipulation or create a sense of urgency to trick individuals into providing personal information or making payments. Common examples include fake emergency calls, job offers, or romance scams. Always verify the identity of the person contacting you, especially if they request sensitive information or money transfers. Scammers often impersonate friends, family members, or officials.

36. **Monitor Credit Reports.** Regularly check your **credit report** to detect any unauthorized credit activity, such as new accounts or loans taken in your name. This will also help you spot errors and correct them before they affect your credit score. Many financial institutions and credit bureaus offer free annual credit reports that allow you to stay updated on your financial history.

37. **Secure Mobile Devices and Apps.** If you use mobile banking apps, ensure that your phone is protected with a **strong passcode** or biometric security (fingerprint or facial recognition). Only download banking apps from **official app stores** (Google Play Store, Apple App Store) and keep them updated to ensure the latest security features are in place.

38. **Report Suspicious Activity Immediately.** If you suspect any fraudulent activity or unauthorized transactions, contact your bank or credit card company immediately to block your account or card and prevent further damage. Most financial institutions have **24/7 fraud support hotlines** that you can contact in case of emergencies.

COMMON TYPES OF FINANCIAL FRAUDS

- **Phishing.** Fraudsters send emails or text messages pretending to be from reputable sources (banks, government institutions) to steal login credentials or other sensitive information.
- **Vishing (Voice Phishing).** Scammers make phone calls pretending to be customer service agents or officials, tricking victims into revealing their financial information over the phone.
- **Skimming.** Criminals use hidden devices at ATMs or point-of-sale terminals to capture card details and PIN numbers, which they use to create duplicate cards for fraudulent transactions.

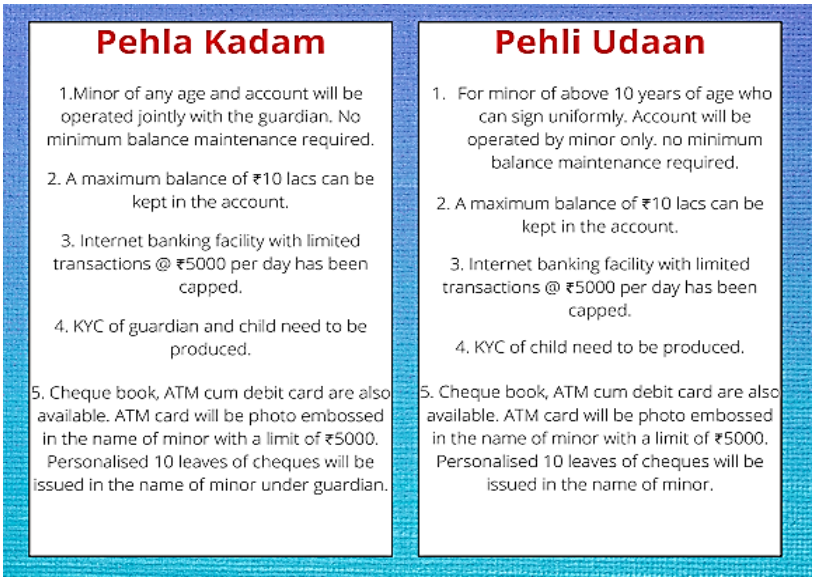
39. Practicing these safety measures will greatly reduce the risk of financial fraud and help you stay vigilant in today's digital economy. Being proactive and taking steps to protect personal information, monitor account activity, and report suspicious actions immediately are essential for ensuring financial security.

Aspect	Public Sector Banks	Private Sector Banks
Ownership	Majority stake (>50%) is held by the government.	Majority stake is held by private individuals or institutions.
Examples	SBI, PNB, Canara Bank, Bank of Baroda.	HDFC Bank, ICICI Bank, Axis Bank, Kotak Mahindra Bank.
Customer Base	Larger base, especially in rural and semi-urban areas.	Smaller but focused on urban and tech-savvy customers.
Objective	Focus on financial inclusion and social welfare.	Profit-driven and customer-centric services.
Interest Rates	Slightly lower loan interest rates.	Competitive but higher interest rates on loans.
Technology Adoption	Slower adoption compared to private banks.	Faster adoption of digital banking and technology.

Government Backing	Upto Rs 5 Lakhs guarantee from the government.	No government guarantee but regulated by RBI.
Service Speed	Moderate, often slower due to traditional processes.	Faster due to advanced digital infrastructure.
Risk Appetite	Conservative approach to lending.	Higher risk appetite, focusing on retail loans.

PART III : PEHLI UDAAN SCHEME OF GOVERNMENT

40. The **Pehli Udaan Scheme** is a special initiative aimed at promoting financial inclusion, particularly targeting young individuals, students, and minors. It encourages them to develop a h abit of saving from an early age while familiarizing them with basic banking services. This scheme is in line with the broader objectives of financial literacy and inclusion, especially among those who are new to the banking system.



Key Objectives of the Pehli Udaan Scheme

41. **Financial Inclusion for Youth.** The primary goal of the Pehli Udaan Scheme is to bring **children and minors** into the formal banking system, enabling them to access banking services independently. It emphasizes the importance of financial education at a young age, preparing the youth to manage their finances responsibly as they grow older.

42. **Encouraging the Habit of Saving.** One of the key features of the scheme is to instil a **habit of saving** among students and young individuals. By opening savings accounts under the Pehli Udaan Scheme, children can start saving small amounts, learning the value of money and financial discipline.

43. **Promoting Digital Banking Awareness.** The scheme introduces young individuals to **digital banking platforms** such as online banking, mobile apps, and UPI payments, helping them become familiar with modern banking technologies. This helps bridge the digital divide and ensures that the younger generation is well-versed in cashless transactions.

Eligibility Criteria

44. The Pehli Udaan Scheme is designed for **minors (under 18 years)** who are eligible to open a **savings account** either independently or with the help of a guardian. Generally, children aged **10 years and above** are allowed to operate the account independently, provided they are capable of understanding and managing the account responsibly.

Key Features of the Pehli Udaan Scheme

45. **Zero-Balance Savings Account.** The savings accounts under the Pehli Udaan Scheme are **zero-balance accounts**, meaning that children are not required to maintain any minimum balance. This ensures that even those from economically weaker sections can participate without worrying about penalties for not maintaining a balance.

46. **Free ATM/Debit Card.** Children are provided with a **free debit card** that can be used to withdraw money from ATMs or make digital payments. Some banks also offer customized cards with spending limits to help minors manage their money safely. The scheme includes controls on how much money can be withdrawn to ensure safe and responsible use of the funds.

47. **Mobile Banking and Digital Access.** The scheme provides **online banking facilities** to minors, allowing them to access their accounts, check balances, and view transactions through mobile banking apps or websites. This also helps in promoting digital literacy. The scheme allows children to participate in **cashless payments** through UPI platforms, fostering early exposure to India's digital payment ecosystem.

48. **Joint Account Option.** For younger children (usually below 10 years), the scheme allows for **joint accounts** with a guardian or parent. This enables parents to monitor and guide their children's banking activities, ensuring responsible financial habits.

49. **Limit on Transactions.** To ensure security, especially for young account holders, the Pehli Udaan Scheme often has predefined **limits on transactions**, both online and offline, preventing large withdrawals or payments without oversight.

50. **Interest on Savings.** Like regular savings accounts, the money deposited in Pehli Udaan accounts earns **interest** at prevailing rates, helping children grow their savings over time.

51. The **Pehli Udaan Scheme** is a forward-thinking initiative that empowers minors by introducing them to the formal banking system. It not only offers them access to essential banking services but also serves as a foundation for **financial literacy and independence**. By integrating savings habits, digital transactions, and financial education, the scheme aims to create a financially responsible and digitally savvy generation.

BENEFITS OF PEHLI UDAAN SCHEME

- **Early Exposure to Banking.** The scheme provides **hands-on experience** in managing bank accounts, using digital platforms, and understanding financial systems from a young age. This knowledge is crucial in shaping responsible financial behaviour later in life.
- **Building Financial Literacy.** By using banking services independently, minors learn the fundamentals of **financial literacy**, including budgeting, saving, and the value of digital payments. This ensures that as they enter adulthood, they are financially empowered.
- **Safe and Controlled Financial Access.** While minors gain access to financial tools like debit cards and online banking, the scheme ensures safety through **controlled access** to funds and restrictions on transactions, protecting them from risks like overspending or fraud.
- **Bridge to Financial Independence.** Pehli Udaan serves as a **stepping stone** toward financial independence. Once the child turns 18, they can convert the account into a regular savings account with full access to all banking facilities.

PART IV : DEBIT CARD & KYC

52. **Using Debit Cards**. Using a debit card involves understanding the processes for in-store, online, and ATM transactions while adhering to safety measures to protect against fraud and unauthorized use. By staying vigilant and following best practices, you can ensure secure and effective management of your debit card.

Debit Card

53. **In-Store Transactions**

(a) **Swiping or Inserting the Card.** For traditional magnetic stripe cards, swipe the card through the point-of-sale (POS) terminal. Ensure the magnetic stripe is facing the correct direction, usually towards the machine. For EMV (Europay, MasterCard, and Visa) chip cards, insert the card into the chip reader slot at the POS terminal. The chip must be inserted face-up and fully into the reader.

(b) **Entering PIN.** After swiping or inserting the card, you will be prompted to enter your Personal Identification Number (PIN). This is a security code you set up when you received your debit card. Enter your PIN on the keypad. Be cautious of your surroundings and cover the keypad to prevent others from seeing your PIN.

(c) **Transaction Confirmation.** After entering your PIN, you will receive a receipt as proof of the transaction. Review the receipt for accuracy and keep it for your records. You may receive an SMS or email notification confirming the transaction, depending on your bank's services.

54. **Online Transactions**

(a) **Entering Card Details.** When making an online purchase, you will need to enter your debit card details on the checkout page. This typically includes.

- **Card Number.** The 16-digit number on the front of the card.
- **Expiration Date.** The month and year when the card expires.
- **CVV/CVC.** The 3-digit security code on the back of the card.
- **Billing Address.** Some sites may also ask for the billing address associated with the card.

(b) **Secure Transactions.** Ensure the website is secure by checking for "https.//" in the URL and a padlock icon in the browser's address bar. Use trusted and recognized payment gateways for transactions.

(c) **Confirmation and Follow-Up.** After completing the payment, you should receive an order confirmation on the website and via email. Regularly check your bank statements for any unauthorized online transactions.

55. **ATM Withdrawals**

(a) **Using ATMs.** Insert your debit card into the ATM slot, usually located at the front of the machine. Enter your PIN on the ATM keypad. Ensure that no one is watching you while entering your PIN. Choose the type of transaction (withdrawal, balance inquiry, etc.) from the menu on the screen.

(b) **Withdrawal.** Enter the amount you wish to withdraw. Confirm the amount if prompted. Choose whether to receive a receipt for the transaction. This provides proof of the transaction and helps in tracking your account balance.

(c) **Collecting Card and Cash.** After completing the transaction, ensure you take your debit card and any cash dispensed by the ATM. Check the ATM for your card to avoid forgetting it.

Safety Measures

56. **Protect Your PIN**

(a) **Keep It Confidential.** Do not share your PIN with anyone, including family and friends. Do not write your PIN down or store it with your debit card.

(b) **Use Caution.** When entering your PIN at ATMs or POS terminals, cover the keypad with your hand to prevent others from seeing it. Be cautious of your surroundings when using your card in public places.

57. **Monitor Account Activity**

(a) **Regular Review.** Regularly review your bank statements and transaction history for any unauthorized or suspicious activity. Use online banking services to monitor your account activity frequently.

(b) **Alert Notifications.** Register for SMS or email alerts for transactions and account activity to stay informed about your account status.

58. **Secure Transactions**

(a) **Use Trusted Sites.** Ensure you are shopping on reputable and secure websites with “https.//” in the URL and a padlock icon. Use known and reliable payment processors for online transactions.

(b) **Avoid Public Wi-Fi.** Avoid making financial transactions over public or unsecured Wi-Fi networks. Use a secure and private internet connection.

(c) **Be Wary of Phishing.** Do not click on links or open attachments in unsolicited emails or messages asking for your card details. Always verify the authenticity of any request for your card details by contacting your bank directly.

59. **Card Security**

(a) **Report Loss or Theft.** If your card is lost or stolen, report it to your bank immediately to block the card and prevent unauthorized use.

(b) **Card Locking.** Many banks offer the option to temporarily lock or freeze your card through their mobile app or online banking portal.

(c) **Secure Disposal.** When disposing of an old or expired card, ensure it is properly shredded to prevent misuse of your card information.

What is KYC – Know Your Customer?

60. KYC stands for Know Your Customer, a fundamental process used by financial institutions and other regulated entities to verify the identity of their clients. This process is helpful in preventing illegal activities such as money laundering, fraud, and terrorist financing. Here is a comprehensive look at KYC.

61. **Purpose of KYC**

(a) **Preventing Financial Crimes.** KYC helps prevent money laundering by ensuring that financial institutions know their customers’ true identities and sources

of funds. It prevents the misuse of the financial system for financing terrorism or other criminal activities.

(b) **Ensuring Compliance.** KYC is required by financial regulators and laws in many countries to comply with anti-money laundering (AML) and counter-terrorist financing (CTF) regulations. Helps institutions manage risks associated with financial transactions and clients.

(c) **Protecting Customers.** Protects customers from identity theft and fraud by ensuring that their financial information is secure and used appropriately.

62. **KYC Process**

(a) **Customer Identification.** Customers are required to provide identification documents such as a passport, driver's license, or Aadhar card. These documents are verified to confirm the customer's identity. The verification process may include checking the authenticity of the documents and matching them with the customer's details.

(b) **Address Verification.** Customers must provide documents that confirm their residential address, such as utility bills, bank statements, or rental agreements. Address documents are verified to ensure they are valid and correspond to the customer's provided information.

(c) **Risk Assessment.** Financial institutions assess the customer's profile to determine the risk level. This includes understanding the nature of the customer's business, source of funds, and transaction patterns**.** For high-risk customers, enhanced due diligence may be required, involving more detailed background checks and ongoing monitoring.

63. **KYC Documentation**

(a) **Identity Documents.** Include government-issued IDs such as a passport, driver's license, or national ID card. May include additional forms of identification like utility bills or social security cards.

(b) **Proof of Address.** Utility bills (electricity, water, gas), bank statements, credit card statements, or rental agreements. Documents must be recent and clearly show the customer's name and address.

(c) **Additional Information.** Customers may need to provide information about the source of their funds or income, such as employment details, business income, or investment statements. Information on the purpose of the account or the expected transaction types and volumes.

64. **KYC Regulations and Compliance**

(a) **Regulatory Framework.** KYC requirements are influenced by international standards set by organizations like the Financial Action Task Force (FATF).

Local Regulations. Each country has its own regulatory framework governing KYC procedures. Institutions must comply with these local laws to ensure legal operations.

(b) **Ongoing Monitoring.** Institutions conduct periodic reviews of customer information to ensure it remains accurate and up-to-date.

Transaction Monitoring. Ongoing monitoring of transactions to detect any suspicious activity or deviations from the customer's known profile.

(c) **Record Keeping.** Financial institutions are required to maintain records of KYC documentation and verification processes for a specified period. Ensuring that customer data is stored securely and protected from unauthorized access or breaches.

65. KYC is a vital component of the financial system, helping to maintain the integrity and security of financial transactions. By understanding and implementing robust KYC practices, institutions can protect themselves and their customers from financial crimes while ensuring regulatory compliance.

PART V : FIXED DEPOSIT, MUTUAL FUNDS & INCOME TAX FILING

66. **Fixed Deposits**. A **Fixed Deposit (FD)** is a financial instrument offered by banks and financial institutions where individuals deposit a lump sum amount for a specified tenure at a fixed interest rate.

(a) **Benefits of Fixed Deposits**

- **Safety.** FDs are considered low-risk investments as they are backed by the bank and are insured by government upto Rs 5 Lakhs. They provide a secure way to save money, making them an ideal choice for conservative investors.

- **Guaranteed Returns.** FDs offer predictable returns since the interest rate remains constant throughout the deposit term. This stability helps individuals plan their finances more effectively.

- **Higher Interest Rates.** FDs generally provide higher interest rates compared to regular savings accounts, making them an attractive option for those looking to grow their savings without taking on significant risk.

(b) **Risks Involved**

- **Liquidity.** One of the primary drawbacks of FDs is liquidity. The funds are locked in for the duration of the deposit, which means they cannot be accessed without incurring penalties. Early withdrawal may result in reduced interest rates or fees, making it less flexible than other investment options.

- **Inflation Risk.** While FDs provide guaranteed returns, if the interest rate is lower than the inflation rate, the real purchasing power of the money may diminish over time.

- **Opportunity Cost.** Funds locked in FDs may miss out on potential higher returns from other investment avenues, such as stocks or mutual funds, especially during periods of market growth.

67. **Mutual Funds**. Mutual funds are investment vehicles that pool money from multiple investors to create a diversified portfolio of assets, including stocks, bonds, and other securities. This collective investment approach allows individuals to access a wider range of investment opportunities than they might on their own.

(a) **Benefits of Mutual Funds**

- **Diversification.** By investing in a variety of assets, mutual funds spread risk across different securities. This reduces the impact of poor performance by any single investment, helping to stabilize returns. Diversification can be across asset classes, sectors, and geographic regions, which further mitigates risk.

- **Professional Management.** Mutual funds are managed by experienced fund managers who conduct in-depth research and analysis to make informed investment decisions. This expertise allows investors to benefit from professional guidance without needing extensive knowledge of the financial markets themselves.

- **Accessibility.** Mutual funds typically have lower minimum investment requirements, making them accessible to a broader range of investors. They also offer liquidity, allowing investors to buy or sell shares on any business day.

(b) **Risks Involved**

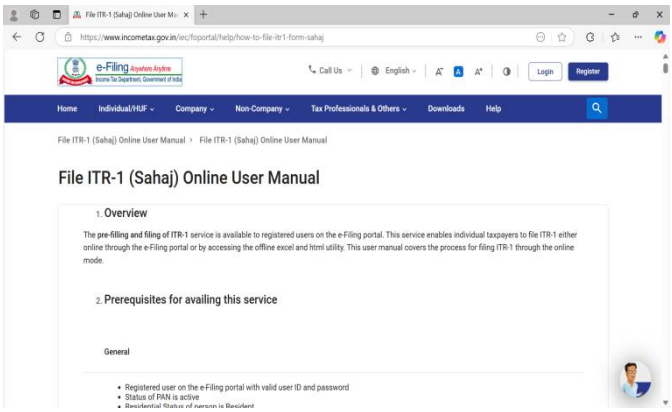
- **Market Risk.** Mutual funds are subject to market fluctuations. The value of the fund's assets can rise or fall based on market conditions, which may lead to potential losses for investors. Investors need to be aware that while diversification helps reduce risk, it does not eliminate it entirely.

- **Management Risk.** The performance of a mutual fund can be significantly influenced by the decisions made by the fund manager. Poor management can result in subpar performance. Changes in management or investment strategy can also impact fund performance.

- **Costs and Fees.** Mutual funds typically come with various fees, including management fees and expense ratios, which can eat into overall returns. It is essential for investors to understand the cost structure before investing.

68. **Basics of Filing Income Tax**

(a) **Understanding Income Tax.** A tax on earnings from wages, salaries, dividends, interest, and capital gains.



(b) **Tax Brackets and Rates.** Higher incomes are taxed at higher rates. Familiarize yourself with **Progressive Tax System** applicable tax brackets.

(c) **Filing Requirements.** Generally, individuals with income above a certain threshold must file. This includes employees, freelancers, and business owners. Your status (single, married, etc.) affects tax rates and deductions.

(d) **Important Documents.** Collect Forms related to file tax, payslips, bank statements, and receipts for potential deductions.

(e) **Deductions and Credits.** Choose between the standard deduction or itemizing for tax savings. Look for credits that reduce your tax liability directly.

(f) **Filing Process.** File manually, use tax software, or hire a tax professional. E-filing is quick and secure.

(g) **Deadlines.** Individual returns are typically due by April 15th. Extensions are available, but taxes owed must be paid on time.

(h) **Payment of Taxes.** Make estimated payments if you expect to owe taxes. Refunds for overpayments can be direct-deposited.

CONCLUSION

69. Effective financial management is a vital life skill that ensures financial security and responsible decision-making. By understanding concepts such as budgeting, saving, investing, and the prudent use of financial tools like bank accounts, debit/credit cards, and digital payment systems, cadets can take charge of their financial future. As NCC cadets, disciplined financial habits are as important as physical and mental discipline. These skills not only prepare you to manage your personal finances but also equip you to guide others as responsible citizens. With knowledge of government schemes, tax basics, and fraud prevention, you can contribute to a financially aware and empowered society. Remember, financial management is not just about earning money but about utilizing it wisely to achieve your goals while securing your future. Make every rupee count, and let this knowledge guide you toward a path of financial independence and stability.

SUMMARY

- Financial literacy is vital for young individuals, equipping them with the tools to manage money effectively, avoid debt, and ensure a secure financial future.
- To open a bank account, individuals must present necessary documents and link their Aadhar card and phone number for enhanced security.
- The application process for a PAN card requires specific documentation and linking it to the Aadhar card for compliance.
- Money transfers can be made through cheques or online methods such as UPI and NEFT, with precautions in place to prevent fraud.
- Initiatives like the Pehli Udaan scheme provides young girls with essential financial knowledge.
- Safe usage of debit cards involves protecting PINs and steering clear of public networks.
- KYC (Know Your Customer) is crucial for identity verification in banking.
- A solid understanding of fixed deposits, mutual funds, credit/debit cards, and income tax basics further strengthens financial independence.

ASSESSMENT EXERCIS

Multiple Choice Questions

Q1. Why is financial literacy important for young individuals?

a) It helps manage their money effectively

b) It ensures they never lose money

c) It teaches them how to avoid taxes

d) It ensures they get rich fast

Q2. What is the primary document required to open a bank account in India?

a) Passport

b) Aadhar card

c) Voter ID

d) Pan card

Q3. Why is it important to link a phone number with a bank account?

a) For OTP verification during transactions

b) To receive marketing messages

c) To reduce bank fees

d) To avoid taxes

Q4. Which of the following is required to apply for a PAN card?

a) Birth certificate

b) Driving license

c) Aadhar card

d) Passport

Q5. Why is it necessary to link a PAN card with Aadhar?

a) To avoid duplication of PAN numbers

b) To earn more interest on savings

c) To reduce income tax

d) For free bank services

Q6. What is the name of the system used for online bank transfers in real-time in India?

a) NEFT

b) RTGS

c) UPI

d) Cheque

Q7. Which of the following is required to transfer money via a cheque?

a) Aadhar number

b) Bank account number of the recipient

c) PAN number of the recipient

d) Debit card

Q8. Which of the following is the best way to protect yourself from phishing scams?

a) Share your password only with trusted people

b) Ignore unknown links or suspicious emails

c) Use the same password for all accounts

d) Save your bank information online

Q9. What is two-factor authentication?

a) Using two devices to access an account

b) A security feature that requires two forms of identity verification

c) Calling the bank for every transaction

d) Logging in with a password only

Q10. What is the key benefit of the MoU between NCC and SBI?

a) Cadets can open zero-balance accounts

b) Cadets receive higher interest rates

c) Free credit cards for all cadets

d) Free international transfers

Q11. The Pehli Udaan scheme is aimed at empowering which group?

a) Contractual employees in cities

b) Elderly women in rural areas

c) Young girls in rural areas

d) Government employees

Q12. What should you do if your debit card is lost?

a) Keep using your online banking until it is found

b) Immediately report it to the bank and block the card

c) Wait for the card to expire

d) Share the PIN with the bank

Q13. Which of the following is a recommended safety measure when using a debit card?

a) Use public Wi-Fi for transactions

b) Keep your PIN confidential

c) Share your PIN with family members

d) Write your PIN on the card for easy access

Q14. What is the main purpose of KYC in banking?

a) To verify customer identity and prevent fraud

b) To offer loans

c) To increase interest rates

d) To open more accounts

Q15. Which document is most used for KYC in India?

a) Passport

b) Voter ID

c) Aadhar card

d) Driving license

Q16. What is the primary benefit of investing in a fixed deposit?

a) High liquidity

b) Guaranteed returns

c) Risk-free investment

d) High interest rates

Q17. What does income tax refer to?

a) Tax on savings

b) Tax levied on an individual's income

c) Tax on purchases

d) Tax on fixed deposits

Q18. Which of the following is NOT a characteristic of a credit card?

a) It allows you to borrow money

b) Interest is charged on late payments

c) It offers rewards for spending

d) You can only spend money available in your bank account

Q19. What is the typical validity period of a debit card?

a) 1 year

b) 2 years

c) 5 years

d) Lifetime

Q20. Which of the following is a public sector bank?

a) Canara Bank

b) Axis Bank

c) ICICI Bank

d) HDFC Bank

Short Answer Questions

Q1. Why is financial literacy important for young individuals?

Q2. What are the essential documents required to open a bank account, and why is linking the Aadhar card and phone number important?

Q3. What documents are needed to apply for a PAN card, and why must it be linked to an Aadhar number?

Q4. What are two methods of transferring money, and how do they differ?

Q5. What are some essential safety measures to avoid financial fraud?

Long Answer Questions

Q1. Discuss the importance of financial literacy at a young age and its impact on long-term financial stability.

Q2. Describe the procedure for opening a bank account and explain the significance of linking an Aadhar card and phone number to the account.

Q3. Explain the process of applying for a PAN card and discuss the legal requirement of linking the PAN card with the Aadhar number.

Q4. Compare the methods of money transfer using cheques and online transactions, highlighting the advantages and disadvantages of each.

Q5. Discuss the essential safety measures individuals should adopt to protect themselves from financial fraud.

LIVING WITH NATURE

6

CHAPTERWISE INDEX: LIVING WITH NATURE (SD/SW)

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LIVING WITH NATURE (SD/SW)

CHAPTER I: PECULIARITIES OF DESERTS, MOUNTAINS AND JUNGLE TERRAIN

""Believe the terrain, not the map."

TEACHING INSTRUCTIONS

Period	:	**01 (One)**
Type	:	**Lecture and Discussion**
Year	:	**1st Year SD/SW**
Conducting Officer	:	**ANO**
Training Aids	:	**Class Room, Computer, OHP, Screen, Chalk/Markers**

Time-plan

- Introduction : 02 Mins
- Part I : 10 mins
- Part II : 10 mins
- Part III : 10 mins
- Conclusion, Summary and Practice : 08 mins

INTRODUCTION

1. India is a country with varied types of terrain, be it deserts, mountains or jungles. Deserts are defined by their arid conditions, typically receiving less than 10 inches or 25 cms of rainfall each year. Deserts are characterized by a dry, arid climate where evaporation rates exceed precipitation. This results in a stark and often inhospitable environment. Plant life is limited and drought-resistant species like cacti and succulents, as well as certain grasses adapt to these harsh conditions. Deserts experience dramatic temperature variations. Hot deserts can scorch during the day, while temperatures can plummet at night. In contrast, cold deserts can have bitterly cold winters. Rainfall is minimal and often unpredictable, leading to dry, cracked earth. Desert soils tend to be sandy or rocky, with low nutrient content and limited organic matter. India's mountain ranges are diverse and play a significant role in the country's geography, climate, and culture. The climatic conditions in the mountain ranges of India vary significantly due to their diverse topography, altitude, and geographical location. The ranges vary in altitude from 600 to over 8,000 meters The Jungle terrain in India mainly consists of various types of forests. The word 'forest' is usually used to describe a dense growth of trees covering a large area of land.

PREVIEW

The lecture will be conducted in following parts:-

(a) Part I : Peculiarities of the Desert Terrain

(b) Part II : Peculiarities of the Mountain Terrain

(c) Part III : Peculiarities of the Jungle Terrain

LEARNING OBJECTIVES

- Different types of terrain
- Peculiarities of Different Terrain
- Strategic Importance of Himalayas

PART I : PECULIARITIES OF DESERT TERRAIN

2. **Definition and Characteristics of Deserts** A desert can be defined as a large area of land, usually in a hot region, where there is almost no water, rain, trees, or plants. Deserts are typically characterised by less than 10 inches or 25 cms of rainfall each year and by a dry, arid climate where evaporation rates exceed precipitation. Plant life is limited and drought-resistant species like cacti and succulents thrive in deserts.

3. Types of Deserts. Deserts can be broadly categorized into two types:

a) <u>Hot Deserts</u>: Take the Sahara, for instance. This region is known for its high temperatures and minimal vegetation. Example – Thar Desert.

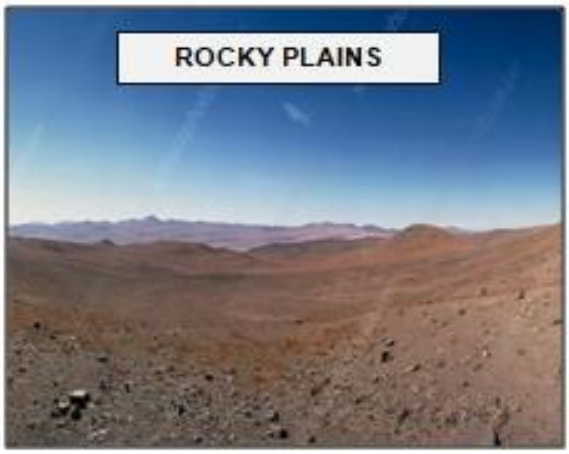
b) <u>Cold Deserts</u>: The Ladakh region in India, showcases extreme winter temperatures that can drop significantly. Example – Spiti Desert.

4. **<u>Location of Thar Desert</u>.** The Thar Desert is located in the northwestern part of India and eastern Pakistan. It spans about 77,000 square miles, primarily across Rajasthan. The Thar Desert is bordered by the Indus River Plain to the west, the Punjab Plain to the north, the Aravalli Range to the southeast, and the Rann of Kutch to the south.

5. Climate and Its Impact on Desert Terrain. The climate profoundly shapes desert terrain. Some key impacts are as under :

a) **<u>Temperature Extremes</u>.** Deserts often see extreme temperature fluctuations—scorching days and chilly nights, which affects both soil composition and vegetation.

b) **<u>Low Precipitation</u>.** With less than 10 inches of rainfall annually, water scarcity leads to arid landscapes, including sand dunes and rocky plateaus.



c) **<u>Wind Erosion</u>.** Strong winds erode surfaces, creating unique features like yardangs—wind-eroded ridges.

d) **<u>Soil Composition</u>.** Limited rainfall causes salinization, leading to high salt concentrations in soils, which impacts plant growth.

e) **<u>Vegetation Adaptations</u>.** Plants like cacti have adapted with deep root systems and reduced leaf surfaces to minimize water loss.

f) **<u>Wildlife Adaptations</u>.** Animals have evolved various survival strategies, including nocturnal behavior and specialized physiology.

g) **Climate Change Impacts.** Increasing aridity from climate change can disrupt ecosystems and lead to more severe droughts.

h) **Human Interaction.** Human activities, such as agriculture and urbanization, can significantly impact desert ecosystems, potentially leading to desertification.

6. **Types of Terrain in Indian Deserts**. Indian deserts display diverse terrain types:

a) **Sand Dunes.** Prominent in the Thar Desert, these shifting sand take various forms, including barchans and linear dunes.

b) **Stony/Rocky Plains.** Known as "badlands," these areas have rocky surfaces with little vegetation.

c) **Salt Flats.** The Rann of Kutch features salt crusts formed by evaporation, particularly evident in dry seasons.

d) **Dry Riverbeds (Wadis).** These channels often remain dry but can support vegetation during rare rainfalls.

e) **Hilly Terrain.** Rocky hills and small mountain ranges can disrupt the flat desert landscape.

f) **Vegetated Areas**. Some regions feature scrubland and xerophytic plants that can survive in arid conditions.

g) **Oases.** Fertile spots supported by underground water, oases are crucial for locals.

h) **Acacia and Thorn Forests.** Areas of stunted trees and shrubs which thrive on minimal water on desert fringes.

7. **Flora and Fauna in Deserts**. The flora and fauna of Indian deserts, especially the Thar Desert, are remarkable.

8. **Flora**

a) **Xerophytic Vegetation.** Predominant species include Ker and Acacia nilotica.

b) **Grasses.** Drought-resistant grasses like Dichanthium help stabilize sand dunes.

c) **Trees.** Hardy trees such as Khejri provide essential food and fodder.

d) **Annual Herbs.** Many plants germinate after rains, including wild barley and various legumes.

DID YOU KNOW?

- The Rann of Kutch, located in Gujarat, is a vast salt marsh. It experiences extreme temperatures, with summer highs around 50°C (122°F) and winter lows near freezing. The region is known for its seasonal flooding and dry spells. The Rann of Kutch is renowned for the Rann Utsav, a cultural festival celebrating local crafts, music, and dance.

9. **Fauna**

a) **Mammals.** Notable species include the Indian Desert Fox, Blackbuck, and the Camel.

b) **Reptiles.** Adaptations abound here, with species like the saw-scaled viper and monitor lizards.

c) **Birds.** The Greater Flamingo and various vultures are crucial scavengers in the ecosystem

d) **Insects.** Grasshoppers and beetles thrive in low moisture conditions.

e) **Aquatic Life.** Seasonal wetlands can host frogs and fish, particularly after monsoon rains.

PART II : PECULIARITIES OF MOUNTAIN TERRAIN

10. India's mountain ranges are diverse and play a significant role in the country's geography, climate, and culture. Here's an overview of the main mountain ranges and their characteristics:

Himalayas

11. **Overview**. The Himalayas are the highest mountain range in the world, stretching across five countries: India, Nepal, Bhutan, China, and Pakistan.

12. **Characteristics**.

a) **Height**. Home to some of the world's highest peaks, including Mount Everest (8,848.86 meters).

b) **Geology**. Composed mainly of sedimentary and metamorphic rocks, formed by the collision of the Indian and Eurasian tectonic plates.

c) **Climate**. Varies from tropical in the foothills to alpine and tundra at higher elevations.

d) **Biodiversity**. Rich flora and fauna, including snow leopards, red pandas, and numerous medicinal plants.

e) **Cultural Significance**. Sacred to various religions, including Hinduism and Buddhism.

f) Western Ghats (Sahyadri)

13. **Overview**. A mountain range that runs parallel to the western coast of India, spanning Maharashtra, Goa, Karnataka, Kerala, Tamil Nadu and some part of Gujrat.

14. **Characteristics**.

a) **Height**. Peaks rise to around 2,695 meters (Anamudi).

DID YOU KNOW?

- A forest has many tall trees and can usually be travelled through by humans. Jungle is usually used to describe a tangled or overgrown mass of vegetation over a large area of land. A jungle usually has a tropical or humid climate and many plants on the ground between trees and larger plants. The thick vegetation on the ground can make it difficult or impossible for humans to go into or travel through a jungle.

b) **Biodiversity**. Recognized as a UNESCO World Heritage Site, it is one of the eight "hottest hotspots" of biological diversity in the world.

c) **Climate**. Receives heavy rainfall during the monsoon season, significantly influencing the climate of the western coast.

d) **Crops**. Known for tea, coffee, and spice plantations.

Eastern Ghats

15. **Overview**. A discontinuous range of mountains along the eastern coast of India, extending from Odisha to Tamil Nadu.

16. **Characteristics**:

a) **Height**: Generally lower than the Western Ghats, with the highest peak being Arma Konda (2,680 meters).

b) **Biodiversity**: Less rich than the Western Ghats but still home to various flora and fauna, including several endemic species.

c) **Mining**: Contains rich mineral deposits, including bauxite and iron ore.

Aravalli Range

17. **Overview**. One of the oldest mountain ranges in India, stretching across Rajasthan, Haryana, and Gujarat.

18. **Characteristics**.

a) **Height**: Peaks like Guru Shikhar reach about 1,722 meters.

b) **Geology**: Composed mainly of granite and metamorphic rocks.

c) **Climate**: Affects local weather patterns; protects the region from the harsh desert climate of Rajasthan.

d) **Biodiversity**: Supports various wildlife, including leopards and a range of bird species.

Vindhya Range

19. **Overview**. A chain of hills in central India, separating the northern plains from the Deccan Plateau.

20. **Characteristics**.

a) **Height**. Peaks generally range from 300 to 700 meters.

b) **Geology**. Comprised mainly of sedimentary rocks.

c) **Historical Significance**: Rich in ancient history and archaeological sites, including caves and temples.

Satpura Range

21. **Overview**. Located to the south of the Vindhya Range, spanning Madhya Pradesh and Maharashtra.

22. **Characteristics**:

a) **Height**. The highest peak is Dhupgarh (1,350 meters).

b) **Geology**. Composed of granite and sandstone.

c) **Biodiversity**. Home to several national parks and wildlife sanctuaries, rich in flora and fauna.

23. **Climatic Conditions**. The climatic conditions in the mountain ranges of India vary significantly due to their diverse topography, altitude, and geographical location. The ranges vary in altitude from 600 to over 8,000 meters. Lower elevations experience hot summers and mild winters. Mid-elevations have cooler temperatures with heavy rainfall in monsoon. Higher elevations are characterized by cold, dry conditions, with significant snowfall. The monsoon season (June to September) brings heavy rainfall, especially in the eastern Himalayas. Density of vegetation varies from tropical forests in the lower ranges to alpine vegetation in the higher altitudes.These climatic variations contribute to the rich biodiversity and distinct ecosystems found in India's mountain ranges, each hosting unique flora and fauna.

24. **Flora & Fauna**. The mountains of India are rich in biodiversity, featuring a wide range of flora and fauna adapted to different climatic conditions and altitudes. Here's a look at some key characteristics of the flora and fauna found in these regions. Deodar cedar, pine, oak, and rhododendron. Snow leopard, leopard, elephant, deer species, wild boar Himalayan bear, red panda, musk deer, and various species of wild goats can be seen in mountainous terrain. Birds like Himalayan monal, griffon vulture, and various species of pheasants stay in such regions. Several species of frogs, lizards, and snakes have also adapted to these terrains. Animals like Himalayan Tahr and various other species have also adapted to high altitudes.

25 **Strategic Importance of Himalayas.** The Himalayas, are not only the highest mountain range on Earth but also a region of immense strategic significance for India. Spanning approximately 1,500 miles across five countries—India, Nepal, Bhutan, China, and Pakistan—the Himalayas play a crucial role in India's security, economy, and environmental stability.

a) **Geopolitical Significance.** The Himalayas serve as a natural barrier, providing India with a strategic advantage against its northern neighbours.

b) **Security Concerns** The rugged terrain of the Himalayas provides natural fortifications. Lends control over strategic passes and high-altitude areas can determine the success of military campaigns.

c) **Economic Importance**. The Himalayas are rich in natural resources, which are vital for India's economic development. The region is known for its mineral wealth, including precious and semiprecious stones, and has significant potential for hydropower generation. The rivers originating from the Himalayas, such as the Ganges, Brahmaputra, and Indus, are crucial for agriculture, drinking water, and hydel energy production.

d) **Environmental Significance.** The Himalayas play a critical role in regulating climate and water systems in the region. They act as a barrier to the southwest monsoon, ensuring that northern India receives adequate rainfall, which is vital for agriculture. However, climate change poses significant threats to this delicate ecosystem, leading to glacial melting and erratic weather patterns. India faces the challenge of managing environmental sustainability while promoting economic development. Deforestation, tourism, and industrial activities can harm the fragile Himalayan ecosystem. Protecting biodiversity and promoting conservation efforts are essential for maintaining the region's ecological balance, which, in turn, supports livelihoods for millions of people who depend on these resources.

e) **Cultural and Social Dimensions**. The Himalayas are not just a geographical entity; they hold immense cultural and spiritual significance for many communities in India. The region is home to various ethnic groups, languages, and traditions. Pilgrimages to sacred sites like Amarnath, Badrinath, and Kedarnath attract millions of devotees each year, making tourism a significant aspect of the local economy.

PART III : PECULIARITIES OF JUNGLE TERRAIN

26. The Jungle terrain in India mainly consists of various types of forests. The word 'forest' is usually used to describe a dense growth of trees covering a large area of land. Forests occur in both dry and wet climate. However, there are tropical forests and rainforests. A forest has many tall trees and can usually be travelled through by humans. Jungle is usually used to describe a tangled or overgrown mass of vegetation over a large area of land. A jungle usually has a tropical or humid climate and many plants on the ground between trees and larger plants. The thick vegetation on the ground can make it difficult or impossible for humans to go into or travel through a jungle.

27. **Types of Forests**. India boasts a diverse range of forests due to its varied climate, topography, and soil types. Here are the main types of forests found in the country:

a) **Tropical Evergreen Forests**: Found in regions with high rainfall, like the Western Ghats and northeastern states. Characterized by dense canopy and rich biodiversity, including species like rosewood and ebony.

b) **Tropical Deciduous Forests**: Also known as monsoon forests, these are found in areas with moderate rainfall. Trees shed leaves in the dry season and common species include teak, sal, and bamboo.

c) **Tropical Thorn Forests**: Found in arid and semi-arid regions like Rajasthan and parts of Gujarat. It is characterized by thorny shrubs and trees like acacia .

d) **Montane Forests**: Located in the Himalayas and other high-altitude regions. It is divided into lower montane forests (with species like oak and pine) and alpine forests (with conifers and shrubs).

e) **Mangrove Forests**: Found in coastal regions, especially in the Sundarbans and parts of Odisha. Characterized by salt-tolerant trees like sundari and palas,it is important for coastal protection and biodiversity.

f) **Temperate Forests**: Found in higher altitudes, mainly in the Himalayan region. Includes coniferous forests (like deodar and fir) and broadleaf forests.

g) **Swamp and Wetland Forests**: Found in areas with waterlogged conditions, such as in the northeastern states and parts of Kerala. It is characterized by species adapted to wet conditions.

h) Each of these forest types supports unique ecosystems and plays a crucial role in the environmental balance, biodiversity, and livelihoods of local communities.

28. **Flora and Fauna**. The biodiversity of India's jungles/forests is among the richest in the world. The Western Ghats alone harbour over 7,000 plant species, including endemic ones like the Neelakurinji (Strobilanthes kunthiana), which blooms once every 12 years. Other significant plant species include the teak tree (Tectona grandis) and various species of orchids and ferns. Wildlife in these jungles is equally diverse. The Western Ghats, for example, are home to the endangered lion-tailed macaque (Macaca silenus) and the Malabar giant squirrel (Ratufa indica). The northeastern jungles support species like the one-horned rhinoceros (Rhinoceros unicornis) in Kaziranga National Park and the elusive clouded leopard (Neofelis nebulosa).

29. **Economic Resources and Effect on Tribes Living Near Forests.** Forests are rich in economic resources, providing various benefits to both local communities and the broader economy. These have implications for tribes living near forests.

30. **Economic Resources in Forests**

a) **Timber and Non-Timber Products**.

b) **Timber**. Used for construction, furniture, and paper products.

c) **Non-timber products**. Include resin, nuts, fruits, medicinal plants, and mushrooms.

d) **Biodiversity**. Forests are home to diverse species, offering opportunities for bioprospecting and ecotourism.

e) **Medicinal Plants**. Many tribes have traditional knowledge of medicinal plants, which can be used for health care or commercial products.

f) **Wildlife**. Traditionally, tribes depended on hunting and fishing for food and income, however hunting now is restricted by law. Wildlife tourism can also attract visitors.

g) **Water Resources.**: Forests help in water purification and watershed management, essential for agriculture and drinking water.

h) **Ecosystem Services**. Forests regulate climate, prevent soil erosion, and contribute to carbon sequestration, which has economic value in carbon credit markets.

31. **Impact on Tribes Living Near Forests**

a) **Sustenance**. Many tribes depend on forest resources for their livelihoods, including food, shelter, and materials for crafts.

b) **Cultural Significance**. Forests often hold spiritual and cultural significance for indigenous tribes, influencing their practices and identity.

c) **Economic Opportunities**. Sustainable harvesting of forest resources can provide income while preserving ecosystems.

d) **Land Rights and Governance**. Tribes may face challenges regarding land rights, especially with encroachment from agriculture, logging, or mining.

e) **Conservation and Sustainability**. Tribes often play a crucial role in conservation efforts, using traditional knowledge to manage resources sustainably.

f) **Access to Markets**. Improved access to markets can enhance income from forest products but may require support for fair trade practices.

Environmental Challenges and Conservation

32. Deforestation and Habitat Loss

a) **Causes**. Urbanization, agriculture, logging, and infrastructure development contribute to deforestation. As forests are cleared, wildlife habitats shrink, and biodiversity is threatened.

b) **Impact**: Loss of forest cover affects the availability of traditional resources, such as food, medicine, and raw materials for shelter, directly impacting tribal livelihoods.

33. Climate Change

a) **Effects**. Changes in temperature and rainfall patterns can disrupt traditional agricultural practices and alter the ecosystems tribes depend on.

b) **Vulnerability**. Many tribes lack the resources to adapt to changing climatic conditions, leading to increased food insecurity and displacement.

34. Land Rights and Encroachment

a) **Challenges**: Many tribal communities face challenges in asserting their land rights against encroachment by industries, agriculture, and urban development.

b) **Consequences**: Loss of land not only affects their livelihood but also undermines their cultural identity and traditional practices tied to the land.

35. Pollution and Environmental Degradation

a) **Sources**. Industrial activities, mining, and agricultural runoff can lead to soil, water, and air pollution.

b) **Health Impact**. Pollution can harm the health of tribal communities, causing respiratory issues, skin diseases, and other health problems due to exposure to toxins.

36. Human-Wildlife Conflict

a) **Incidents**. As forests are encroached upon, wildlife may venture into agricultural areas, leading to conflicts. This includes crop damage and threats to livestock.

b) **Cultural Impact**. Such conflicts can foster fear and resentment towards wildlife, which is often an integral part of tribal culture and mythology.

37. Access to Resources

a) **Depletion**. Overexploitation of forest resources (like timber, fuelwood, and nontimber forest products) due to commercial interests can diminish availability for tribes.

b) **Dependency**. Many tribes depend on these resources for their daily needs, and depletion can lead to economic hardships and increased poverty.

38. Cultural Erosion

a) **Influence of Modernization**. Increased interaction with outside cultures can lead to the erosion of traditional practices, languages, and lifestyles.

b) **Loss of Identity**. As tribes adapt to modern ways, they may lose essential aspects of their cultural identity and heritage.

39. Social Marginalization

a) **Access to Services**. Tribal communities often lack access to essential services such as healthcare, education, and infrastructure, exacerbating their vulnerability.

b) **Representation**. Marginalization in political and decision-making processes can lead to inadequate attention to their rights and needs regarding forest management.

CONCLUSION

40. India's diverse terrain — deserts, mountains and jungles, each present unique challenges and opportunities for adaptation. The Thar Desert's arid expanses, the Himalayas' towering peaks, and the lush rainforests of the Western Ghats and northeastern regions illustrate the country's ecological richness. Human adaptation to these environments has led to the development of distinct cultural practices and lifestyles, highlighting the resilience and ingenuity of India's diverse populations.

SUMMARY

- **India's Diverse Terrain.** India has varied terrains including deserts, mountains, and forests, each with distinct climates and ecosystems.
- **Desert Terrain.** The Thar Desert, spanning northwestern India, is characterized by extreme temperatures, low rainfall, and arid conditions.
- **Types of Deserts.** Deserts are classified into hot deserts (e.g., Thar Desert) and cold deserts (e.g., Ladakh), each with unique climatic features and vegetation.
- **Flora and Fauna in Deserts.** Deserts support drought-resistant plants like cacti and acacia. Animals such as camels, desert foxes, and reptiles have adapted to the harsh, dry environment.
- **Mountain Terrain**. India's mountains, including the Himalayas, Western Ghats, and Aravallis, are vital for biodiversity, climate, and cultural significance.
- **Flora and Fauna in Mountains.** The mountains host a rich variety of species, such as snow leopards, red pandas, and high-altitude plants like rhododendrons.
- **Strategic Importance of the Himalayas.** The Himalayas act as a natural border, provide key resources, and influence climate patterns, affecting agriculture and water systems.
- **Forest Terrain in India.** India's forests include tropical evergreen, deciduous, and mangrove forests, which are home to rich biodiversity and provide resources like timber and medicinal plants.
- **Challenges to Forests.** Deforestation, climate change, land encroachment, and human-wildlife conflict threaten forests, impacting both ecosystems and local tribes.
- **Human Adaptation and Culture.** Indigenous tribes in desert, mountain, and forest areas have developed unique cultural practices and lifestyles to adapt to their environments, though they face challenges like land rights issues and environmental degradation.

ASSESSMENT EXERCISE

Multiple Choice Questions

Q1. Which of the following states in India is predominantly covered by desert terrain?

a) Rajasthan

b) Himachal Pradesh

c) Kerala

d) West Bengal

Q2. What is the primary reason for the sparse population in the Thar Desert?

a) High altitude

b) Lack of water

c) Extreme cold

d) High humidity

Q3. Which mountain range in India is known for its unique biodiversity and is a UNESCO World Heritage Site?

a) Aravalli Range

b) Western Ghats

c) Himalayan Range

d) Vindhya Range

Q4. In which region of India would you find the largest expanse of tropical rainforest?

a) Sikkim

b) Maharashtra

c) Andaman and Nicobar Islands

d) Punjab

Q5. What adaptation do desert plants like cacti have to survive in arid conditions?

a) Large leaves

b) Thick bark

c) Water-storing tissues

d) Shallow roots

Q6. Which of the following animals is most commonly associated with jungle terrain in India?

a) Camel

b) Snow Leopard

c) Bengal Tiger

d) Desert Fox

Q7. The region known as 'The Roof of the World' refers to which mountain range in India?

a) Western Ghats

b) Himalayas

c) Eastern Ghats

d) Karakoram Range

Q8. Which desert is known for having the highest salt concentration in its soil?

a) Great Rann of Kutch

b) Thar Desert

c) Kutch Desert

d) Nubra Valley

Q9. Which ecosystem is characterized by high rainfall, dense canopy, and a diverse range of flora and fauna?

a) Desert

b) Mountain

c) Jungle

d) Grassland

Q10. What is a significant challenge faced by communities living in mountainous regions of India?

a) Urbanization

b) Soil erosion

c) Overpopulation

d) Deforestation

Q11. Which of the following is a characteristic of desert terrain in India?

a) High rainfall and lush vegetation

b) Extreme temperature variations and minimal rainfall

c) Dense forests and humid climate

d) Cool temperatures and frequent snowfall

Q12. The Thar Desert is located primarily in which region of India?

a) Eastern India

b) Northern India

c) Northwestern India

d) Southern India

Q13. Which mountain range is home to the highest peaks in India and plays a key strategic role for the country?

a) Western Ghats

b) Vindhya Range

c) Himalayas

d) Aravalli Range

Q14. What is the main feature of the flora found in India's desert terrain?

a) Dense trees and shrubs

b) Drought-resistant plants like cacti and acacia

c) Tall grasslands and wildflowers

d) Evergreen trees and tropical plants

Q15. What major environmental challenge affects forests and jungles in India?

a) Heavy rainfall

b) Deforestation and habitat loss

c) Over-farming

d) Glacial melting

Short Answer Questions

Q1. What are the two main types of deserts, and how do they differ?

Q2. Describe one adaptation of flora found in desert environments.

Q3. What is the significance of the Himalayas in terms of biodiversity?

Q3. How do forests contribute to the livelihoods of tribal communities in India?

Q4. What are some major environmental challenges facing India's forest ecosystems?

Long Answer Type Questions

Q1. Discuss the characteristics and ecological significance of the Thar Desert.

Q2. Analyze the impact of climate on the biodiversity of the Himalayas.

Q3. Explain the role of forest ecosystems in sustaining tribal communities in India.

Q4. What are the challenges posed by climate change to India’s mountainous regions?

Q5. Describe the various types of forests in India and their ecological roles.

LIVING WITH NATURE (SD/SW)

CHAPTER II :SURVIVAL IN DESERT, MOUNTAIN, JUNGLES, PRACTICAL SURVIVAL SKILLS AND ACCLIMATISATION

"'Survival can be summed up in three words - Never Give Up."

TEACHING INSTRUCTIONS:

Periods	:	**02 (Two)**
Type	:	**Lecture, Discussion and Practicals**
Year	:	**2nd Year SD/SW**
Conducting Officer	:	**ANO/ CTO/PI Staff.**
Training Aids	:	**Class Room, Outdoor, OHP, Chalk/Markers, Laser**
Time-plan		
• Introduction	:	03 mins
• Part I	:	13 mins
• Part II	:	11 mins
• Part III	:	13 mins
• Part IV	:	20 mins
• Part V	:	10 mins
• Conclusion, Summary and Practice	:	10 mins

INTRODUCTION

1. Deserts are defined by their extreme conditions, characterized by minimal rainfall, significant temperature variations, and often harsh terrain. Surviving in such an environment requires specialized knowledge and skills. Surviving in a jungle environment requires a unique set of skills and knowledge due to the dense vegetation, diverse wildlife, and unpredictable weather conditions. Mountains present unique challenges and opportunities for survival due to their rugged terrain, altitude, and rapidly changing weather conditions. Mountains are characterised by higher altitudes, rugged terrain, unpredictable weather with low temperatures, limited resources, and the possibility of isolation. Hypothermia, altitude sickness, High-Altitude Cerebral Edema **(HACE), High-Altitude Pulmonary Edema (HAPE), frost bites, snow blindness,** injuries from falls and navigation are major challenges. Understanding these challenges is crucial for anyone venturing into mountainous areas.

PREVIEW

The lecture will be conducted in following parts:-

(a) Part I : Survival in Deserts

(b) Part II : Survival in Mountains

(c) Part III : Survival in Jungles

(d) Part IV : Practical Survival Skills

(e) Part V : Acclimatisation

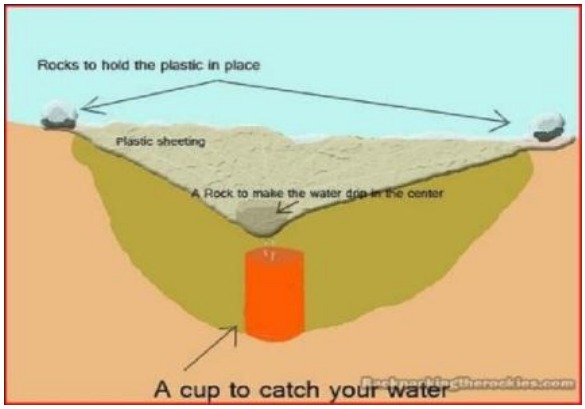
LEARNING OBJECTIVES

- Survival Skills in Desert
- Survival Skills in Mountains
- Survival Skills in Jungles
- Learn Practical Skills
- Acclimatisation Awareness

PART I : SURVIVAL IN DESERTS

2. **Water Management.**

a) **Signs of Water**. Look for vegetation, as green plants often indicate nearby water. Animal tracks can also lead to water sources; follow them.



b) **Dew Collection**: In the early morning, use a cloth to soak up dew from grass or other plants. Wring it into a container.

c) **Water Rationing**. Limit water intake during the hottest parts of the day. Take small sips to stretch your supply.

d) **Body Cooling**. Keep your body temperature down to reduce sweating. Find shade during peak sun hours.

e) **Solar Still**. Dig a pit, place a container at the bottom, and cover it with plastic. Add some green vegetation to enhance moisture collection.

f) **Boiling**. If you have the means, boil any collected water to kill pathogens.

3. **Health and Safety**.

a) **Avoid Flood Zones**. Stay away from low-lying areas that may flood during rare rainstorms.

b) **Wind Protection**. Position your shelter to minimize exposure to wind, especially during cold nights.

c) **Identifying Edibles**. Prickly pear fruits are nutritious; just be careful of spines. Pods of Mesquite trees can be ground into flour.

4. **Temperature Regulations.**

a) **Natural Features**. Utilize rocks, caves, or overhangs for natural shelter. They provide from the extreme heat and scorching sun.

b) **Shade Structures**. Use branches and leaves to create a shaded area. Ensure it's stable.

c) **Insulation**. Use desert vegetation for insulation at night, as temperatures can drop significantly.

d) **Tinder**. Look for dry grasses, leaves, and bark. Gather materials from the ground to avoid excess moisture. This will provide warmth at night.

e) **Heatstroke and dehydration**. Recognise body signs (dizziness, rapid pulse, confusion) and stop immediately to cool down and hydrate.

f) **Wildlife**. Most desert animals avoid humans, but be cautious of venomous snakes and scorpions.

g) **Sandstorms**. Seek shelter or cover your face and mouth with fabric if caught in a storm.

5. **Navigation.**

a) **Sun Position.** The sun rises in the east and sets in the west. During the day, use the sun's position for basic direction.

b) **Stars**. At night, the North Star (Polaris) helps in navigation if you're in the Northern Hemisphere.

c) **Prominent Features**. Identify and remember prominent mountains, rock formations, or other landmarks to navigate effectively.

d) **Compasses and Maps**. If you have them, use a compass to find your direction. Familiarize yourself with basic map reading.

6. **Shelter and Shade.**

a) Utilize rocks, caves, or overhangs for natural shelter. They provide from the extreme heat and scorching sun.

b) Use branches and leaves to create a shaded area.

c) Use desert vegetation for insulation at night, as temperatures can drop significantly.

DO YOU KNOW?	INTERESTING FACTS
➢ The word jungle came from a Sanskrit word, “jaṅgala”. It means “rough and arid. ➢ Crevasses: Crevasses (very deep gorges) are invisible dangers in snowy and icy areas.	➢ Most people envision a desert as a sand-covered, hot, and dry region. However, there are also additional desert types. Any sizable area that receives relatively little rain annually is considered a desert. Desert regions support very few plant or animal species. There are several different definitions to describe a desert, but they are typically areas that receive extremely low amounts of rain. In a year, deserts generally receive less than 16 inches of rain.

PART II : SURVIVAL IN MOUNTAINS

7. **Altitude Adaptation – Acclimatisation**. By definition, acclimatization is the process by which the body gradually adapts to environmental changes, including altitude, temperature, and humidity. Acclimatization helps prevent altitude sickness, heatstroke, dehydration, and other health issues, enhancing performance and safety in extreme environments. The key challenges are as under:

a) **Reduced Oxygen**. As altitude increases, the oxygen level in the air decreases, which can lead to altitude sickness.

b) **Temperature Drops**. Mountains can be much colder, especially as you ascend.

c) **Increased UV Exposure**. Thinner atmosphere at high altitudes leads to stronger ultraviolet rays.

d) **Climb Gradually**. Climb slowly, ideally ascending no more than 300-500 meters (1,000-1,600 feet) per day above 2,500 meters (8,200 feet). Rest after each increase in altitude.

e) **Hydration**. Increased breathing rates at high altitudes can lead to dehydration. Drink plenty of fluids, preferably water, or add electrolytes.

f) **Monitor for Altitude Sickness**. Symptoms include headache, nausea, dizziness, and fatigue. If symptoms occur, stop climbing and descend if necessary. Never ascend with worsening symptoms.

g) **Diet**. Eat light, carbohydrate-rich meals, which are easier to digest at high altitudes.

h) **Rest**. Allow your body time to adjust by resting periodically during ascents and avoiding strenuous activity until fully acclimatized.

8. **Weather Preparedness.**

a) **Keep Warm**. Collect dry wood, even if wet on the surface, dry it near your body before use. Know how to start a fire with minimal resources (flint and steel, matches, lighters, or even friction methods). Use snow as insulation when necessary (e.g., digging a snow cave).

b) **Clothing.** Layering is essential (base layer for moisture control, insulating layer for warmth, and outer shell for wind and water protection).Keep head, hands, and feet covered to minimize heat loss.

9. **Shelter and Warmth**.

a) **Emergency Shelters**. Use materials available in the environment, such as branches, leaves, and snow (for igloos).

b) **Natural Shelters**. Caves or overhangs can provide immediate protection from the elements.

10. **Food and Navigation**.

a) **Natural Water Sources**. Look for streams, rivers, and lakes, often found in valleys or lower elevations.

b) **Snow and Ice**. Melting snow and ice can provide drinking water; ensure to purify it before consumption.

c) **Protein Sources**. Look for insects, small animals, and fish. Bugs are a great source of protein and can often be found under logs or rocks.

d) **Reading Maps**. Understand topographic maps, including contour lines and elevation markers.

e) **Using a Compass**. Learn to take bearings and follow azimuths to navigate through challenging terrain.

f) **Landmarks**. Identify and use prominent natural features for navigation.

g) **Sun and Stars**. Use the sun's position and constellations to determine direction.

11. **Health Issues in High Altitude Areas**.

a) **Altitude Sickness**. Recognize symptoms (headache, nausea) and descend if necessary.

b) **Cuts and Scrapes**. Clean wounds with purified water and cover with available materials.

(c) **Hypothermia Signs**. Shivering, confusion, and slurred speech. Warm the person gradually.

(d) **Frostbite Treatment**. Warm affected areas slowly; avoid direct heat sources.

(e) **High-altitude cerebral edema (HACE), High-altitude pulmonary oedema (HAPE)**

12. **Type of Clothing**. Layering is essential preferably with three layers of clothing (base layer for moisture control, insulating layer for warmth, and outer shell for wind and water protection).Keep head, hands, and feet covered to minimize heat loss.

PART III : SURVIVAL IN JUNGLES

13. **Water Management.**

a) **Boiling.** Boil water for at least five minutes, then let it rest for another five minutes. Boiling is one of the most efficient and safest ways to purify water. It kills most bacteria, viruses, and parasites. However, boiling water contaminated with dirt or leaves can introduce particulates into the water.

b) **Filtering.** Use a cloth, like a bag or t-shirt, to filter the water. You can also add sand, stones, or charcoal to remove larger sediment.

c) **Collect Rain Water.** Rainwater is generally pure and safe to drink, as long as it's not from a region with heavy industry. You can collect rainwater using a wide, flat object like a tarp, plant leaves, or your clothing.

d) **Distillation.** Heat the water to create vapour, then collect the vapour in another chamber and let it condense into pure water. Contaminants are left behind in the first chamber as sediments.

e) **Finding Water.** Look for streams, rivers, or low-lying areas. Use plants like bamboo to collect rainwater.

14. **Protection from Snakes and Insects**.

a) **Avoidance**. Many animals avoid humans. Make noise while moving to avoid surprising them.

b) **Safety Tips**. Wear boots and watch where you step. Use clothing and nets to protect against bites.

15. **Navigation**

a) **Natural Indicators**. Use the position of the sun and stars. Moss tends to grow on the north side of trees in the Northern Hemisphere.

b) **Creating a Compass**. If you have a needle, you can magnetize it by stroking it with a magnet and floating it on water to create a makeshift compass.

16. **Health Issues Which Can Be Faced**. There are several health issues that can occur in the jungle, including tropical diseases, which are infections that can be acquired in hot and humid areas:-

a) **Malaria**. A serious, parasite-borne disease transmitted by mosquitoes. It is found in many countries, including Central and South America, sub-Saharan Africa, and South Asia.

b) **Dengue**. A mosquito-borne disease that is increasingly prevalent in tropical and subtropical countries.

c) **Diarrhoea**. Caused by rotavirus & other bacterias, protozoa. This disease mainly affects young children.

d) **Yellow Fever**. Transmitted from a mammalian host, usually a monkey, to humans via forest-living mosquitoes.

PART IV : PRACTICAL SKILLS TO ADAPT IN VARIOUS TERRAINS

17. The practical knowledge about survival techniques in various terrains and the stages and conduct of acclimatisation in High Altitude Areas and not only important and relevant but are actually “live- saving skills” which every cadet must endeavour to adopt and learn.

18. **Starting a Fire with a Hand Drill**. We are going to learn how to start a fire using the hand drill method. This technique requires only natural materials and some practice, but it's a valuable skill for survival situations.

19. **Materials Needed**

a) **Fire Board.** A flat piece of dry wood (softwood like cedar or pine works well).

b) **Spindle.** A straight, dry stick about 1-2 feet long and about the thickness of a pencil (softwood is preferred).

c) **Tinder.** Dry, fine materials that easily ignite, such as dried grass, leaves, or bark.

d) **Bow (Optional).** A bent stick with a cord (paracord or string) for easier spinning of the spindle.

e) **Socket (Optional):** A small piece of wood or stone to hold the spindle in place and reduce friction on your hand.

Step 1: Prepare Your Materials

a) First, we need to prepare our fire board. Make a small notch on the edge of the board, about 1/4 of the way in. This will collect the ember as we drill.

b) Next, gather your tinder and prepare a small nest or bundle where you'll place the ember once we create it.

Step 2: Position the Fire Board. Place the fire board on a stable surface, ideally on the ground. Ensure that it's dry and free of moisture. If possible, place it on a slight incline to help with ember collection.

Step 3: Prepare the Spindle. Take your spindle and place one end into the notch on the fire board. This end will be the point of friction where we'll generate heat.

Step 4: Starting the Drill

a) If you have a bow, wrap the cord around the spindle and hold it tightly. If not, simply use your hands. Place your non-dominant hand on top of the spindle to apply pressure while you rotate it.

b) Begin spinning the spindle back and forth vigorously. If you're using a bow, use a smooth, consistent motion to pull the bowstring. Make sure to keep the spindle vertical.

Step 5: Generating Friction. Keep the spindle moving. The goal is to create enough friction to generate heat. After a minute or so, you should see some dark powder forming at the notch, which is a good sign.

Step 6: Collecting the Ember

a) Continue drilling until you see smoke rising. This indicates that you're getting close! Once you see smoke, keep applying pressure and spinning until you create a small ember.

b) Carefully remove the spindle from the fire board, and gently knock off the powder into your tinder bundle.

Step 7: Igniting the Tinder

a) Now, take the ember from the fire board and place it into your prepared tinder nest. Gently blow on it to encourage it to ignite.

b) As the tinder catches fire, gradually add small sticks and twigs to build your fire, ensuring that you maintain airflow.

20. **Starting a Fire with a Magnifying Glass**

Step 1: Prepare Your Tinder. First, gather your tinder. It's important that this material is completely dry, as it will help catch the spark. Create a small nest or bundle with your tinder, making sure it's fluffy to allow for airflow.

Step 2: Find a Good Spot. Choose a location with direct sunlight. Make sure there are no obstructions blocking the sun's rays, such as trees or buildings. The brighter the sunlight, the better.

Step 3: Position the Magnifying Glass. Hold the magnifying glass over your tinder, about 6 to 12 inches above it. Angle the lens until you find the focal point—the spot where the sunlight is most concentrated and creates the smallest, brightest dot.

Step 4: Focusing the Sunlight. Adjust the distance between the magnifying glass and the tinder until you see a small, bright point of light. This is where the sunlight is focused, and it will generate heat.

Step 5: Ignite the Tinder

a) Keep the magnifying glass steady, and hold it in place for about 20 to 30 seconds. Watch for smoke; this means you're close to ignition. If the tinder doesn't ignite right away, adjust the position slightly and continue to focus the sunlight.

b) Once you see smoke, you may notice a small ember forming. Be patient; it may take a moment for the tinder to catch fire.

Step 6: Encouraging the Flame

a) Once the ember forms, gently blow on it to encourage it to ignite. Be careful not to blow too hard, as this can extinguish the ember.

b) As the tinder ignites, start adding small kindling to build your fire. Gradually add larger sticks and logs as the flames grow.

21. **Solar Still.** A solar still is an effective method for obtaining clean water from contaminated or salty sources using the sun's heat. Here's a step-by-step guide on how to construct and use a solar still:

Step-by-Step Guide to Using a Solar Still

Materials Needed

a) **Container**. A shallow bowl or pan to collect the water.

b) **Plastic Sheet**, A clear plastic sheet or plastic wrap.

c) **Weight** : A small stone or weight to hold the plastic sheet down.

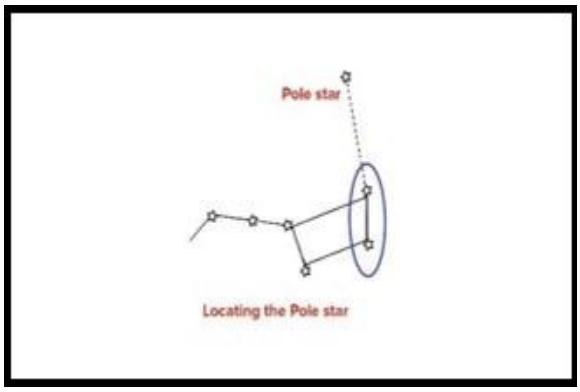
d) **Sunlight :** A sunny location with direct sunlight.

Step1. Choose a Location : Find a sunny spot where the still will receive maximum sunlight throughout the day. A flat, level area works best.

Step 2. Prepare the Container : Place the shallow container (bowl or pan) in the center of the location. This container will collect the distilled water.

Step 3. Add Water Source : Pour contaminated or salty water into the container, but do not fill it to the top. Leave some space to avoid overflow when condensation occurs.

Step 4. Cover with Plastic Sheet : Place the clear plastic sheet over the container. Make sure it is sealed tightly around the edges to prevent moisture from escaping. The plastic should be elevated slightly in the center (you can create a small peak) to allow water droplets to form and drip into the container.



Step 5. Add a Weight : Place a small stone or weight in the center of the plastic sheet. This will create a dip that encourages condensation to form and collect in the container.

Step 6. Let the Sun Work : Leave the solar still in place under the sun for several hours. As the sun heats the water, it will evaporate, condense on the underside of the plastic sheet, and drip into the container as distilled water.

Step 7. Collect the Water

a) After several hours (or a full day), check the container for water. Carefully remove the plastic sheet, being cautious of any remaining water or condensation. The collected water should be clean and safe to drink.

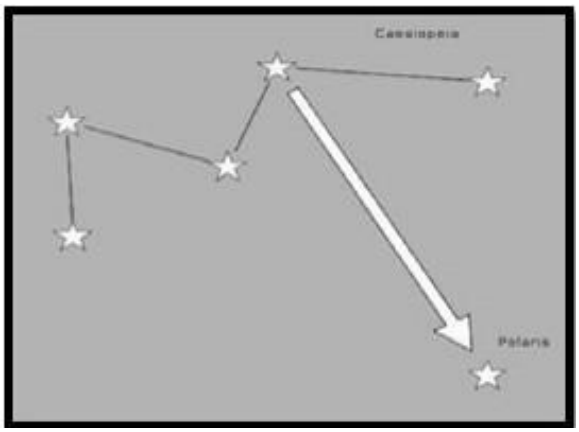
b) **Optimal Conditions.** The hotter and sunnier the day, the more effective the still will be, so check conditions beforehand.

By following these steps, you can successfully create and use a solar still to obtain clean drinking water**.**

22. **Finding Polaris, the North Star, using the Ursa Major Constellation**

Step-by-Step Guide to Finding Polaris

Step1. Locate the Ursa Major - Look for the familiar shape of Ursa Major in the night sky. The most recognizable part is the Big Dipper, which consists of seven bright stars forming a ladle shape.



Step 2. Identify the 'Pointer Stars'. The two stars at the end of the Big Dipper's bowl are known as the Pointer Stars: Dubhe and Merak. These stars form a line that leads toward Polaris.

Step 3. Draw an Imaginary Line. Imagine a straight line connecting Dubhe and Merak. Extend this line outwards from the bowl of the Dipper.

Step 4. Measure the Distance. The distance between the two Pointer Stars is about five times from Merak to Dubhe along this line. Extend it in the same direction until you see a bright star.

Step 5. Find Polaris. After extending the line about five times the distance between Dubhe and Merak, you will arrive at Polaris. It is located at the end of the handle of the Little Dipper (Ursa Minor).

Step 6. Confirm Polaris.Polaris is not only bright but also unique because it remains nearly stationary in the night sky, marking true north.

23. **Step-by-Step Guide to Finding North Using Cassiopeia**

Step1. Locate Cassiopeia. Cassiopeia is easily recognized by its distinctive 'W' shape, formed by five bright stars. It is situated in the northern sky.

Step 2. Identify the 'W' Shape. Look for the 'W' or 'M' shape depending on its orientation in the sky. The three middle stars form the peaks of the 'W'.

Step 3. Find the North Star (Polaris)

a) To find North, extend an imaginary line from the two outer stars of the 'W' (the stars at the ends of the 'W', named **Caph** and **Schedar**).

b) Draw a straight line extending from these stars in a straight line toward the horizon.

Step 4. Measure the Angle Opposite Cassiopeia is roughly the North Star (Polaris). To approximate North, locate the point in the sky directly above the midpoint between Caph and Schedar, and then draw a line toward the horizon.

Step 5. Confirming North - Once you've identified the general direction using Cassiopeia, you can check against other constellations or landmarks. Polaris, which is part of the Little Dipper, will be a bright star close to the line you've drawn.

PART V : ACCLIMATISATION

24. **Acclimatisation Is Crucial**. Acclimatisation is an inescapable requirement, especially in High Altitude Areas to ensure health and safety of personnel and for smooth adaption with High Altitude Weather since it helps the body in adjusting to extreme low temperatures, low oxygen level and avoid altitude sickness .Taking medical clearance for every ascent is very important.

25. **Need for Acclimatisation in Different Altitude**. In consideration of the need to prevent/reduce the occurrence/severity of acute High Altitude Illness (HAI) and the existing topographical, logistic and operational constraints we practice a staged ascent schedule to High Altitude Area (HAA). This is referred to as the “acclimatization schedule” However, ”staging schedule” is a better term since acclimatization carries on for weeks after arrival at HAA. The value of the Staged Ascent schedule employed by the Indian Army has been proven over more than 3 decades of use with lower than internationally reported figures for incidence of serious acute HAI i.e. HAPE (High-altitude pulmonary edema**)** and HACE (High-altitude cerebral edema).

26. **Process of Acclimatisation**. The staged ascent schedule as per AO 110/80 is as follows:

Stage 1. This is applicable to individuals arriving at heights between 2700m to 3600m (9000 feet-12000 feet). The staging period is 6 days as under:

a) First and Second day: Rest, except for short walks in the unit lines only, not Involving any climbs.

b) Third and Fourth day: Walk at slow pace for 1.5 to 3 km. Avoid steep climbs.

c) Fifth and Sixth day: Walk up to 5 km and climb upto 300mtrs at a slow pace.

Stage 2. On ascent to altitudes above 3600 m and upto 4500 m (12000 feet-15000 feet) after completion of Stage 1. This is carried out for 4 days as under:

a) First and second days : Slow alk for a distance of 1.5 to 3 km. Avoid steep climbs

b) Third day: Slow walk and climb upto 300mtrs.

c) Fourth day. Climb 300 m without equipment.

Stage 3: On further ascent to altitudes above 4500 m (15000 feet) after completing stages 1 & 2 of ascent protocol. This also lasts for 4 days and is on the same lines as second stage.

27. **Re-entry to HAA**. AO 110/80 also lays down the entry schedule for soldiers returning from the plains after 10 days absence but less than 28 days absence from HAA as follows:

a) First and second day: Rest, except short walk.

b) Third day: Walk at slow pace for 1 to 2 km. Avoid steep climb.

c) Fourth day: Walk for 1 to 2 km, climb up to 300 m

28. This schedule is to be followed at every stage of ascent i.e. 2700-3600m (9000 feet-12000 feet), 3600-4500m (12000 feet-15000 feet) and higher than 4500m (15000 feet). If the individual has been in the plains for 4 weeks then the entire entry schedule must be repeated as for a fresh entry.

29. Considerable inter-individual variability exists in the response to arrival and subsequent ascent at HAA. Thus, the above schedule does not prevent acute HAI totally but it reduces the incidence and severity of these maladies significantly. Adherence to this schedule does NOT imply:

a) Return of exercise capacity to sea-level normal at the end of any stage or during any time at stay in HAA.
b) Absence of the likelihood of acute HAI if precipitating factors such as large subsequent ascent, unusual exertion or concurrent illness develop.

30. **Health Issues in High Altitude Areas**.

a) **Altitude Sickness**: Recognize symptoms (headache, nausea) and descend if necessary.

b) **Cuts and Scrapes**: Clean wounds with purified water and cover with available materials.

c) **Hypothermia Signs**: Shivering, confusion, and slurred speech. Warm the person gradually.

d) **Frostbite Treatment**: Warm affected areas slowly; avoid direct heat sources.

e) **High-altitude cerebral edema (HACE), High-altitude pulmonary edema (HAPE).**

f) **Pulmonary Issues (Lungs Related) & Sickle Cell Anaemia** are not recommended for camps in High Altitude Areas. Bronchial Asthma cases are at High Risk.

CONCLUSION

31. Surviving in the desert is a test of knowledge, adaptability, and resilience. Understanding the environment, finding water and food, and maintaining mental fortitude are essential. Preparation, practice, and a proactive mindset are key to thriving in this challenging landscape. Survival in a jungle requires adaptability, knowledge of the environment, and a range of practical skills. Preparation, practice, and mental fortitude are key to thriving in the wild. Surviving in mountainous environments demands a unique skill set, awareness of the natural world, and the ability to adapt to changing conditions. Preparation, knowledge, and mental resilience are key components to thriving in this challenging terrain. Knowledge of practical survival skills is a prerequisite for a leader coupled with the awareness of safety measures and stages of acclimatisation.

SUMMARY

- Deserts are characterized by extreme heat, cold nights, minimal rainfall, and rough terrain. Surviving in this environment requires specialized knowledge in water sourcing, shelter, and food foraging.
- Finding water involves identifying signs like vegetation or animal tracks, collecting dew in the morning, and using solar stills or boiling water for purification. Water should be conserved by rationing and keeping cool.
- Shelters can be created using natural features like rocks or caves, or by building shade structures with desert vegetation. Insulation is crucial to handle the temperature fluctuations.
- Edible desert plants, such as prickly pears and mesquite pods, provide carbohydrates, while insects and small animals can be sources of protein.
- Tinder (dry grasses, leaves) and kindling are needed for fire. Methods include friction (bow drill), flint and steel, or magnifying glasses using sunlight to ignite tinder.
- The jungle presents challenges like dense vegetation, diverse wildlife, and unpredictable weather. Survival depends on shelter-building, food foraging, water purification, and navigation skills.
- Shelters should be built from materials like leaves, vines, and branches, ensuring protection from rain, insects, and falling branches. Lean-to and A-frame shelters are popular designs.
- Water can be sourced from streams, rivers, and plants like bamboo for rainwater collection. Common edible plants include bananas and cattails, while protein can be found in insects, small animals, and fish.
- Use natural indicators like the sun, stars, and moss growth to navigate. A makeshift compass can be created using a magnetized needle and water.
- Mountains require skills for navigating rugged terrain, finding water from streams or melting snow, and managing cold temperatures. Acclimatization to altitude is essential to prevent altitude sickness, and layering clothing is necessary for warmth and protection

ASSESSMENT EXERCISE

Multiple Choice Questions

Q1. What is the primary characteristic of a desert?

a) High rainfall
b) Extreme temperature variations
c) Dense vegetation
d) Abundant wildlife

Q2. Which method is effective for finding water in a desert?

a) Digging deep holes
b) Following animal tracks
c) Looking for large bodies of water
d) Collecting rainwater

Q3. What type of shelter is recommended in jungle survival?

a) Igloo
b) Lean-to
c) Cave
d) Tent

Q4. In jungle environments, which plant is commonly edible?

a) Cactus
b) Bamboo
c) Pine
d) Oak

Q5. What is a key consideration when building a shelter in a desert?

a) Wind protection
b) Aesthetics
c) Proximity to other shelters
d) Elevation

Q6. Which of the following is NOT a method of purifying water in deserts?

a) Boiling
b) Solar still
c) Using sand and charcoal
d) Adding salt

Q7. What is a common sign of altitude sickness?

a) Increased appetite
b) Nausea

c) Increased energy

d) Clear vision

Q8. Which survival skill is critical in mountainous terrain?

a) Building rafts

b) Navigating using stars and sun

c) Swimming

d) Cooking over an open fire

Q9. What should you do if you experience symptoms of heatstroke in a desert?

a) Continue walking

b) Hydrate and seek shade

c) Build a fire

d) Find food

Q10. In jungle survival, what is the best way to protect yourself from insects?

a) Wear bright colors

b) Use nets and long clothing

c) Stay completely still

d) Avoid all plants

Q11. Which of the following is the best indicator to find water in a desert environment?

a) High cliffs

b) Animal tracks

c) Large rock formations

d) Dry soil

Q12. What is the most common method of purifying water in the desert if you have limited resources?

a) Boiling the water

b) Using a solar still

c) Filtration through cloth

d) Using a chemical purifier

Q13. Which of the following plants can be consumed for both carbohydrates and protein in the desert?

a) Cactus (Prickly pear)

b) Bamboo

c) Banana

d) Pineapple

Q14. What is the key strategy for acclimatization when ascending to high altitudes in mountains?

a) Drink less water to prevent dehydration

b) Ascend quickly to avoid altitude sickness

c) Gradually increase your altitude by no more than 300-500 meters per day

d) Keep active and avoid resting

Q15. In a jungle environment, which of the following is the best method for starting a fire?

a) Rubbing sticks together without tools

b) Using flint and steel or a ferro rod

c) Focusing sunlight using a magnifying glass

d) Boiling water to generate steam

Short Answer Questions

Q1. What are two key survival skills needed in desert terrain?

Q2. How can you identify edible plants in the jungle?

Q3. What is the importance of acclimatization in mountainous regions?

Q4. Name one method to purify water in the jungle.

Q5. What should be prioritized when building a shelter in a jungle?

Long Answer Questions

Q1. Describe the challenges faced when trying to survive in a desert environment and the strategies that can be employed to overcome them.

Q2. Explain the essential skills required for survival in a jungle environment and how they differ from those in desert or mountain terrains.

Q3. Discuss the health risks associated with high altitudes and the methods for preventing and treating altitude sickness.

Q4. Describe the process of building a shelter in a mountainous environment and the considerations that must be taken into account.

Q5. Compare and contrast the survival strategies in deserts, jungles, and mountains, highlighting the unique challenges of each terrain.

MILITARY HISTORY

7

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MH I (SD/SW)

CHAPTER I : INDIA-PAKISTAN WAR, 1947-48

TEACHING INSTRUCTIONS

Period(s) : **01**

Type : **Lecture**

Year : **SD/SW (First Year)**

Training Aids : **Classroom, computer with OHP, screen, pointer staff, presentation or videos, script or book flagged or lesson plan in file, and chart / poster.**

Time-plan:

- Introduction : 2 mins
- Part I : Historical Background : 6 mins.
- Part II : Prelude and Cause : 6 mins.
- Part III : Key Battles and Operations : 20 mins
- Part IV : Outcomes and Aftermath : 6 mins

INTRODUCTION

1. The partition of British India and the emergence of India and Pakistan as independent nations on the world map on 15 August 1947 marked the end of British colonialism in the Indian subcontinent. However princely states under British paramountancey were given the choice to join either of these newly independent nation-states or remain independent. Maharaja Hari Singh, the ruler of Jammu and Kashmir, wanted independence for Jammu and Kashmir. However, the political leadership of Pakistan was eyeing the princely state of Jammu and Kashmir due to its peculiar demography. Pakistan army supported and instigated rebellion in Jammu and Kashmir. On 22 October 1947, tribal militia, actively supported and guided by Pakistani army, launched a full-fledged attack on the princely state. Maharaja Hari Singh asked for India's help and agreed to sign the instrument of accession with India on 26 October 1947. Next day, Indian troops troops landed at Srinagar after accession to India. During the course of ousting the invaders, Indian troops conducted operations in areas like Srinagar, Poonch, Badgam, Naushera, and Leh. The war lasted from 22 October 1947 to 1 January 1949, ending with a UN-brokered ceasefire. It left a third of Jammu and Kashmir under Pakistani control and shaped future relations between the two countries.

OVERVIEW

(a) Introduction

(b) Part I : Historical Background

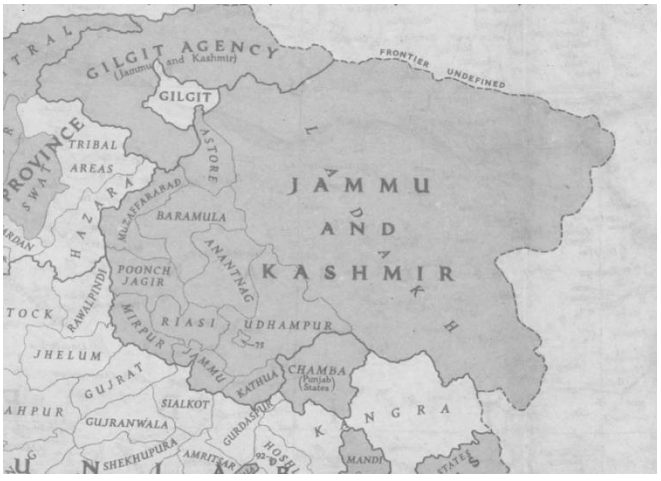
(c) Part II : Prelude and Cause

(d) Part III : Key Battles and Operations

(e) Part IV : Outcomes and Aftermath

LEARNING OBJECTIVES

- To understand the conflict's background, prelude, and cause(s).
- To appreciate the response of the Indian armed forces to the sudden outbreak of a conflict that was critical for India's national integrity.
- To know about the conflict's key battles and heroic figures.



A British map of Jammu and Kashmir and its environment from 1946.

GEOGRAPHY

In 1947, the princely state of Jammu and Kashmir had a land area of 2,22,236 sq.km. Today, Pakistan and China illegally occupy 78,114 sq.km. and 37,555 sq.km. of this area respectively. Jammu and Kashmir, legally claimed by India entirely, is geopolitically vital owing to its borders with Tibet to the east; China's Xinjiang to the north; Afghanistan to the northwest; and Pakistan to the west. It once formed part of the historic Silk Road, the ancient network of trade routes that connected East Asia to Europe. The region's geographical features include the Karakoram, Greater Himalayan, and Pir Panjal ranges of mountains, and the Indus, Jhelum, Chenab, Ravi, and Sutlej rivers.

PART I : HISTORICAL BACKGROUND

2. British civil servant Sir Cyril Radcliffe, who had never visited India before, took six weeks to partition the eastern and western parts of British India, granting the Muslim-dominated areas to Pakistan. The remaining 565 princely states, which had been under British paramountcy while retaining some autonomy, were given the choice to join India or Pakistan, or stay independent. India's Deputy Prime Minister, Sardar Vallabhbhai Patel, and his Secretary, VP Menon, then led a massive effort to convince the Maharajas and Nawabs to join India.

3. The British idea of giving internal autonomy to India's provinces and princely states was indicated by the Cabinet Mission Plan of 1946. The Mountbatten Plan, named after the last British Viceroy of India Lord Louis Mountbatten, took this a step further by partitioning India and permitting the princely states to decide their future in June 1947. After this announcement, forces inspired by the Muslim League, which had led the demand for Pakistan, began creating disturbances in certain parts of Jammu and Kashmir such as Poonch.

Sardar Patel, Jawaharlal Nehru, and Lord Mountbatten.

DIVISION OF THE BRITISH INDIAN ARMY

The partition necessitated a division of the British Indian Army. By August 1947, the Indian Army comprised of 260,000 troops, while the Pakistan Army got 140,000. The larger Indian share included 18 artillery, 14 cavalry, 11 infantry, and six Gorkha regiments. Senior Generals Robert Lockhart and Frank Messervy were appointed as the Commanders-in-Chief (C-i-C) of the armies of India and Pakistan respectively. Furthermore, Field Marshal Claude Auchinleck, the former C-i-C of the British Indian Army, was elevated to Supreme Commander to oversee both forces, but only at the administrative level.

PART II : PRELUDE AND CAUSE

4. Before becoming independent, Pakistan made a plan to force the Maharaja of Jammu and Kashmir into joining it. In the Pakistan Army's assessment, Kashmir's terrain was suited to guerrilla warfare. Therefore, Prime Minister Liaquat Ali Khan authorized **Operation Gulmarg**, a military plan for inciting rebellion within Jammu and Kashmir and attacking it externally. By September 1947, the Pakistan Army began to recruit and organise a militia of about 4,000 Pashtun tribesmen from the Khyber frontier. This militia then invaded Jammu and Kashmir on 22 October.

Maharaja Hari Singh (left) with Sardar Vallabhbhai Patel in 1948

5. The Jammu and Kashmir State Forces (JKSF) under the Maharaja were under-staffed and under-equipped to deal with such a massive invasion. The invaders quickly overpowered them and took over Muzaffarabad. They burnt and looted the town, ruthlessly killing or enslaving a large part of its residents, before starting their advance towards Srinagar. As the invaders halted on their way to cause similar devastation at Baramulla, Maharaja Hari Singh asked India to intervene militarily. India stated that it could only do so, however, if he signed an instrument of Jammu and Kashmir's accession to India. When the Maharaja did so on 26 October to protect his subjects in Srinagar, India sent its troops.

DELHI EDITION

The Hindustan Times

LARGEST CIRCULATION IN NORTHERN, NORTH-WESTERN AND CENTRAL INDIA

VOL. XXIV. NO. 295 NEW DELHI: TUESDAY, OCTOBER 28, 1947. PRICE TWO ANNAS

KASHMIR ACCEDES TO INDIA

Headlines of a major Indian newspaper from October 1947

Indian troops landing in Jammu and Kashmir after its accession to India

MORE ON PAKISTAN'S ROLE

Although Field Marshal Auchinleck and Lord Mountbatten sought to restrain the conflict, General Messervy and his Pakistan Army backed Operation Gulmarg. The 11 Prince Albert Victor's Own Cavalry (PAVO) facilitated the invasion of Jammu and Kashmir by the Pashtun militia, providing arms, ammunition, and equipment. They transported the invaders and oversaw operations for General Headquarters. PAVO's armoured vehicles participated in key actions, including capturing Mirpur on 24 October. Further, the Gilgit Scouts executed a coup in Gilgit, helping it secede from Jammu and Kashmir to Pakistan.

PART III : KEY BATTLES AND OPERATIONS

Initial Response

6. Though General Lockhart remained unsure, the Jawaharlal Nehru government ordered troops of the Indian Army to be flown to Srinagar swiftly after Jammu and Kashmir's accession to India. On 27 October, three Royal Indian Air Force (RIAF) Douglas Dakotas brought the 1 Sikh Regiment to secure Srinagar airport. A part of the regiment then moved towards Baramulla under Lieutenant Colonel Dewan Ranjit Rai to assist the JKSF troops there. On being outnumbered by the Pashtun invaders, they took a defensive position midway at Pattan. While reinforcements were arriving at Srinagar, Lieutenant Colonel Rai was killed in defence of Pattan. On 29 October, the RIAF's 7 Squadron crippled the enemy convoys in the area.

LIEUTENANT GENERAL KODANDERA M. CARIAPPA

After attending the Royal Military College, Sandhurst, Kodandera M. Cariappa joined the Indian Army in 1920. During the Second World War, he received a mention in dispatches for his service in Iraq, and went on to see action in Iran, Syria, and Burma. A Lieutenant General during the conflict of 1947-48, he set up the Indian Army's Western Command as its General Officer Commanding-in-Chief and oversaw the reorganization of JKSF into the Jammu and Kashmir Corps. In January 1949, Cariappa became the Indian Army's first native C-i-C. He was made a Field Marshal in 1986.

Defence of Badgam

7. Based on new intelligence inputs, the Indian Army's presence in Srinagar rose to about 3,000 troops with the entry of the 161 Brigade by 31 October. Threatened by this, a section of Pashtun invaders turned southwards from Pattan, attempting to penetrate Srinagar via Badgam. Brigadier Lionel Protip Sen, commanding the 161 Brigade, responded by dispatching an offensive team under Major Somnath Sharma. Despite being low in numbers, this team kept fighting the invaders until an RIAF aerial attack forced their retreat. However, Major Sharma, who refused to withdraw, was killed by enemy mortar in Badgam's defence on 3 November.

MAJOR SOMNATH SHARMA

Major Somnath Sharma, an alumnus of the Royal Indian Military College and the Indian Military Academy, was mentioned in the dispatches for his service in Burma during the Second World War. Leading the 4 Kumaon, the 24-year-old Major was killed in action while defending Badgam and posthumously awarded independent India's first Param Vir Chakra. In his bold final message to brigade headquarters, Major Sharma had vowed not to withdraw one inch despite being heavily outnumbered and under tremendous enemy fire.

Battle of Shalateng

8. As another section of the invaders managed to reach the outskirts of Srinagar, they were intercepted at Shalateng by troops of the 1 Sikh and 1 Kumaon. Then, the enemy was also chased from the rear by armoured vehicles of the 7 Cavalry under Lieutenant Noel David. While the invaders made a hasty retreat, they were struck by cannon-fire from RIAF's Supermarine Spitfires and Hawker Tempests, which blew away a large part of the enemy's convoys and pushed the remainder towards Baramulla. The action ensured the long-term security of Srinagar.

Operation Easy and Poonch Link-up

9. Shocked by the massacre and destruction left by the enemy at Baramulla, troops of the 161 Brigade quickly marched about fifty kilometres on foot to reach and secure Uri by 13 November. To prevent a similar scene at Poonch, Brigadier Sen then diverted two battalions from Uri to pierce through the invaders blocking the town, which was a strategically vital point in southwest Jammu and Kashmir. Across the Haji Pir Pass and the Poonch River, Lieutenant Colonel Pritham Singh courageously led his troops to Poonch by November 22.

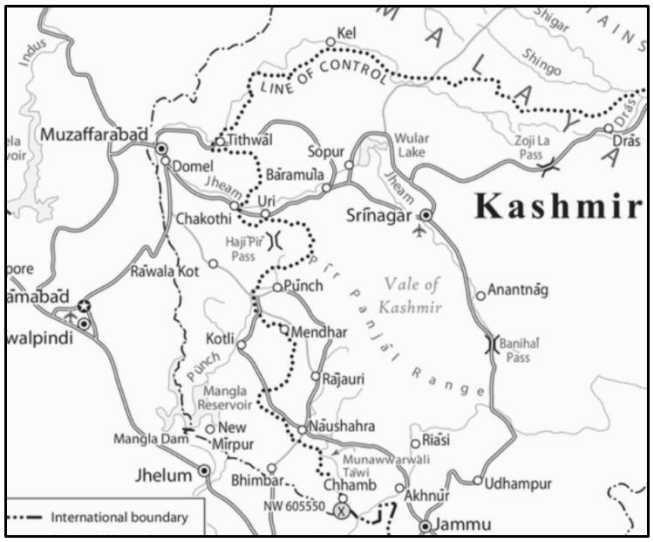
10. Pritham Singh, promoted Brigadier, laid an airstrip there with assistance from locals. The RIAF then began supplying food and arsenal, as also bombing enemy positions and evacuating casualties. Brigadier Pritham's troops collaborated with locals to fortify the area and protect its resources. With rising involvement of the Pakistan Army, the fighting around Poonch did not stop until Brigadier Yadunath Singh's troops pushed through northwards from Jammu and link up with Brigadier Pritham outside Poonch on 21 November 1948 as part of **Operation Easy**.

AIR COMMODORE MEHAR SINGH

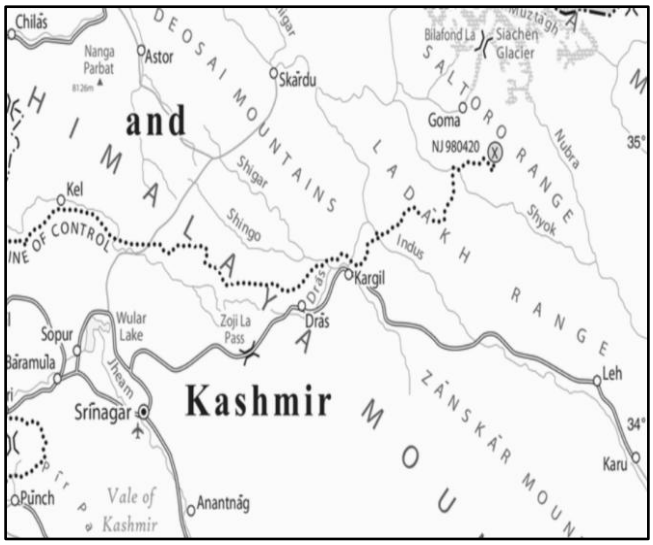
An alumnus of the Royal Air Force College, Cranwell, Mehar Singh joined the RIAF in 1936. On becoming Air Commodore, he was the Air Officer Commanding of the operation group that transported the 1 Sikh into Jammu and Kashmir on 27 October. Supporting the Indian Army's efforts at Poonch, he was the first pilot to land an aircraft at the Poonch Airport to secure it despite lacking landing aid. Air Commodore Mehar also became the first RIAF pilot to achieve a daring landing at Leh. His spearheading role in the conflict earned him a Maha Vir Chakra.

DHOBI RAM CHANDER

Having joined the 14 Field Company Engineers of the Madras Sappers as a civilian *Dhobi* (washerman), Ram Chander was part of a convoy that was blocked on a bridge and ambushed on 18 December 1947 while it was headed toward Jammu. Chandar actively jumped to the aid of his commander Lieutenant FDW Fallon. With Fallon hit by enemy fire while removing the roadblock, Chander took his rifle, returned fire, and moved Fallon to safety. He became the first civilian to receive a Maha Vir Chakra.



[A map highlighting Baramulla, Uri, Poonch, and Naushera](#)



[A map highlighting Leh, Kargil, and Skardu](#)

Operation Vijay

11. Close to Jammu, Pakistan Army sent its artillery to fortify the occupied towns of Jhangar and Naushera by early 1948. The 50 Para Brigade, led by Brigadier Mohammed Usman, had to liberate the towns in order to enable the Poonch Link-up. Despite tough offensives, however, Brigadier Usman's troops were unable to breach enemy fortifications. It was an aerial attack by the RIAF's 7 Squadron that allowed the 50 Para Brigade to advance into Naushera with Brigadier Yadunath's troops and retake Jhangar under Operation Vijay. In the action, Brigadier Usman became the seniormost Indian Army officer to be killed during the entire conflict. He was awarded Maha Vir Chakra posthumously.

The Defence of Ladakh and Operation Bison

12. The coup by Gilgit Scouts in Gilgit provided the Pashtun invaders with a fresh supply of manpower. The strengthened invading force then launched an offensive towards Skardu and Leh in northern Jammu and Kashmir in November 1947. Led by Major Sher Jung Thapa from Leh, a section of the JKSF intercepted the enemy at Skardu, managing to hold them off until February. As the fall of Skardu became unavoidable, the 2 Dogra under Major Prithi Chand braved harsh conditions and rushed to reinforce the remainder of the JKSF troops at Leh via Zoji La.

13. By May, the invaders managed to push the smaller Indian force in defence of Leh on the backfoot. Responding to calls for reinforcements, Air Commodore Mehar Singh made a miraculous landing in Leh on 24 May 1948 and paved the way for the RIAF's 12 Squadron to transport troops of the Gorkha Rifles into the Ladakhi town. The strengthened Indian force at Leh managed to defend Leh until October. However, the attempts to provide relief to Skardu were resisted by the invaders and the town was eventually captured by enemy forces in August.

An IAF Dakota aircraft at Poonch

14. Having taken Zoji La, which linked Srinagar and Leh, the invaders had begun posing serious threat to Leh, prompting the Indian forces to attempt recapturing the crucial mountain pass before winter set in. Following an unsuccessful frontal attack by the 77 Brigade, 19 Infantry Division started Operation Bison. M5 Stuart light tanks of 7 Cavalry were transported from Srinagar to Baltal, while the Madras Sappers cleared the muddy route between Baltal and Zoji La. On 1 November, Major General Kodandera S. Thimayya, the division commander, led a surprise armoured and artillery assault against the invaders to famously retake Zoji La.

Indian soldiers after the recapture of Zoji La; Prime Minister Nehru reviewing Indian troops at Srinagar in May 1948

EXERCISE PEACE

As opposed to Jammu and Kashmir, on India's west coast, the Nawab of the princely state of Junagadh, Muhammad Mahabat Khanji, and his dewan, Shah Nawaz Bhutto, threatened to join Pakistan despite opposition by their people. To prevent violence, independent India's first joint military operation, Exercise Peace, was launched in October 1947. With the Indian Army, RIAF, and Royal Indian Navy headed toward Junagadh, the Nawab fled to Karachi. By February 1948, 91 percent of Junagadh's population voted for accession to India.

PART IV : OUTCOMES AND AFTERMATH

15. With the Kashmir issue beginning to potentially pose a threat to international peace merely three years after the end of the Second World War, Prime Minister Nehru was convinced that the then newly formed United Nations (UN), primarily created to maintain international peace, was capable enough to propose a long-term solution. He informed his Pakistani counterpart Liaquat Ali Khan about this in December 1947. Even though India clearly had the upper hand in the conflict, the issue reached the UN soon after to prevent the further loss of lives.

16. After long consultations with both parties, the UN brokered a ceasefire that brought the conflict to an end on 1 January 1949. By July, the bilateral Karachi Agreement formally established a Ceasefire Line in Jammu and Kashmir. A third of the region remained under illegal Pakistani occupation. After a suggestion of deploying UN peacekeepers in Kashmir was vetoed by the Soviet Union in 1957, India began emphasising on addressing the question of Kashmir bilaterally with Pakistan. Following the 1971 Bangladesh Liberation War, the Simla Agreement replaced the Ceasefire Line with a Line of Control (LoC).

CONCLUSION

17. In response to an invasion by Pakistan-backed tribal forces, the Maharaja of Jammu and Kashmir, Hari Singh, sought India's military support, leading to the state's formal accession to India. Indian armed forces repelled the invaders by December 1948, covering regions from Poonch in the west to Leh in the east. Despite having the upper hand militarily, India preferred a diplomatic resolution. The conflict was brought to an end by UN mediation and a Ceasefire Line was established, which left a third of the territory under Pakistani occupation. While having relied on the UN initially, India opted for a bilateral approach to address the matter with Pakistan eventually.

SUMMARY

- After Pakistan-backed tribesmen invaded Jammu and Kashmir, its ruler Maharaja Hari Singh requested for military assistance from India.
- India sent troops to Jammu and Kashmir after its accession to India.
- Fighting in areas ranging from Poonch in the west to Leh in the east, the Indian troops pushed back the invaders by December 1948.
- While being advantaged militarily, India decided to seek a diplomatic resolution to the conflict to prevent further loss of lives.
- The UN mediated in the conflict and helped establish a Ceasefire Line, with a third of Jammu and Kashmir remaining occupied by Pakistan.
- Gradually, India preferred to deal with the issue bilaterally with Pakistan.

ASSESSMENT EXERCISE

Multiple Choice Questions

Q1. Who was the supreme Commander of the Indian Armed Forces during the India-Pakistan Conflict of 1947-48?

a) Rajendra Prasad
b) Vallabhbhai Patel
c) Baldev Singh
d) Jawaharlal Nehru

Q2. Which tribal community was supported by the Pakistan to spread insurgency in Kashmir in 1947-48?

a) Bakharwal
b) Pashtun
c) Gujjars
d) Bhotia

Q3. Who was responsible for partitioning Punjab and Bengal during the implementation of the 'Mountbatten Plan'?

a) Lord Louis Mountbatten
b) Sir Cyril Radcliffe
c) Mahatama Gandhi
d) Jawaharlal Nehru

Q4. Who was the General Officer Commanding-in-Chief who set up the Indian Army's Western Command in 1947-48?

a) General Kodandera Subayya Thimayya
b) Lieutenant General Kodandera M. Cariappa
c) General Sir Robert Lockhart
d) General Satyawant Mallana Sringesh

Q5. Why is Brigadier Pritham Singh remembered?

a) He managed to lay an airstrip to cross Poonch in 3 weeks' time with the help of the locals
b) He defeated the Pashtun tribe
c) He landed an aircraft on the makeshift airstrip for the first time
d) He provided the supply of food and other amenities for months to the locals of Poonch

Q6. Name the battle in which Major Somnath Sharma laid his life and was later awarded the Param Veer Chakra.

a) Battle of Shalateng
b) Operation Poonj
c) Battle of Badgam
d) Battle of Zoji La

Q7. Why was an UN Military Observer Group appointed?

a) To establish a line of control between India and Pakistan

b) To hold a dialogue with the troops of India and Pakistan

c) To monitor the ceasefire and proposed demilitarisation

d) To divide the arms and armaments between India and Pakistan

Q8. Who became the first native Commander in –Chief of the Indian Army in 1949?

a) General Sam Manekshaw

b) General Bipin Rawat

c) Field Marshal Kodandera M. Cariappa

d) Field Marshal William Slim

Q9. Where is Zojila?

a) Pass to connect Drass and Kargil

b) Pass to connect Kargil and Leh

c) Pass to connect Srinagar and Leh

d) Pass to connect POK and Poonj

Q10. Name the first civilian to receive a Maha Vir Chakra for his participation?

a) Ram Chadar

b) Krishna Ram

c) Chandar Krishna

d) Hari Ram

Short Answer Questions

Q1. What was Operation Gulmarg? Who were the two personalities of Pakistan who led this operation?

Q2. Who was Air Commodore Mehar Singh? What was his role in safeguarding the Ladakh region during Operation Bison?

Q3. Elaborate the role of Maj Somnath Sharma in the Battle of Badgam.

Long Answer Questions

Q1. Examine the causes that led to the Indo Pak War on 1947-48?

Q2. Elaborate the military action of India at Srinagar immediately after the formal accession of Jammu and Kashmir?

Q3. Explain the Battle of Shalateng and its significance.

Q4. Elaborate the stand of the United Nations Security Council (UNSC) on the Kashmir question during 1948?

MH II (SD/SW)

CHAPTER II : INDIA-PAKISTAN WAR, 1965

Indian Army Chief, Gen. J. N. Chaudhuri with other officers at the banks of Ichhogil Canal on the outskirts of Lahore during 1965 Indo-Pak war. (Ministry of Defence)

TEACHING INSTRUCTIONS

Period(s)	**:**	**01**
Type	**:**	**Lecture and discussion**
Year	**:**	**SD/SW (First Year)**
Training Aids	**:**	**Classroom, computer with OHP, screen, pointer staff, presentation or videos, script or book flagged or lesson plan in file, and chart / poster.**

Time-plan :

Introduction	:	2 mins.
• Part I : Historical Background	:	5 mins.
• Part II : Prelude and Cause	:	5 mins.
• Part III : Key Battles and Operations	:	20 mins.
• Part IV : Outcomes and Aftermath	:	5 mins.
• Part V : International Response	:	3 mins.

INTRODUCTION

1. The India-Pakistan War of 1965 began with Pakistan's two-phase invasion of Jammu and Kashmir. Lasting from 1 to 22 September, it tested India's military resilience. Strengthened by advanced American weapons from West-led security alliances, Pakistan aimed for a swift victory to separate Jammu and Kashmir from India. Initially restrained, India countered by opening another front along the Punjab and Sialkot sectors. The conflict saw intense tank battles and aerial duels, drawing interventions from the Soviet Union and the US. The war ended with a UN-imposed ceasefire and a bilateral declaration. Its aftermath deepened distrust between India and Pakistan, while strengthening Pakistan's ties with China.

OVERVIEW

(a) Introduction

(b) Part I : Historical Background

(c) Part II : Prelude and Cause

(d) Part III : Key Battles and Operations

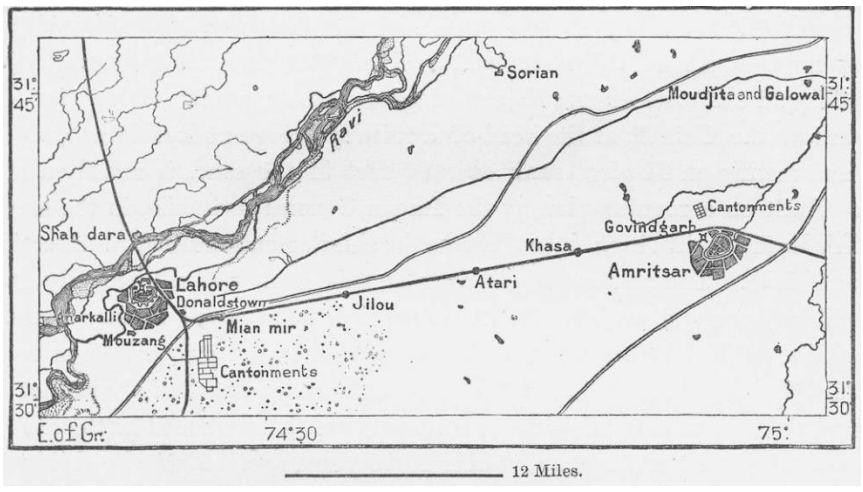
(e) Part IV : Outcomes and Aftermath

LEARNING OBJECTIVES

- To understand the conflict's background, prelude, and cause(s).
- To gain an insight into persisting Pakistani motives against India.
- To appreciate the contributions of India's armed forces in defending its western borders, from Kashmir to Kutch, against enemy offensives.
- To know about the conflict's key battles and heroic figures.

GEOGRAPHY

The fertile, agrarian region of Punjab was partitioned into two separate states in India and Pakistan in 1947. Amritsar and Lahore, two major cities in these states respectively, are only about 50 km. apart. Sialkot, another major city in Pakistan's Punjab state 130 km. north of Lahore, lies about 45 km. to the west of Jammu in India. Their locations have traditionally made these cities lucrative and prime targets for each other's military in the event of a bilateral conflict.



A 19th-century map showing the proximity between Amritsar and Lahore

PART I : HISTORICAL BACKGROUND

2. By 1965, India boosted its military with new mountain divisions and equipment. However, Pakistan had aligned with the West by joining the SEATO and CENTO collective security groups based on NATO. These groups aimed to contain Soviet influence in Asia and granted members access to advanced Western military technology. Accordingly, Pakistan benefited from US military aid and enhanced its defence with American M-47 and M-48 Patton tanks, F-104 Starfighter, and F-86 Sabre jets, alongside Grumman Albatross aircraft. It also acquired the PNS Ghazi, a Tench-class submarine, elevating its naval strength in South Asia. Thus, Muhammad Ayub Khan, Pakistan's General-turned-President, felt that the time was suitable to reattempt a capture of Jammu and Kashmir.

Clockwise from the top: PAF's Lockheed F-104 Starfighter, IAF's Dassault Mystere, India's Centurion Tank, Pakistan's M48 Patton Tank

PART II : PRELUDE AND CAUSES

3. The Pakistan Army's Indus Rangers violated the long-standing status quo on the international border between the two states in January 1965, by crossing into the salt marshes of Gujarat's Kutch region and occupying the Kanjarkot Fort's ruins. This was followed by **Operation Desert Hawk**, which saw Pakistan thrust its US-supplied Patton tanks into Kutch in April to overrun multiple outposts of the Indian Central Reserve Police Force (CRPF) at Kanjarkot and Biar Bet. Reacting, India mobilized its XI Corps westwards in **Operation Ablaze**, but an intervention from the United Kingdom led to a speedy ceasefire in Kutch.

4. With no US opposition to its use of American weapons against India, Pakistan launched **Operation Gibraltar** in August, deploying 30,000 troops disguised as mujahids and locals in Jammu and Kashmir, aiming to incite rebellion. After they failed to gain local support, the Indian Army swiftly countered, securing the vital Haji Pir Pass and ending the

infiltration. Pushed by Foreign Minister Zulfikar Ali Bhutto, Pakistan's President Ayub Khan then initiated **Operation Grand Slam**, targeting the vital Akhnoor Bridge to cut off Jammu's supply line to the Kashmir valley on 1 September. After the Pakistani Patton tanks got initial success against India's AMX-13 tanks, the war intensified soon and shifted momentum.

BRIGADIER ZORAWAR BAKSHI AND MAJOR RANJIT SINGH DAYAL

As seen during the India-Pakistan Conflict of 1947-48, the Haji Pir Pass of the Pir Panjal Mountain Range served as a opening for infiltration during Operation Gibraltar. Control over it was necessary to seal off the invaders and link Uri with Poonch by road. Brigadier Zorawar Chand Bakshi led the assault by India's 68 Brigade against Pakistani defences around the pass on 26 August. Continuing the advance, Major Ranjit Singh Dayal's platoon made a steep climb amid rain to thwart enemy troops and take the Haji Pir Pass hours later. Brigadier Singh and Major Dayal were awarded Maha Vir Chakras for the action.

Brig. Zorawar C. Bakshi (top left) and Maj Ranjit S. Dayal (top right)

PART III : KEY BATTLES AND OPERATIONS

A map of Pakistani infiltrations points in Jammu and Kashmir

Initial Response

5. As Pakistan's 12 Division advanced towards Akhnoor, Brigadier Mohan Singh of the 191 Brigade called for air support, but even the Indian Air Force (IAF) faced Pakistan's ground fire and its F-86 Sabre fighters. Yet, resistance from India's AMX light tanks and a change in Pakistan's command from Major General Malik to Major General

Yahya Khan delayed the enemy's progress. This allowed the Indian forces to regroup, call for reinforcements, and fortify Akhnoor. India's 41 Brigade launched a counter-attack on 3 September near Jourian, aided by IAF's Dassault Mysteres and Folland Gnats. Over Chumb, Flight Lieutenants Keelor and Pathania downed two Sabres. On 6 September, Pakistan redirected troops south as India opened new fronts at the Lahore and Sialkot sectors.

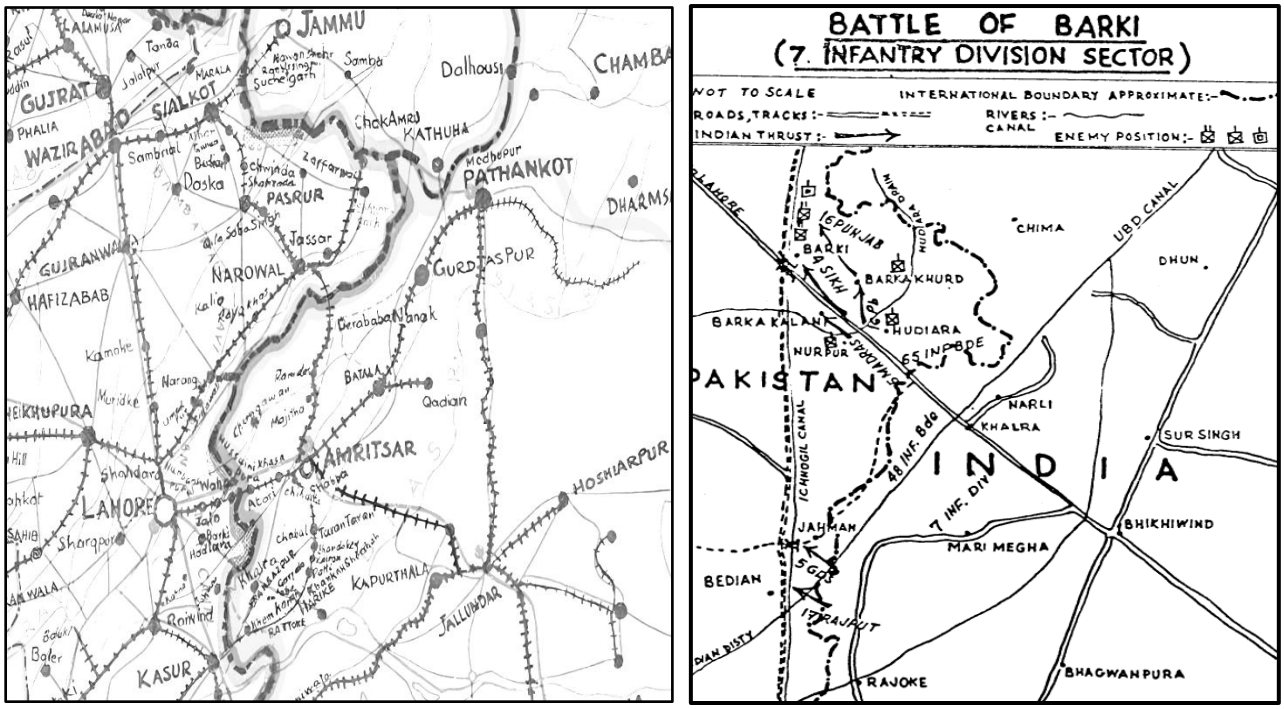
Operation Riddle and Air Raids on Sargodha

6. As India's newly raised I Corps prepared to target Sialkot, its XI Corps launched Operation Riddle to advance on Lahore, drawing the enemy away from Chumb. The chief target in the Lahore sector was the Ichogil Canal, located 30 km. east of the city of Lahore and running for 90 km. between rivers Ravi and Sutlej along the bilateral border. With the canal being heavily guarded by Pakistan Army's 10 and 11 Divisions, however, India's 15 Division faced heavy artillery and armoured resistance despite rapid initial penetration. Further, the Pakistan Air Force (PAF) repelled the IAF's attempts to enter the sector over Kasur, south of Lahore.

7. On 6 September, PAF struck Indian airfields at Pathankot, Halwara, Adampur, and Jamnagar. While significant losses were seen at Jamnagar and Pathankot, the intervening Hawker Hunters of the IAF's 7 and 27 Squadrons prevented the PAF's Sabres from inflicting much damage at Halwara and Adampur. Moreover, dozens of Pakistani paratroopers dropped around these airfields were captured or killed. In a retaliatory raid, the IAF's 1, 8, and 27 Squadrons bombed Sargodha, a well-defended vital PAF airbase, on 7 September. Despite losing five aircraft, the IAF destroyed 11 PAF aircraft and ground infrastructure. The daring raid tied down a significant number of PAF aircraft for Sargodha's defence thereafter.

SQUADRON LEADER AB 'TUBBY' DEVAYYA

Having joined the 1 Squadron of the IAF just before the War of 1965, Squadron Leader AB Devayya was amongst the pilots raiding Sargodha. While doing so, he was seen by a PAF F-104 Starfighter, being flown by Flight Lieutenant Amjad Hussain. Despite being hit by gunfire initially, Devayya sprung back into the dogfight, tailed after Hussain, and struck the advanced US-made jet with gunfire of his own. This was the only Starfighter to be downed in the war. Unfortunately, Devayya could not eject and died in action. In 1988, he become the only posthumous Maha Vir Chakra awardee in the IAF's history.



[A map of the war's Punjab theatre, with Lahore and Sialkot highlighted]

Battles of Dera Baba Nanak and Burki

8. To enable India's planned offensive at Sialkot, 29 Brigade sought to capture a strategically crucial rail-and-road bridge across the Ravi River on the Sialkot sector's southern edge at Dera Baba Nanak. The Indian infantry offensive was restricted to the river's east by stiff resistance from a dozen Pakistani Patton tanks until the arrival of air support from the Mysteres of the IAF's 8 Squadron, which crippled the enemy tanks and forced a retreat. After a day's battle, however, the withdrawing Pakistani troops blew up the bridge on 7 September.

9. The following day, when India's 7 Division reached the outskirts of Lahore, it faced a similarly tough resistance from Pakistan Army's 1 Armoured Division at the town of Burki. However, after gaining armoured support, the boosted Indian infantry launched a counter-offensive, destroying a majority of the Pakistani tanks. Thereafter, the captured enemy trenches helped Indian troops evade the limited air support coming from the PAF and continue their charge until Burki's capture on 11 September. The town was then held through the rest of the war.

Battles of Khem Karan and Asal Uttar

10. Khem Karan and Asal Uttar, villages in Indian Punjab about 10 km apart, saw some of the fiercest tank battles since the Second World War. Pakistan's 1 Armoured Division advanced from Kasur to Khem Karan, but suffered losses from the IAF. This enabled India's 4 Division to halt the enemy advance at Khem Karan and regroup at Asal Uttar by 8 September. Led by Major General Gurbaksh Singh and supported by 2 Independent Armoured Brigade, the Indian forces then set an ambush at Asal Uttar using camouflaged

tanks, artillery, and anti-tank guns. As the marshy terrain hindered Pakistan's Pattons and Chaffees, the Indian tanks and tank-hunting teams successfully countered the enemy's numerical strength, turning Asal Uttar into a 'graveyard of tanks'. By 11 September, residual Pakistani forces retreated, with many diverted to Sialkot amidst an IAF offensive there.

BRIGADIER THOMAS K. THEOGARAJ

Enlisting in the British Indian Army on an emergency commission in 1942 as Second Lieutenant, Thomas K. Theogaraj, he served in the Second World War as part of the Indian Armoured Corps. He found a Mention in Dispatches in 1945 for his role in helping suppress a postwar rebellion in Java, Indonesia. As Brigadier of the 2 Independent Armoured Brigade in 1965, he led the offensive against Pakistan's advance from Khem Karan, which resulted in the crippling or capture of 40 enemy Patton tanks, and a Maha Vir Chakra for himself.

HAVILDAR ABDUL HAMID

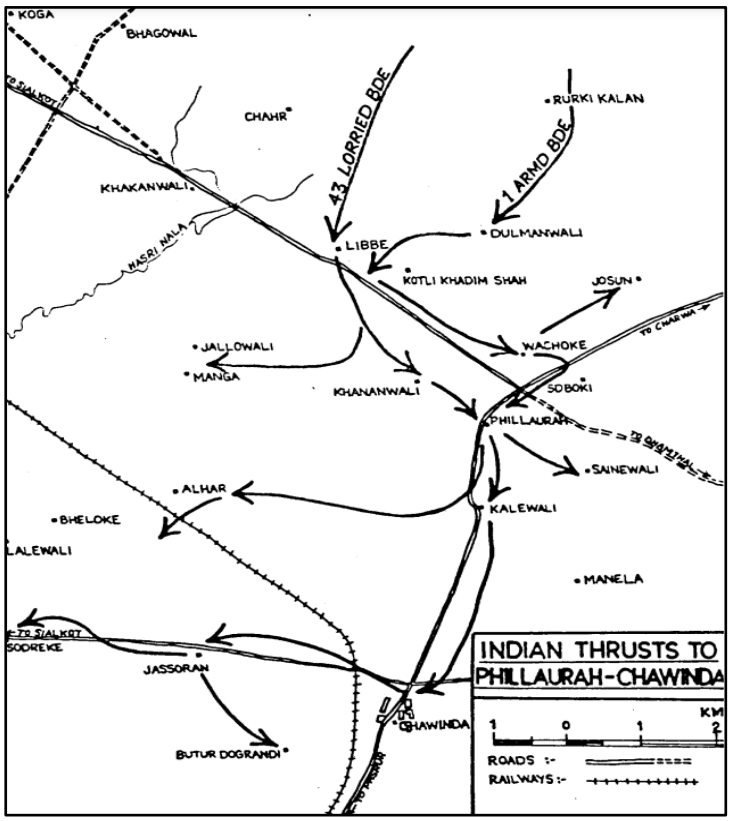
Havildar Abdul Hamid formed part of one of the 4 Division's tank-hunting teams at the Battle of Asal Uttar in 1965. Operating a Jeep-mounted anti-tank gun, he proved to be a formidable force against the Pakistan Army's armoured assault. Hamid single-handedly knocked out a lead enemy tank on 8 September, and two more on 10 September, before being killed by enemy tank-fire while aiming for his fourth kill. He was awarded a Param Vir Chakra posthumously.

Pakistani tanks at the Battle of Asal Uttar

Battles of Phillora and Chawinda

11. I Corps, the Indian Army's first strike corps, was being reinforced while the war of 1965 broke out. As the Sialkot offensive began on 8 September, the three infantry divisions and one armoured division constituting the corps were under-manned or under-equipped.

The terrain, including vast tracts of sugarcane fields, was also not conducive for tanks. So, the Indian advance across the international border to Phillora, a post about 25 km. from Sialkot, was slow. Yet, upon reaching, 1 Armoured Division knocked out dozens of Pakistani tanks by 11 September. Brigadier KK Singh and Lieutenant Colonel MMS Bakshi received Maha Vir Chakras for their role in securing Phillora.



12. A two-day pause before the Indian Army could continue to the next village of Chawinda, however, allowed the Pakistani reinforcements from Khem Karan to reach the location. For the following six days, the rural areas between Chawinda and Phillora saw the largest tank battle since the 1943 Battle of Kursk in Russia amid the Second World War. Involving almost evenly matched formations of India and Pakistan and featuring a total of over 400 tanks, the Battle of Chawinda was characterized by armoured thrusts followed by infantry clashes and attrition.

13. Due to confusion caused by the on-ground crowd of fighting tanks and rising attrition, the IAF was compelled to restrict its air support, with its initial significant successes being recorded on 11 September over Phillora. When the dust settled at Chawinda with the ceasefire, India had suffered considerable losses of its own, but knocked out 144 Pakistani tanks and captured about 500 sq. km. of territory. Lieutenant Colonel AB Tarapore, martyred while gallantly refusing to abandon his damaged Centurion tank, was awarded a Param Vir Chakra posthumously.

FLIGHT LIEUTENANT DENZIL KEELOR

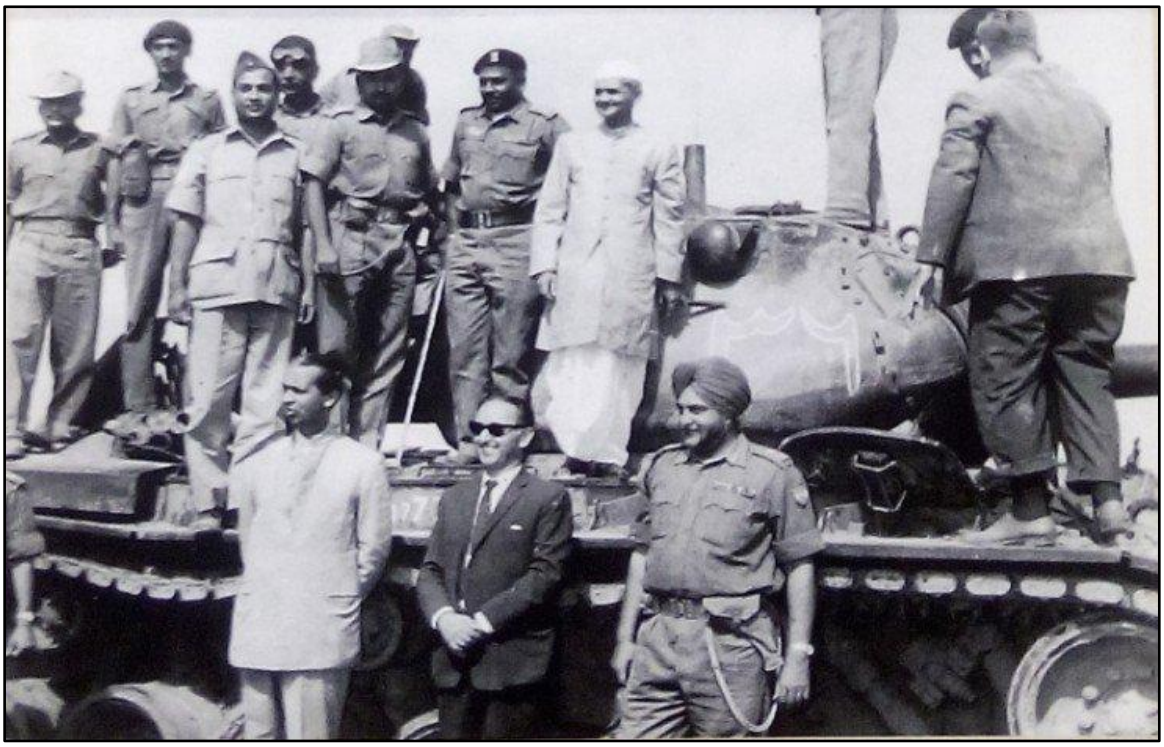
Having recovered, the IAF began re-engaging enemy aircraft in dogfights by 18-19 September. Four Gnats of the 1 Squadron being led by Flight Lieutenant Denzil Keelor, the brother of Flight Lieutenant Trevor, spotted and engaged two PAF Sabres while flying on an escort mission over the Sialkot sector. After they downed a Gnat, both the enemy Sabres were expertly tailed and shot down by Keelor and his subsection leader, Flight Lieutenant Vinay Kapila, in retaliation. The action earned both the young pilots Vir Chakras.

Battle of Dograi

14. As early as on 6 September, the battalion of 3 Jat had managed to cross the Ichogil Canal despite heavy PAF firing and advance towards Dograi, a village on Lahore's outskirts. However, lacking anti-tank weapons, 3 Jat had to withdraw to the bridgehead it made inside enemy territory. On the night of 21 September, the battalion made a final charge at the strategically crucial village under Lieutenant Colonel Desmond Hayde. After intense infantry combat with the Pakistani troops emerging from the enemy pillboxes fortifying the area, 3 Jat took Dograi hours before ceasefire, earning Lieutenant Colonel Hayde the Maha Vir Chakra. This presented a direct and significant threat to the vital city of Lahore.

MAJOR ASA RAM TYAGI

Commanding the leading platoon in the action at Dograi, Major Asa Ram Tyagi and his troops attacked the town of Dograi from the east, piercing past a strong Pakistani defence consisting of pillboxes, recoilless rifles, and tanks. Despite sustaining two bullet wounds early, Major Tyagi pushed ahead, firing his rifle, bayonetting the enemy, lobbing grenades, and even engaging tanks. Inspired, his platoon managed to surge to the town, but not before Major Tyagi was killed by further enemy gunfire. He received a Maha Vir Chakra posthumously.



Prime Minister Lal Bahadur Shastri with a captured enemy tank

Naval Involvement

15. In spite of a sizable numeric edge, the Indian Navy's direct involvement in the War of 1965 was limited. Much of the Indian Navy was initially directed to defend the Bay of Bengal. However, Indian maritime presence was boosted heavily along the Gujarat coast after an attack on Dwarka by the Pakistan Navy. With its only aircraft carrier, *INS Vikrant*, undergoing a refit, a crucial focus for India was also to keep *PNS Ghazi*, the subcontinent's first submarine, away from its waters.

INS Vikrant

PART IV: OUTCOMES AND AFTERMATH

16. In September 1965, China began to mobilize its troops along the MacMahon Line, its border with India, demanding the demolition of certain Indian structures facing it at Sikkim by September 22. Though the Chinese were deeply engaged against Western forces in the Vietnam War, suspicions emerged that a second front against India may open up. However, UN Security Council (UNSC) adopted Resolution 211 on 20 September, calling for a ceasefire by 22 September and a withdrawal of Indian and Pakistani troops to pre-war posts.

17. Thereon, Soviet Premier Alexei Kosygin played a proactive role in convincing both Shastri and Ayub to converge for mediated talks. This was also backed by the US and the UK. To facilitate it, Kosygin hosted Shastri and Ayub at Tashkent in Soviet Uzbekistan for talks from 4 to 10 January 1966. The threat posed by India to Lahore was a key reason why Pakistan entered the talks. The resultant Tashkent Declaration urged the rival neighbours not to use force during disputes and attempt a normalization of bilateral relations diplomatically and economically.

Ayub Khan, Lal Bahadur Shastri, and Alexei Kosygin at Tashkent

18. As Shastri and Ayub signed the declaration, the mood in both nations stayed gloomy. India was shocked on 11 January by the sudden demise of their Prime Minister at Tashkent. Shastri was hailed for leading India resolutely through the War of 1965. The conflict also alerted India to the needs of deploying its air power early in a conflict and of expediting the

modernisation of its military equipment. The requirement of enhanced border security also led to the birth of the Border Security Force (BSF) that year. In Pakistan, discontent against President Ayub began to mount, leading to his eventual resignation in 1969.

'*JAI JAWAAN, JAI KISAAN*'

Complimenting the bold defence of India by its armed forces in 1965, American agronomist Norman Borlaug was already promoting the cultivation of high-yield variety wheat in India. A major boost for farmers, this marked the beginning of the 'Green Revolution', set to revolutionize India's food production in under a decade and free it from relying on other nations, especially the US, for its grains supply. A proud Lal Bahadur Shastri gave the popular slogan, '*Jai Jawaan, Jai Kisaan*' (hail the soldier and the farmer), at Prayagraj in October 1965.

CONCLUSION

19. Strengthened by weapons from the US, Pakistan launched Operation Gibraltar, infiltrating Jammu and Kashmir. Lacking local support, the enemy were swiftly expelled by India. Pakistan responded with Operation Grand Slam, targeting the Akhnoor Bridge in Kashmir. The Indian forces countered by advancing on Sialkot and Lahore. The conflict escalated into intense tank battles, among the fiercest ones seen in two decades. The Indian Air Force helped slow Pakistani advances and countered advanced enemy jets. The war concluded with a UN-imposed ceasefire and the Tashkent Declaration. India's direct threat to Lahore compelled Pakistan to accept these diplomatic efforts. The US' halt of military aid to both nations strengthened Pakistan-China and India-Soviet relations.

SUMMARY

- After testing its US-supplied weapons in an incursion at Kutch, Gujarat, Pakistan launched Operation Gibraltar, infiltrating Jammu and Kashmir.
- However, finding no local support in the region, the infiltrators were fast flushed out by India. Pakistan then activated Operation Grand Slam to target strategic areas in Kashmir, such as the Akhnoor Bridge.
- Indian troops countered by advancing on the Sialkot and Lahore sectors.
- The war escalated into some of the most intense tank battles seen since the Second World War, with the armies fighting tough battles of attrition.
- Despite entering the conflict late, the Indian Air Force played a key role in slowing Pakistani advances and fending off advanced enemy jets.
- The war ended with a UN-imposed ceasefire and a declaration mediated at Tashkent by the Soviet Union.
- The threat posed by India from Dograi to the city of Lahore compelled Pakistan to come to the negotiating table. Despite signing the Tashkent Declaration, the distrust between the two countries only deepened.
- The US' withdrawal of military aid to Pakistan and India pushed them towards China and the Soviet Union respectively.

ASSESSMENT EXERCISE

Multiple Choice Questions

Q1. What defensive position did Major General Gurbaksh Singh order at Khem Karan?

a) A circular formation

b) A triangular trap

c) A horseshoe-shaped defensive position

d) A rectangular blockade

Q2. What technique was used by Indian troops to immobilize Pakistani tanks at Asal Uttar?

a) Blowing up bridges

b) Flooding the sugarcane fields

c) Digging trenches

d) Using anti-tank mines

Q3. What was Asal Uttar famously referred to after the battle?

a) A Cemetery for Enemy Tanks

b) The Graveyard of Invaders

c) A Fortress of Strength

d) The Gateway to Victory

Q4. On what date did the Indian Army capture Burki during the 1965 War?

a) September 6, 1965

b) September 7, 1965

c) September 9, 1965

d) September 11, 1965

Q5. Which nation mediated the "Kutch Agreement" between India and Pakistan?

a) Soviet Union

b) United States

c) United Kingdom

d) China

Q6. Which Indian Prime Minister signed the Tashkent Declaration?

a) Jawaharlal Nehru

b) Lal Bahadur Shastri

c) Indira Gandhi

d) Morarji Desai

Q7. What was the major achievement of the Indian Air Force on September 11, 965?

a) The destruction of 144 Pakistani tanks

b) A victory over Phillora

c) Recapturing the McMahon Line

d) Signing of a ceasefire agreement

Q8. What popular slogan did Lal Bahadur Shastri give during the Indo-Pak War of 1965?

a) "Jai Hind"

b) "Bharat Mata Ki Jai"

c) "Jai Kisaan"

d) "Jai Jawaan, Jai Kisaan"

Q9. What honour was posthumously awarded to Lieutenant Colonel A.B.Tarapore?

a) Vir Chakra

b) Param Vir Chakra

c) Ashok Chakra

d) Mahavir Chakra

Q10. How much territory did India capture by the ceasefire at Chawinda?

a) 200 sq. km.

b) 500 sq. km.

c) 1,000 sq. km.

d) 700 sq. km.

Short Answer Questions

Q1. Why did the 3 JAT battalion withdraw initially from Dograi, and when did they recapture it?

Q2. What were the outcomes of the Indian Air Force’s attack on Sargodha?

Q3. What was the main objective of Pakistan's Operation Grand Slam?

Long Answers Questions

Q1. What strategy was used to trap Pakistani tanks in the Battle of Asal Uttar?

Q2. What was the significance of the Battle of Phillora in the Indo-Pak War?

Q3. What were the objectives and outcomes of Operation Grand Slam? Discuss the role of the Indian Air Force

MH III (SD/SW)

CHAPTER-III : INDIA – PAKISTAN WAR, 1971

Troops of the 23 Punjab celebrating atop a damaged Pakistani tank at Longewala

TEACHING INSTRUCTIONS:

Period(s) : **01**

Type : **Lecture**

Year : **SD/SW (Second Year)**

Training Aids : **Classroom, computer with OHP, screen, pointer staff, presentation or videos, script or book flagged or lesson plan in file, and chart / poster.**

Time-plan:

- Introduction : 3 mins.
- Part I : Historical Background : 5 mins.
- Part II : Prelude and Cause : 5 mins.
- Part III : Key Battles and Operations : 25 mins.
- Part IV : Outcomes and Aftermath : 2 mins.

INRODUCTION

1. The India-Pakistani War of 1971 was catalysed by Pakistani efforts to crush the liberation movement of the Bengali populace in their eastern half (East Pakistan), which led to a major humanitarian crisis and infiltrations along India's eastern borders. The conflict began with Pakistan's strikes on Indian airbases, prompting India to launch a full-scale intervention aiding the Bengali Mukti Bahini resistance. The war was also fought at the western border between India and Pakistan, with India achieving decisive victories on both fronts, after crippled Pakistan's naval capabilities early. The war lasted between 3 and 16 December 1971, ending with Bangladesh's creation. It affirmed India's strategic and operational supremacy, suppressing Pakistan's direct acts of war for 28 years.

OVERVIEW

(a) Introduction

(b) Part I : Historical Background

(c) Part II : Prelude and Cause

(d) Part III : Key Battles and Operations

(e) Part IV : Outcomes and Aftermath

LEARNING OBJECTIVES

- To understand the conflict's background, prelude, and cause(s).
- To gain a broad understanding about the problem of East Pakistan.
- To appreciate the Indian armed forces' actions at the western and eastern theatres of a brief but highly complex and wide-reaching war.
- To know about the conflict's key battles and heroic achievements.

GEOGRAPHY

In East Pakistan, the Indian Army faced significant obstacles due to the terrain of the Ganges-Brahmaputra delta, formed by the rivers Meghna, Padma, and Jamuna. Hampering troop mobility and logistics, the swampy, flooded territory restricted heavy weapons deployment, as dense forests made reconnaissance difficult. Poor road networks forced reliance on airlifts and waterborne transport. Seasonal monsoons further disrupted operations and complicated strategies.

In West Pakistan, diverse landscapes, including Punjab's fertile plains, Sindh's deserts, and Northwest Frontier's rugged mountains, posed logistical hurdles for troop movement. The Indus River floodplains created natural barriers, while extreme climate variations and poor infrastructure, especially inadequate roads and bridges, further complicated military movements and supply lines.

PART I : HISTORICAL BACKGROUND

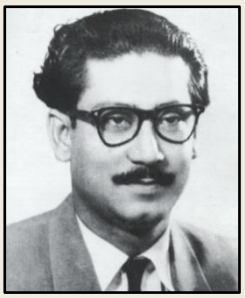
2. After the Partition of India, the resultant country of Pakistan was geographically divided into two halves, West Pakistan, on the west of India, and East Pakistan, which was the eastern half of the former British-era province of Bengal. Despite a shared religious identity, East Pakistan was not only territorially far-flung from the west (separated by 1,600

km. of India in between), but was also culturally different, as a majority of its population was Bengali-speaking people, with their distinct ways of life. This distinction was also owed to East Pakistan's location at the Ganges-Brahmaputra delta, which is prone to floods, droughts, and cyclones. The systemic overlooking of East Pakistan by government's dominated by West Pakistanis became normal, leading to rising local discontent in the east.

3. Following the resignation of General Ayub Khan, Pakistan held an election in 1970. East Bengal voted enthusiastically and as a result, the Awami League of Sheikh Mujibur Rahman, a popular Bengali leader, ended up winning the majority in Pakistan's National Assembly. Fearing a loss of control, West Pakistani leaders rejected the election mandate, prevented the Awami League government's formation, and ensured Mujib's arrest. This sparked widespread protest and a call for a separate national identity in East Pakistan. Reacting, the Pakistan Army, directed by the military dictatorship of General Yahya Khan, stepped in to crush the movement.

SHEIKH MUJIBUR RAHMAN

From being a student activist at University of Dacca, Sheikh Mujibur Rahman rose to the position of a state cabinet minister by 1954. He fiercely advocated for the language and socio-economic rights of East Pakistan's Bengali people. Soon after becoming the president of the Awami League, he was arrested in 1967. Following his release from prison two years later, Rahman began demanding greater autonomy for East Pakistan.



PART II : PRELUDE AND CAUSE

4. On 25 March 1971, beginning with a brutal crackdown on students at Dacca University, the Pakistan Army launched **Operation Searchlight** to silence voices of protest, including intellectuals, professionals, and opposition leaders, and take over key towns by force. By late-1971, up to three million people were killed and 10 million people were displaced as a result. Most of the refugees escaping this persecution arrived in India, putting enormous pressure on India's own security and resources. Pakistan forces in pursuit also crossed over to India's territory sporadically. In November, Indian Prime Minister Indira Gandhi's bid to convince the UK, US, France, and West Germany to step-in was unsuccessful. As tensions mounted, India began to anticipate large-scale aggression from Pakistan.

INDIA-SOVIET TREATY OF PEACE, FRIENDSHIP, AND COOPERATION, 1971

The India-Soviet Treaty of Peace, Friendship, and Cooperation, was signed on 9 August 1971, marking a key shift in India's foreign policy, as it formally moved closer to the Soviet Union strategically in the Cold War. The treaty established cooperation in political, economic, and military areas, and played a major role during the War of 1971 by providing India with crucial diplomatic and military support. Lasting for 20 years and renewed in 1991, it symbolized long-term relations between India and Russia, contributing to regional stability and peace.

Indian PM Indira Gandhi and Soviet Premier Leonid Brezhnev in August 1971

MUKTI BAHINI

Mukti Bahini (liberation army), was instrumental in the liberation movement of East Pakistan's Bengalis. Formed in response to Pakistan's brutal crackdown, it included Bangladeshi military personnel, paramilitary forces, and civilians, organized into the Niyomito Bahini (regular army) and Gano Bahini (people's army). Employing guerrilla tactics such as ambushes and sabotage, the Mukti Bahini disrupted Pakistani supply lines and communication, weakening their control over East Pakistan. They launched key actions like **Operation Jackpot** and **Operation Kilo Flight**, which contributed significantly to the war's outcome. The determination of Mukti Bahini guerrillas, and the Indian Armed Forces' assistance, led to Bangladesh's liberation and independence.

Mukti Bahini guerrillas on boats

PART III: KEY BATTLES AND OPERATIONS

Battle of Garibpur

5. Even before the War of 1971, Battle of Garibpur marked an early victory for the Indian Army and Mukti Bahini in the Boyra salient of East Pakistan. Pakistan used Garibpur as a launchpad for artillery raids into India. On 20 November, 14 Punjab and 45 Cavalry launched a counter-attack, but a premature engagement followed. On the following day, under Lieutenant Colonel RK Singh, four Indian companies and tanks recaptured Garibpur after fierce fighting. Major DS Narang fielded PT-76 amphibious tanks, knocking out Pakistan's US-made M24 Chaffee tanks before being killed in action. He earned a posthumous Maha Vir Chakra. On November 22, the first aerial combat of the war occurred over Boyra, where the Indian Air Force (IAF) destroyed three Pakistani Sabre aircraft without loss.

Enemy Chaffees captured by 45 Cavalry

WESTERN THEATRE

Defence of Poonch

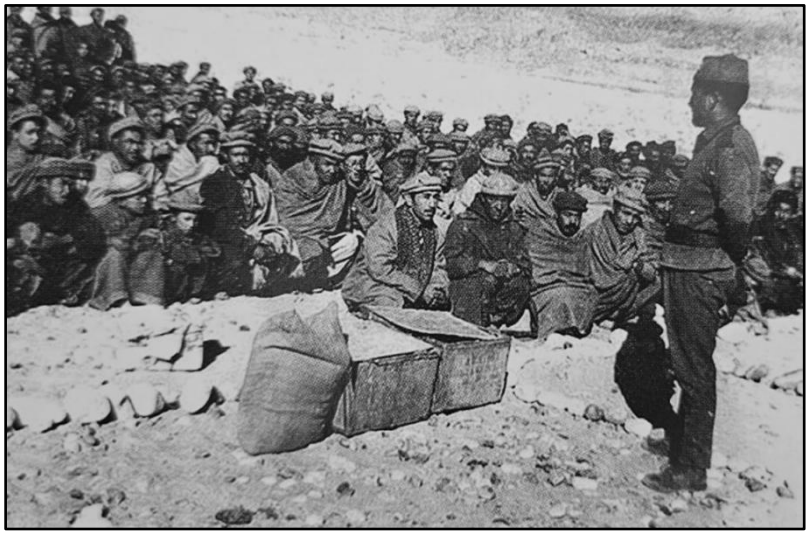
6. In November 1971, Pakistan mobilized troops in the Poonch sector, prompting India's 93 Infantry Brigade to defend critical positions, including Picquets 405, 406, and 406A, which were held by 6 Sikh Regiment. On 3 December, intense shelling from across strategically vital Chand Tekri feature led to the capture of an Indian helipad in the area despite fierce resistance. Reinforcements from 8 Jat Regiment helped mount a counter-attack, and by 6 December, the helipad was regained and placed under the 6 Sikh again. Further enemy offenses launched until 9 December were effectively repelled. Meanwhile, the Indian Army fortified its defences in the sector, strengthening its communication lines and intensifying its artillery fire. The sustained resilience of Indian forces made the enemy retreat.

Battles of Thanpir and Turtuk

7. While the offensive on Poonch was on, a Pakistani attack against the small unit of 93 Infantry Brigade guarding the Thanpir post on 4 December led to its fall, further endangered Poonch, along with Rajouri, Mandi, and the vital Kalai Bridge on the Poonch River. On 5 December, the Indian forces launched a multi-flank counter-offensive, with the Border Security Force (BSF) threatening the enemy from the east and Para Commandos climbing the Nagali Spur on the west. The surprise forced Pakistani troops to retreat, leaving their arms behind and allowing India to regain Thanpir and fully secure Poonch in a major early success.

8. Meanwhile, securing the strategically key Partapur sector in Ladakh, near the Shyok and Nubra valleys, was critical to preventing a Pakistan-China link through the Karakoram Pass. To ensure this, 3 Infantry Division and Ladakh Scouts under Major Chewang Rinchen began a coordinated operation on 8 December. The Indian forces secured key points like V Picquet and Point 18402. Two days later, Major Rinchen's troops advanced on the Chalunka village and repelled Pakistani troops from there. By 14 December, they similarly

ejected the Gilgit Scouts from the Turtuk village. For the action, which saw Indian troops secure over 800 sq. km. Major Rinchen, along with Colonel Udai Singh, received Maha Vir Chakras.



Major Rinchen addressing the inhabitants of Turtuk after the operation

Battle of Basantar

9. On 4 December, 16 Madras Regiment set up a bridge on the Basantar River, enabling 17 Poona Horse tanks to advance. Despite heavy enemy fire, troops of India's 16 Madras defended this bridge for three nights. Meanwhile, Indian forces advanced on the Barapind-Sikandarpur-Lalial area, captured the Supwal Ditch, and mounted further pressure on Pakistani tanks. On 16 December, 3 Grenadiers repelled multiple enemy assaults with artillery and tank support to bring relief to 16 Madras. In the action, which kept the enemy on the backfoot, India knocked down 48 Patton tanks. Young Second Lieutenant Arun Khetarpal destroyed five enemy tanks while not abandoning his own, being awarded a posthumous Param Vir Chakra. The Pakistani forces faced high attrition and demoralisation, failing to make any headway in the riverine area until the war's end.

Lt. Col. Hanut Singh (third from left) with his tank crew

FIELD MARSHAL SAM HFJ MANEKSHAW

Field Marshal Sam Manekshaw, also known as 'Sam Bahadur', was one of the most distinguished Indian Army officers. He participated in significant conflicts such as the Second World War, followed by the India-Pakistan Wars of 1947-48 and 1965. As Chief of the Army Staff between 1969 and 1973, his exceptional leadership and strategic brilliance guided India to a decisive victory over Pakistan and the liberation of the Bangladeshi people in 1971. He was the first Indian military officer to be promoted to Field Marshal. Field Marshal Manekshaw received the Padma Bhushan in 1968 and the Padma Vibhushan in 1972 for his exceptional service and continued relevance.

Battle of Dera Baba Nanak

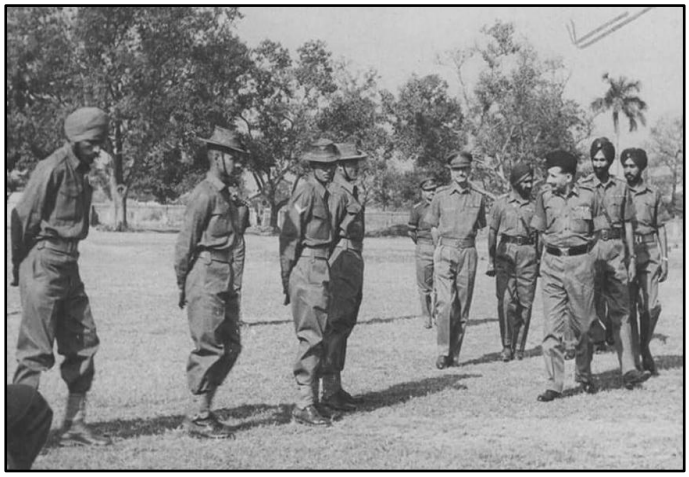
10. Tasked to defend Gurdaspur, the 86 Infantry Brigade faced an armoured and infantry attack by Pakistan at Dera Baba Nanak on 3-4 December. After initially forced to vacate Kasowal, the Indian troops launched a spirited counter-offensive on 5 December, attacking a fortified enclave east of the key bridge at Dera Baba Nanak and managing to push the enemy back despite heavy fire. While taking out an enemy machine gun, Captain Devinder Singh was killed and awarded the Maha Vir Chakra posthumously. Effective coordination of infantry, armour, and artillery ensured the fall of Dera Baba Nanak by 6 December, with Lieutenant Colonel NS Sandhu and Brigadier KG Shankar also receiving Maha Vir Chakras.

BRIGADIER KRISHNASWAMI GOWRI SHANKAR

Commanding an infantry brigade defending Dera Baba Nanak on the Western Front, Brigadier Krishnaswami Gowri Shankar was tasked with capturing a heavily fortified enemy position. Demonstrating bold planning and steadfast leadership, he directed operations under intense enemy fire, while inspiring his troops consistently. His adaptability ensured the momentum and success of the attack. For outstanding leadership and determination, he received a Maha Vir Chakra. Brigadier Shankar went on to retire as a Lieutenant General.

Battles of Burj-Fatehpuri and Sehra Bulge

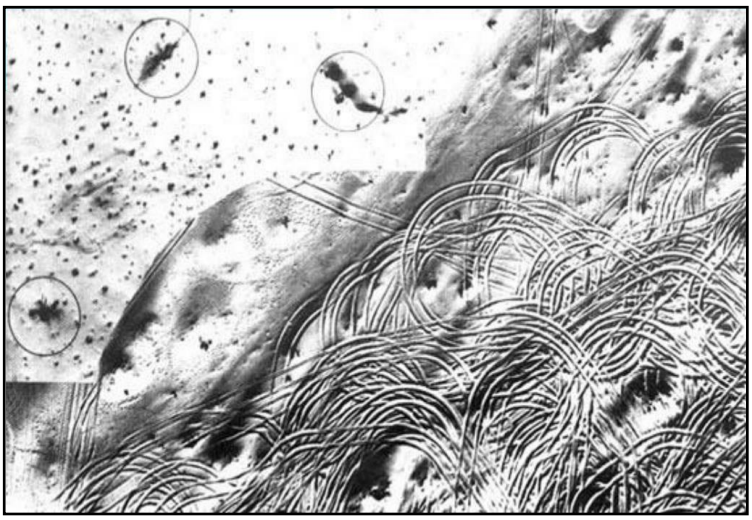
11. On 3-4 December, a Pakistani brigade seized the Fatehpur and Bhago-Kamo areas, prompting the troops of India's 15 Maratha Light Infantry and 66 Armoured Regiment to counter-attack and reclaim the Tur and Burj areas on 5 December, killing over 50 enemy soldiers. On 11-12 December, 8 Sikh Light Infantry retook the heavily fortified Fatehpur post despite suffering heavy casualties. Lieutenant Colonel Pathak earning the Maha Vir Chakra for his leadership during the action. Simultaneously, on 6 December, India's 48 Infantry Brigade managed to capture the tactically vital Sehra Bulge in Pakistan, repelling tank-led counter-attacks on Khem Karan until 16 December. The Indian troops firmly safeguarded the Harike Barrage on the Indian side of Punjab, inflicting heavy losses on the enemy.



Gen. Manekshaw interacting with his troops after the capture of Sehra

Battle of Longewala

12. Initially a BSF post, the Longewala border post in the Thar Desert was taken over in November 1971 by a company of the 23 Punjab Regiment under Major Kuldip Singh Chandpuri, in anticipation of a full-scale war. The Indian force was small and had limited weaponry. On December 5, a large contingent of Pakistani tanks approached the area, with the objective of capturing parts of the Jaisalmer district and advancing to Jodhpur. In an extraordinary effort, Major Chandpuri's troops defended the post, using anti-tank weapons, machine guns, and small arms to fend off a much larger armoured force through the night, as air support from the IAF could only arrive at dawn. After Hawker Hunters of the IAF's 122 Squadron arrived over Longewala, they joined ground troops to destroy multiple of enemy tanks, neutralise dozens of troops. and force their retreat.



The frantic movements of Pakistani tanks caught in the open by Hunters from the Indian Air Force (IAF) in the battle of Longewala. The insert show three destroyed Pakistani tanks.

EASTERN THEATRE

Battle of Jessore

13. In early December, Indian troops led by the 9 Infantry Division and supported by the Mukti Bahini, launched a coordinated advance on the town of Jessore in East Pakistan. Facing strong enemy resistance and navigating narrow streets, the Indian forces advanced methodically using guerrilla tactics. By 3 December, their progress compelled Pakistani forces to fall back. Nearby posts at Durga Barkati and Charbari were cleared by 4 December despite heavy fog, making way for an entry into Jessore. As a section of the Indian troops fought Pakistani forces on the town's outskirts, the 32 Brigade captured the Chaugacha-Jessore Road and pierce into the fortified Jessore cantonment by 7 December.

Map of modern Bangladesh with the key locations in tact

Battles of Darsana and Jhenaidah

14. Defended by a Pakistani battalion with tanks, mortars, and guns, Darsana was vital for securing the Hardinge Bridge, which in turn was a gateway to key routes inside East Pakistan. On the night of 2-3 December, after Indian troops of 22 Rajput pierced through enemy defences and reached Akandabaria, they made an advance on enemy bunkers at Darsana. The 5/1 Gorkha Rifles, with armoured support, opened an assault from an adjacent direction, as an Indian Engineer unit cleared a minefield to make way for the tanks. The coordinated campaign helped secure Darsana after neutralising the Pakistan Army's capabilities at the post.

15. On December 5, troops of the 4 Mountain Division were tasked to capture the towns of Jhenaidah and Magura to secure access to vital highways and ferry sites on the Madhumati and Padma Rivers. While a unit blocked off 57 Infantry Brigade of the Pakistan Army, another established a bridgehead across the Chitra River to facilitate the advance of artillery. After closing in on Jhenaidah, India's troops launched a surprise attack on the Pakistani defences in the town on 6 December and captured the town by the following day at a heavy cost for the enemy. By 8 December, 62 Mountain Brigade captured Magura by advancing via Naldanga. Brigadier Antony R. Mishan was awarded a Maha Vir Chakra leading the effort.

Battle of Madhumati River

16. From Magura, the 62 Mountain Brigade advanced towards Faridpur, reaching the Madhumati River's west bank by 9 December. Joined by the 7 Mountain Brigade, the Indian forces managed to fend off heavy enemy resistance and cross the river by 14 December, establishing roadblocks around Kamarkhali to isolate the Pakistani troops. When the Pakistanis' attempts to break through failed, they surrendered. The surrender at Kamarkhali was substantial, including about 3,000 enemy troops and the General Officer Commanding of the 9 Pakistan Infantry Division. On December 16, after clearing the far side of the river, Indian forces resumed their advance towards Faridpur.

An Indian tank rolling to Khulna, near Jessore (left); Indian troops crossing River Madhumati

Capture of Chittagong and Bogra

17. India's 83 Mountain Brigade was, meanwhile, tasked with capturing the major eastern city of Chittagong. Starting the operation from Sitakund on 13 December, they secured Sitalpur and Nazirhat with minimal resistance by 15 December and advanced to Bulako. By the following day, they forced the Pakistani troops around Chittagong and in the city's cantonment to surrender after some resistance. The 8 Bihar Regiment was then assigned to uphold law and order in the area.

Locals celebrate the liberation of Chittagong by Indian forces

18. Bogra was a key communication hub in East Pakistan, serving as the tactical headquarters of the Pakistan Army's 16 Infantry Division. The fortified town was well-connected by rail, road, and air to Dacca and other towns. The Indian Army made an advance on it on 14 December, with 5/11 Gorkhas and 6 Guards, aided by armoured columns assaulting Bogra from the north and the east. Supported by IAF strikes, the Indian tanks penetrated the town without much resistance, but the infantry faced a stiff challenge

in close quarters combat on the streets. It took armoured, air, and infantry attacks until 17 December to secure the town.

Battle of Sylhet

19. After Pakistani forces blew up the Meghna River bridgehead to prevent Indian troops from crossing it, a remarkable heli-bridge (chain of helicopters) was flown to airlift hundreds of Indian troops and supplies to the strategically vital town of Sylhet. On the night of 13 December, the airlifted 4/5 Gorkha Rifles assaulted the Sylhet railway station and chased away fleeing Pakistani troops to the north bank of the Surma River. Another unit comprising 5/5 Gorkha Rifles and Mukti Bahini guerrillas cleared nearby villages like Sarighat and Chandghat of the enemy. The Gorkha troops then captured key infrastructure in the town, including a gas supply hub and a radio station, before converging on the cantonment. By 17 December, 6,400 enemy troops surrendered, despite being 20 times the Indian force.

Battles of Mainamati and Jamalpur

20. On 4 December, the Indian Army prepared to target the Lalmai Hills area. Its 61 Mountain Brigade moved ahead north and captured villages like Rajapur and Jafargunj by 7 December, establishing blockades. On the backfoot, the Pakistan Army redirected its troops from Lalmai and the nearby town of Comilla towards the old town of Mainamati. This permitted Indian troops to capture Comilla without much resistance and advance on Mainamati. After putting up some resistance against a renewed assault by the 61 Mountain Brigade, Pakistani troops began to retreat from Mainamati, causing its fall by 9 December. Form there, the Indians reached the Meghna River and secured certain some tactical points on its bank.

21. Meanwhile, 6 Sikh Light Infantry, 1 Maratha Light Infantry, and 13 Guards had launched an assault on the garrison town of Jamalpur. The Maratha troops faced heavy resistance with gun and artillery fire, suffering losses in a counter-ambush. However, they continued to push on, and after being reinforced by the remaining ground troops and IAF air support, the enemy troops, especially the 31 Baluch, suffered severe losses and even eventually surrendered on 11 December. In the capture of Jamalpur, over 300 Pakistani soldiers were killed and 379 captured

Indian Army officers at Sylhet railway station after its capture

Pakistani troops laying down their arms at Mainamati

INDIAN AIR FORCE'S INVOLVEMENT

Western Theatre

22. Pakistan Air Force (PAF) launched **Operation Chengiz Khan** with daytime strikes on 11 Indian military targets, including airbases and radar installations in Punjab, Jammu and Kashmir, and Rajasthan. In reply, the IAF began operations at midnight, targeting enemy Sabre fighters and expanding to massive airstrikes on enemy targets the next morning. In one such action, on 8 December, Hawker Hunters from Pathankot struck the Pakistani airbase at Murid, destroying five jets. The IAF's focus in the western theatre was largely defensive, while in the east, it aimed to neutralise PAF's capabilities. On the west, the Battle of Longewala was a notable achievement, where six Hunters from Jaisalmer destroyed or damaged over 50 Pakistani tanks on 5 December.

Eastern Theatre

23. The IAF's role in the east was led by Eastern Air Command and some units from the Central Air Command. The PAF had limited resources in East Pakistan, meanwhile, with just one major airbase at Tejgaon with a few F-86 Sabre jets fully operational when the war broke out. Further, its satellite and monitoring bases were also inadequately equipped. The IAF launched its initial raids in the eastern theatre with Hunters, MiG-21 fighters, and Canberra bombers against enemy air- and army bases. Transport and helicopter fleets, including Dakotas, Antonov An-12s, and C-119 Packets, supported the Indian Army's offensive on the ground. In a vital sortie, four IAF MiG-21s bombarded the Governor House in Dacca on 14 December, severely denting the morale of Pakistani forces before their surrender.

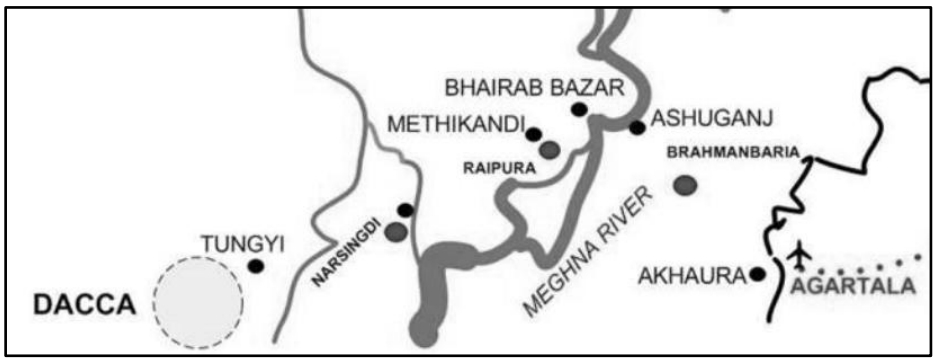
Tangail Airdrop

24. The Tangail Airdrop was a landmark operation on 11 December. 2 Parachute Regiment, under Lieutenant Colonel Kulwant Singh Pannu, targeted Tangail near the intersection of the Ganga and Jamna Rivers to block the retreating 93 Infantry Brigade of Pakistan Army from reaching Dacca. Over 750 Indian paratroopers were airlifted from West Bengal in six An-12s, 22 Dakotas, and 20 Packets. They successfully captured the Poongli bridge on the Jamalpur-Tangail road in four hours, cutting off the enemy brigade's route. By 12 December, 2 Para joined the Maratha Light Infantry to ambush Pakistani troops, as the IAF provided extensive bombing cover. Pakistani Brigadier AQ Khan was captured with 26 other officers. The action allowed 2 Para to become the first Indian force to march into Dacca.

Heli-borne Operations

25. IAF conducted its first large-scale heli-borne operations in this war, ensuring rapid troop movement across East Pakistan's riverine terrain. With air supremacy gained early in the east, these missions operated safely and with commendable results. From 7 to 13 December, the 105 and 110 Helicopter Units, comprising 14 Mil Mi-4 helicopters, were involved in two crucial

operations. Between 7 and 9 December, as part of the **Sylhet Heli-lift**, 12 helicopters airlifted 254 troops of the 4/5 Gorkha and 400 kg. of equipment to Sylhet dodging heavy enemy fire. The mission, which saw Indian helicopters fly in intervals of a few minutes, helped the Indian Army surprise Pakistan's 313 Brigade and capture Sylhet. Then, after realising that the Pakistani 27 Brigade had blown up the bridge on the Meghna River, 15 Indian helicopters shifted to lifting troops of the 311 Mountain Brigade (along with thousands of kg. of equipment daily) from Brahmanbaria to Raipura and Narsingdi between 9 and 13 December with over 200 sorties. This allowed Indian troops to circumvent an enemy stronghold in Ashuganj, capture Narsingdi and Bhairab Bazar, and make a swift advance westward to Dacca. This was known as **Operation Cactus Lilly or the Meghna Heli-bridge**. For leading these actions, Group Captain Chandan Singh was awarded the Maha Vir Chakra.



A map of the areas involved in India's heli-borne operations

The airdrop over Tangail

IAF Mi-4 helicopters forming the Meghna Heli-bridge

MAJOR GENERAL SAGAT SINGH

The son of a First World War veteran, Major General Sagat Singh began his military career during the Second World War as part of the Bikaner State Forces. After seeing action in the liberation of Goa and the War of 1965, he ascended to lead the IV Corps during the War of 1971. Known for his command of heli-borne missions and logistics, he played a crucial role in conceptualising the Meghna Heli Bridge, leading to Dacca's capture. He was widely regarded for his strategic acumen, going on to be honoured with a Padma Bhushan.

INDIAN NAVY'S INVOLVEMENT

26. In November 1971, India established INS Dwarka near Karachi to prepare for retaliating against Pakistan's anticipated aggression. A Task Group, comprising Vidyut Class missile boats, as well as Arnala and Veer Class corvettes, planned to attack Karachi. On 4 December, a day after Pakistan attacked Indian airbases, the Task Force, called '25 Killer Squadron' and led by Commander Babru Bhan Yadav, advanced towards Karachi. Engaging the surprised Pakistan Navy, *INS Nirghat* sank the destroyer *PNS Khaibar*, as *INS Nipat* sank a merchant vessel and damaged *PNS Shah Jahan*. *INS Veer* then destroyed the minesweeper, *PNS Muhafiz*. While withdrawing, an Indian missile boat also bombed a part of the Karachi port. In spite of a risky delay in the return of *INS Kiltan*, the daring action, codenamed **Operation Trident**, proved to be a major Indian success in the early days of the war. The squadron regrouped at Saurashtra by 5 December.

27. Operation Trident's success, marked by the sinking of three Pakistani ships, highlighted India's naval strength. It showed the utilities of resource optimization, contingency planning, and timing in inflicting a severe early setback on Pakistan Navy during the war. Commander Yadav received the Maha Vir Chakra for his leadership. Encouraged, India launched **Operation Python** on December 8 to strike Karachi's naval defences even further. The operation's element of surprise proved the effectiveness of high-risk decision-making led by Admiral SM Nanda.

An Arnala Class corvette

CAPTAIN MAHENDRA NATH MULLA

Having joined the Indian Navy in 1948 and seen extensive service, Captain Mahendra Nath Mulla was commanding *INS Khukri*, a frigate, when it was hit by torpedoes from an enemy submarine off the Diu coast on 9 December 1971. With exceptional valour, Captain Mulla refused to abandon ship, leading the massive rescue effort that followed while prioritising his crew. He even gave his own life-saving gear to an evacuating sailor. He was last seen going down with the frigate and received a posthumous Maha Vir Chakra.

THE US SEVENTH FLEET AND THE SOVIET RESPONSE

The US, militarily aligned with Pakistan then, sent Task Force 74 of its Seventh Fleet, led by the aircraft carrier USS Enterprise, to the Bay of Bengal to deter India's war effort in the final days of the conflict. This posed a significant threat to India, as the Task Force was seen to be an immensely capable naval force. In response, the Soviet Union, bound by its Treaty of Peace, Friendship, and Cooperation of August 1971 with India, deployed a nuclear-armed submarine to shadow the US fleet. This in turn halted the advance of the Seventh Fleet and prevented a potential US intervention. Gaining vital, timely naval support from the Soviet Union greatly strengthened India's position in the Indian Ocean.

PART IV : OUTCOMES AND AFTERMATH

28. The conflict ended when the capture of Dacca by the Indian troops forced the Pakistan Army to surrender on 16 December 1971. It marked a decisive and monumental military victory for India, whereby it managed to ensure the liberation of an entire half of its enemy's territory. The war led to the replacement of East Pakistan by Bangladesh on the global map, bringing honour to the countless Bengali and Indian lives lost for the cause. The war humbled Pakistan militarily and diplomatically, with the Simla Agreement that followed in 1972 replacing the 1949 Ceasefire Line in Jammu and Kashmir with a more concrete Line of Control.

Lt. Gen. AAK Niazi (centre) signing the instrument of surrender on 16 December 1971 before Lt. Gen. JS Aurora of India

29. In an act of benevolence, India also released 93,000 Pakistani prisoners of war along with about 15,000 sq. km. of captured enemy territory. The war brought several vital lessons for India, highlighting the importance of sufficient military preparedness; coordinated

military strategies and their timely implementation; fighting a conflict in support of a just cause; strategically well-thought international alliances; and decisive political will, as shown by the Indira Gandhi government.

CONCLUSION

The War of 1971 followed a prolonged military suppression of East Pakistan's Bengali population, which caused a significant refugee crisis for neighbouring India. The war began with Pakistani airstrikes on India, prompting Indian forces to respond decisively against West and East Pakistan. The Indian armed forces showing exceptional strategy, firmness, and readiness. Despite challenges of terrain and resistance, India advanced swiftly to capture Dacca, compelling a surrender and Bangladesh's birth. This war also bolstered India's relations with the Soviet Union, deterring a potential US intervention in Pakistan's favour.

SUMMARY

- The India-Pakistan War of 1971 was triggered after months of ruthless persecution of East Pakistan's Bengali people by the state.
- The campaign, intended to militarily crush Bengali nationalism, caused a massive refugee crisis on India's eastern borders.
- The war was caused by Pakistani airstrikes against military targets in India, triggering a swift response on land, at sea, and in air by India.
- The conflict saw two theatres open up in the west and the east, where India's armed forces fight with strategic and material preparedness.
- Overcoming of harsh terrain and resistance of East Pakistan, India's troops and aircraft rapidly advanced towards Dacca, forcing the enemy to surrender within 13 days and liberate Bangladesh.

ASSESSMENT EXERCISE

Multiple Choice Questions

Q1. What was the primary cause of the 1971 India-Pakistan War?

a) East Pakistan's demand for independence

b) Indian military aggression

c) Religious conflict

d) Dispute over Kashmir

Q2. How long did the 1971 India-Pakistan War last for?

a) 15 days

b) 13 days

c) 17 days

d) 10 days

Q3. Who was the Indian Army Chief during the 1971 India-Pakistan War?

a) General K.M. Cariappa

b) General Sam Manekshaw

c) General Bipin Rawat

d) General Kodandera Subayya Thimayya

Q4. During the 1971 war, which operation involved the airlifting of 656 troops and 8,200 kg of equipment after Pakistan destroyed a bridge over the Meghna River?

a) Sylhet Heli-lift

b) Brahmanbaria Airlift

c) Meghna Heli Bridge

d) Kulaura Lift

Q5. Which Indian brigade, supported by Kilo Force, was assigned the mission to capture Chittagong during the 1971 India-Pakistan War?

a) 54 Mountain Brigade

b) 41 Infantry Brigade

c) 83 Mountain Brigade

d) 7 Armoured Brigade

Q6. Which of the following was Not an operation conducted during the 1971 India-Pakistan War?

a) Operation Vijay

b) Operation Trident

c) Operation Python

d) Operation Jackpot

Q7. Which Indian brigade was awarded the Battle Honour for its role in the Battle of Dera Baba Nanak during the 1971 Indo-Pak War?

a) 54 Infantry Brigade

b) 86 Infantry Brigade

c) 15 Infantry Brigade

d) 71 Armoured Brigade

Q8. Which country supported India diplomatically and militarily during the 1971 India Pakistan War?

a) United States

b) China

c) Soviet Union

d) United Kingdom

Q9. True or false. Operation Searchlight, launched on March 25, 1971, was a peaceful initiative aimed at resolving political tensions in East Pakistan.

a) True

b) False

Q10. True or false. The Tangail airdrop during the 1971 India-Pakistan War was carried out by the 2nd Battalion of the Parachute Regiment under the command of Lieutenant Colonel Kulwant Singh Pannu.

a) True

b) False

Short Answer Questions

Q1. When did the 1971 India-Pakistan War begin?

Q2. Which Indian regiment led the advance on Bogra during the 1971 India-Pakistan War?

Q3. Outline the key outcomes of the 1971 India-Pakistan War.

Long Answers Questions

Q1. What terrain challenges did the Indian Army encounter in both the eastern and western theatres during the 1971 India-Pakistan War?

Q2. How did Lieutenant Arun Khetarpal contribute to the victory in the tank battle during the 1971 India-Pakistan War?

Q3. Describe the key events of the Battle of Jessore during the 1971 India-Pakistan War.

MH IV (SD/SW)

CHAPTER- IV : OP VIJAY (KARGIL), 1999

India artillery men fire 155mm Bofors guns at enemy positions from a gun emplacement in Drass, Kashmir 22 June 1999

TEACHING INSTRUCTIONS

Period(s) : **02**

Type : **Lecture and discussion**

Year : **SD/SW (Second Year)**

Training Aids : **Classroom, computer with OHP, screen, pointer staff, presentation or videos, script or book flagged or lesson plan in file, and chart / poster**

Time-plan:

- Introduction : 2 mins.
- Part I : Historical Background : 6 mins.
- Part II : Prelude and Cause : 6 mins.
- Part III : Key Battles and Operations : 20 mins.
- Part IV : Outcomes and Aftermath : 6 mins.

INTRODUCTION

1. The Kargil War of 1999, fought between India and Pakistan in the tough mountain conditions of Jammu and Kashmir, about 16,000 feet above sea level, is known as the “world’s highest war”. After an escalation of Pakistan-supported separatist militancy in Jammu and Kashmir in the early 1990s, the war was triggered by a major military infiltration by Pakistani across the Line of Control (LoC) into Indian territory. The war lasted between May and July 1999.

2. The infiltration of Jammu and Kashmir from Pakistan was carried out by its regular troops disguised as mujahideen fighters, and coincided with India’s diplomatic efforts to de-escalate bilateral tensions created by the nuclear tests conducted by both countries in 1998. Pakistan’s objectives in the war, which focused on the strategically crucial Kargil, Dras, and Mushkoh Valley sectors, included cutting off the highway link between Kashmir and Ladakh; keeping Indian troops away from Siachen Glacier; and internationalizing the dispute over Kashmir further.

3. India's military response, named Operation Vijay, was a decisive effort to expel intruders using a combination of mountain warfare, artillery barrages, air strikes, and naval deterrence. The Indian Army launched coordinated infantry, air, and artillery offensives against Pakistani forces occupying strategic high-altitude positions in Kargil and Dras, including Tololing, Tiger Hills, and Peaks 5140 and 4875. Air and naval operations were conducted under Operation Safed Sagar and Operation Talwar, respectively. Key battles took place at Tololing, Tiger Hills, and Points 5140 and 4875. Spanning May to July 1999, the conflict concluded with India reclaiming all occupied territories and restoring pre-war conditions, marking a decisive military victory.

OVERVIEW

(a) Introduction

(b) Part – I : Historical Background

(c) Part – II : Prelude and Cause

(d) Part – III : Key Battles and Operations

(e) Part – IV : Outcomes and Aftermath

LEARNING OBJECTIVES

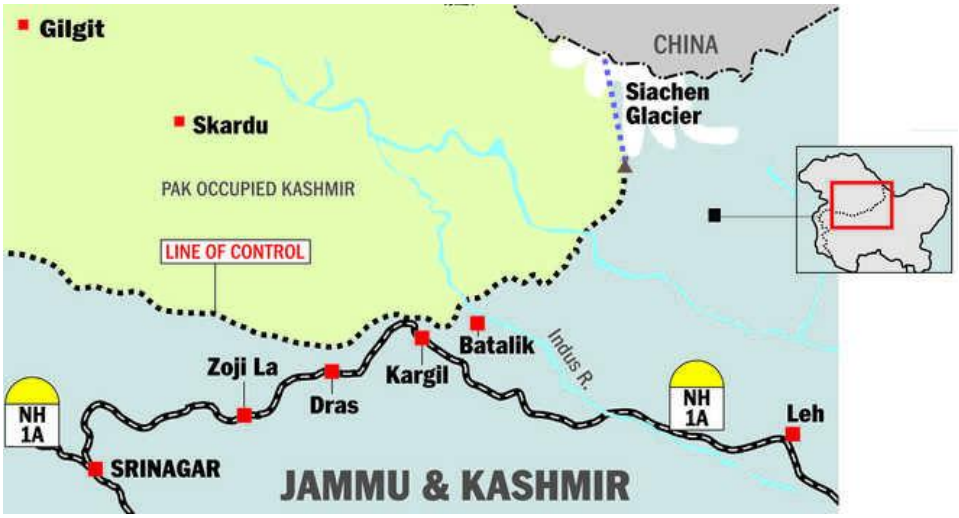
- To understand the conflict’s background, prelude, and cause(s).
- To become aware of the strategic importance of the Kargil region.
- To appreciate the perseverance of the Indian armed forces in one of the highest warzones in the world against well-prepared infiltrators.
- To know about the conflict’s key battles and heroic figures.

Geography

The Kargil, Dras, and Mushkoh sectors in Ladakh feature snowy peaks (that are over 16,000 feet tall, deep gorges, and narrow valleys. Strategically critical locations include Tololing, Tiger Hills (overlooking NH1A), Batalik, Mushkoh valleys, and high-altitude posts such as Points 5140 and 4875. Extreme winters (-30°C) compel the seasonal vacating of forward posts by the Indian Army. In 1999, Pakistan exploited this, infiltrating the emptied Indian posts across the porous Line of Control (LoC). Given the region's limited connectivity, Pakistan targeted NH1A, aiming to cut off India's key supply and transport route to Ladakh and Siachen. For India, the infiltrations highlighted the region's strategic vitality.

A map of the areas held by infiltrators in the Kargil, Dras, and Mushkoh sectors

Strategic Importance of NH-1A



4. NH-1, which includes the route of NH-1A, is part of the historic Grand Trunk Road built by Sher Shah Suri, adding to its historical and cultural importance NH-1A, connecting the Kashmir Valley to Jammu and the rest of India, held strategic importance as a vital supply route and lifeline for the region, particularly for connecting Leh to Kashmir Valley through the Zoji La Pass. Strategic significance of NH-1A is as under:-

(a) **Connectivity and Supply Route**. NH-1A, now a part of the broader NH-1, served as a crucial link between the Kashmir Valley and the rest of India, including Jammu, and was vital for supplying the remote Leh region.

(b) **Zoji La Pass**. The highway's route through the Zoji La Pass, a high-altitude mountain pass, made it a challenging but essential route for connecting Leh to the Kashmir Valley, especially during the winter months when other routes might be closed.

(c) **Lifeline for Ladakh**. NH-1, which includes the route of NH-1A, is considered the lifeline of the Ladakh region, providing access to goods, services, and people.

(d) **Defence**. The highway's importance for defense and security is evident, as it facilitated the movement of troops and supplies to the region, which is strategically important due to its proximity to the Line of Control (LoC) and the India-Pakistan border.

PART I : HISTORICAL BACKGROUND

5. India and Pakistan emerged as separate nations in August 1947, following the end of British colonial rule. Since then, they have had strained relations, mainly revolving around border disputes, particularly in Jammu and Kashmir. Pakistan's attempt to seize the region militarily led to the 1947–48 war. Though Jammu and Kashmir legally acceded to India, Pakistan retained illegal control over a third of its territory. Subsequent wars in 1965 and 1971 reinforced Pakistan’s focus on the region, even after losing East Pakistan, which became Bangladesh. The 1972 Simla Agreement established the Line of Control (LoC) and sought to ease tensions, but Pakistan continued its efforts to claim Jammu and Kashmir.

6. By the 1980s, Pakistan shifted to asymmetric warfare, arming militant groups to destabilize the region. This strategy fueled separatism and escalated violence. Efforts like the Simla Agreement and others aimed to restore peace, but Pakistan’s continued aggression and support for militancy deepened the conflict, leaving relations strained and the dispute unresolved.

7. During the Soviet-Afghan War, Pakistan aligned closely with the United States, forging strong connections with militant groups. After the Soviet withdrawal, these groups and surplus arms were redirected into Kashmir, intensifying separatism and terrorism in the region. This escalation led to the massacre and forced exodus of around 100,000 Kashmiri Pandits in 1990, marking a tragic chapter in Jammu and Kashmir's history. Earlier attempts at peace, like the Tashkent Agreement (1966), sought to restore diplomacy after two wars. Following this, the Shimla Agreement (1972) established the Line of Control (LoC) in Jammu and Kashmir and required both nations to avoid military aggression.

8. By 1998, nuclear tensions rose as India and Pakistan declared themselves nuclear powers. Pakistan conducted six nuclear tests after India’s Pokhran-II trials, escalating regional security concerns. General Pervez Musharraf’s belief in limited conflict under

nuclear deterrence inspired Operation Badr, leading to the 1999 Kargil War. Despite the Lahore Declaration (1999), which aimed to prevent accidental nuclear incidents and reaffirm peaceful dispute resolution, repeated violations of agreements by Pakistan's military strained relations, underscoring the ongoing conflict.

The Lahore Declaration

9. The Lahore Declaration, signed on February 21, 1999, by Indian Prime Minister Atal Bihari Vajpayee and Pakistani Prime Minister Nawaz Sharif, was a significant step toward easing tensions and fostering peace between the two nations. India and Pakistan conducted their respective nuclear tests in 1998, which raised global concerns regarding the historical tensions between the neighbouring countries. Indian Prime Minister Atal Bihari Vajpayee decided to travel to Pakistan and sign the historic 1999 Lahore Declaration with Pakistani PM Nawaz Sharif.

10. The declaration outlined key steps both countries should take to improve bilateral relations and resolve outstanding issues, particularly the Kashmir conflict. The 1999 Lahore Declaration laid out various objectives, and both countries agreed to reaffirm their commitment to the principles and purposes of the United Nations Charter and their determination to implement the Simla Agreement in letter and spirit.

11. **Key highlights of the 1999 Lahore Declaration**. The key highlights of the Lahore Declaration are as under: -

(a) **Nuclear and Conventional Safety**: The two countries emphasised the need to take immediate steps to ensure the safe and authorised use of nuclear energy and reduce the risk of accidental or unauthorised use of nuclear weapons.

(b) **Kashmir Issue**. India and Pakistan agreed to intensify their efforts to resolve all conflicts related to Kashmir, through proper diplomatic channels.

(c) **Confidence-Building Measures**: The two sides also agreed to keep the channels of communication open and engage in a structured dialogue to address all issues of concern to build mutual confidence.

(d) **Commitment To Multilateralism**. Nawaz Sharif and Atal Bihari Vajpayee emphasised their commitment to the South Asian Association for Regional Cooperation (SAARC), the multilateral body with the objective of increasing the welfare of people in South Asia.

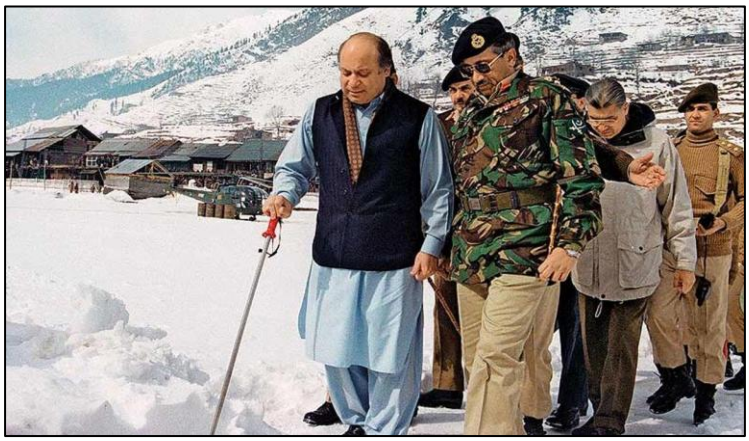
(e) **Terrorism**. The Lahore Declaration also called for strict actions against all stakeholders of terrorism in all its forms and manifestations.

PART II: PRELUDE AND CAUSE

12. Post 1965 and 1971 Indo-Pak War; the Tashkent & Shimla agreements were signed for withdrawal of troops to the positions held before 05 Aug 1965. Also, various Confidence Building Measures (CBM) were initiated in the agreements to deescalate the tension on the borders. CBM were also initiated in the Lahore Declaration. During winters, India and Pakistan Army had an understanding of vacating posts in the higher reaches of the mountain ranges due to inhospitable weather conditions. However, Pakistan Army breached all the norms of the Tashkent & Shimla Agreement and Lahore Declaration.

13. The Kargil War of 1999 was sparked by Operation Badr, a military plan to seize strategic heights in the Kargil, Dras and Mushkoh sectors of Jammu and Kashmir. India's Army Chief, General Ved Prakash Malik, viewed it as a decades-old plan based on 1965's Operation Gibraltar, which was strengthened by Pakistan's newly gained nuclear status. Planned after General Musharraf became Pakistan's Army Chief in 1998, Operation Badr was devised in secrecy, with details known only to senior military officials. Pakistani troops were sent over the Line of Control (LoC) disguised as mujahideen to capture Indian posts vacated during the winter. These troops were trained in mountain warfare to suit the operation.

14. From February to May 1999, over 5,000 troops of Pakistan's Northern Light Infantry (NLI) and Special Services Group (SSG) occupied 132 Indian locations across 130 km along the Kargil-Dras area, with elevations of up to 16,000 feet. The positions were fortified with bunkers, mines, and artillery, making this Pakistan's first major incursion since its response to India's securing of Siachen Glacier in 1984. By taking these high-altitude areas, Pakistan aimed to dominate National Highway 1A (NH1A), the critical Indian transport route to Ladakh and Siachen. The strategy sought to divert Indian troops, expose the Siachen Glacier, capitalize on India's avoidance of full-scale war, and exploit its nuclear deterrence to aggravate militancy in Jammu and Kashmir and internationalize the region.



Nawaz Sharif along the LoC with Gen. Musharraf (right) in February 1999

PART III : KEY BATTLES AND OPERATIONS

Initial Response

15. Pakistan's moves were first reported on 3 May 1999 by local shepherds in the Batalik subsector, with similar alerts following from Drass. By 6 May, 121 Brigade and the Indian Air Force (IAF) conducted reconnaissance but faced enemy fire. On 10 May, Pakistani artillery shelling destroyed a major Indian ammunition depot in Kargil, disrupting

mobility on NH1A in the Kaksar sub-sector. As the scale of infiltration remained unclear, Indian patrols intensified. On 15 May, a five-man patrol led by Lieutenant Saurabh Kalia of 4 Jat Regiment from Bajrang Post was ambushed, captured, subjected to torture, and returned with bodies mutilated. In trying to secure the Bajrang Post, Lieutenant Amit Bharadwaj was killed, confirming the need for a stronger response.

LIEUTENANT SAURABH KALIA

Lieutenant Saurabh Kalia, a valiant officer of the Indian Army, was among the first to report the infiltration of Pakistani forces during the Kargil War in 1999. Born on June 29, 1976, in Amritsar, Punjab, he excelled academically and joined the Indian Military Academy in 1997. Commissioned into the 4 Jat Regiment, he was stationed in the Kargil sector. On May 15, 1999, while patrolling the Bajrang Post at high altitudes, he and his team encountered Pakistani forces. Despite their bravery, they were captured after running out of ammunition, marking the beginning of a tragic chapter in the conflict.

Held captive for 22 days, Lieutenant Kalia and his team endured inhumane torture before their bodies were returned to India. The brutality they faced shocked the nation and highlighted the need for adherence to international conventions on the treatment of prisoners of war.

LIEUTENANT AMIT BHARADWAJ

Lieutenant Amit Bharadwaj, displayed extraordinary courage during the Kargil War of 1999. Commissioned into the 4 JAT Regiment, he was tasked with leading a search mission to locate Lieutenant Saurabh Kalia and his patrol team, who had been captured by enemy forces. On May 17, 1999, Lt. Bharadwaj led a team of 30 soldiers to the Bajrang Post, where they encountered a larger enemy force. Despite being outnumbered, he provided cover fire to ensure the safe retreat of his troops. His bravery resulted in the elimination of over ten infiltrators, showcasing his leadership and dedication.

Tragically, Lt. Bharadwaj sustained severe injuries during the intense exchange of fire and succumbed to their wounds. Lt. Bharadwaj's body was recovered 57 days later, with his weapon still in his hand—a testament to his unwavering commitment to duty.

Operation Vijay

16. Operation Vijay was a high-intensity operation in high-altitude Mountains, with a fairly large amount of unconventional artillery support. On 23 May, Indian Army began Operation Vijay to repel the Pakistani forces, having received approval from India’s Cabinet. The 121 Brigade was assigned to defend Mushkoh, Dras, and Kaksar, while 70 Brigade was

mobilized for Batalik. Brigades 56, 79, and 192 soon joined them, supported by the artillery brigade of 8 Mountain Division. The initial objectives were to retake the Tololing and Tiger Hills to dominate NH1A; Jubar Ridge in Batalik to reduce threats to supply routes towards the Siachen Glacier; and Turtuk Valley, which lay adjacent to Pakistani and Chinese areas. The strategic Points 5140 and 4875 also required retaking. However, attempts by Indian troops to recapture Tololing and Tiger Hills between 18 and 22 May were obstructed by enemy shelling.

MAJOR RAJESH ADHIKARI

Having led an early effort to retake Tololing Ridge in May, Major Rajesh Singh Adhikari was part of an advance by 18 Grenadiers. After mounting a bold counterattack against enemy firing, the 28-year-old Major Adhikari was injured by machine gun fire while approaching Tololing Hill's top. Yet, he crawled up to an enemy bunker and destroyed it with a grenade before being killed by retaliatory fire. He received a Maha Vir Chakra posthumously.

Operation Safed Sagar

17. Until 21 May, the Indian Air Force (IAF) focused on reconnaissance, deploying Mi-17 helicopters, and MiG-21 and Canberra aircraft. While facing two brigades of Pakistani troops illegally occupying strategic positions, the Vajpayee Cabinet approved airpower under Operation Safed Sagar, but disallowed crossing of the LoC. Despite incomplete intelligence, IAF's 9 and 51 Squadrons launched MiG-21 and MiG-27 strikes on the Tololing and Tiger Hills on 26 May, surprising the intruders. When ground fire increased, the IAF shifted to reconnaissance sorties, showing flexibility. 17, 108, and 221 Squadrons joined in soon, but close attacks on high-altitude targets kept pilots vulnerable to ground fire and engine failures.

18. In a change of tactics, Sepecat Jaguars of 5 and 14 Squadrons, and Dassault Mirage-2000s of 1 and 7 Squadrons started precision bombings while avoiding ground fire. Night bombings followed by June, with 221 Squadron using GPS to evade Stinger missiles and Litening targeting pods for better accuracy. Between 3 and 13 June, 125 IAF sorties aided the recapture of Tololing Hill and Point 5140. In Batalik, Mirages and MiG-27s targeted a logistics camp at Munthadalo and a fuel dump at Kukarthang, crippling enemy supplies. By July, airstrikes over Tiger Hill that destroyed enemy communication assets, hangar, helipad, and a logistics base proved crucial for the point's recapture. Further, more than 2,000 helicopter sorties were flown for evacuations, transport, and supplies.

SQUADRON LEADER AJAY AHUJA

Upon receiving the news of Flight Lieutenant K. Nachiketa Rao's MiG-27 crashing due to engine failure during a raid over Batalik, Squadron Leader Ajay Ahuja was dispatched to spot the crash site. Amidst the survey, his aircraft was struck by a Stinger missile fired by the infiltrators. Following ejection, however, Squadron Leader Ahuja was captured on enemy territory and then brutally killed on 27 May.

WING COMMANDER ANIL K. SINHA

Wing Commander Anil K. Sinha survived a similar Stinger attack while flying an offensive sortie on his Mi-17 helicopter over Tololing the next day. They were the only two IAF officers to receive Vir Chakras for the Kargil War. Eventually, Flight Lieutenant Rao returned home from enemy captivity.

A MiG-27 of IAF's 9 Squadron being armed with a 1000-lb. bomb

Battles of Tololing Hill, Point 5140, and Three Pimples Complex

19. The capture of Tololing, pivotal during the Kargil War, was led by 2 Rajputana Rifles, supported by 18 Garhwal Rifles and significant artillery regiments. The operation began after comprehensive reconnaissance and preparation by 2 Rajputana Rifles, under the command of Lieutenant Colonel M B Ravindranathan. On June 12, 1999, a heavy artillery barrage destroyed several enemy bunkers, catching the Pakistani forces off guard.

20. That night, C Company, led by Major Vivek Gupta, and D Company, led by Major Mohit Saxena, launched the assault. Despite intense enemy resistance and grievous injuries, Major Gupta heroically led his men to secure Tololing Top before making the ultimate sacrifice, earning the Maha Vir Chakra posthumously. D Company captured Point 4590, securing a vital foothold.

NAIK DIGENDRA PARASWAL

Naik Digendra Kumar Paraswal was part of 2 Rajputana Rifles in its offensive on Tololing Hill. In the assault, despite being injured by a bullet wound and losing his commanding officer, Major Vivek Gupta, Naik Paraswal kept firing his light machine gun at enemy bunkers. Killing dozens of enemy troops, his relentless firing allowed 2 Rajputana Rifles to advance and outshine the enemy in close combat. Naik Paraswal was awarded a Maha Vir Chakra.

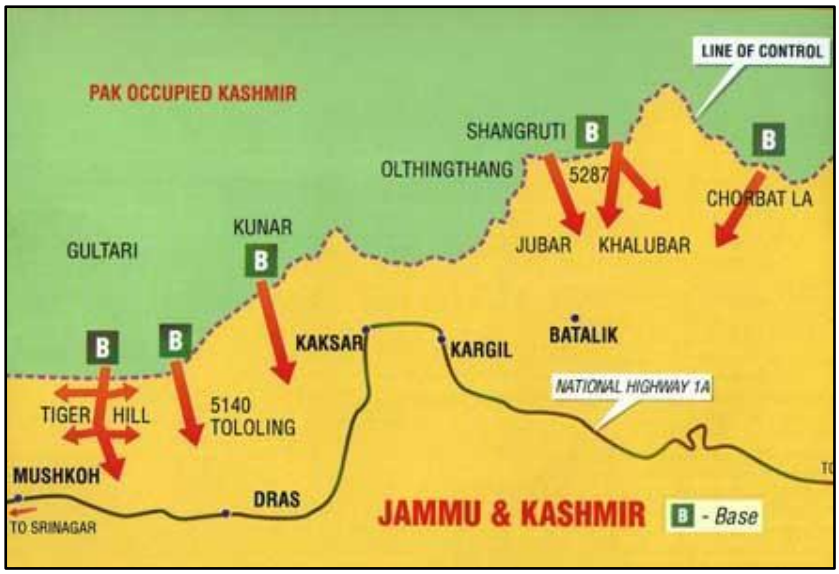
21. The operation also witnessed bravery from Subedar Bhawar Lal, who, despite severe injuries, led his platoon to capture Tololing Top. He, too, sacrificed his life and was awarded the Vir Chakra posthumously. Artillery support played a crucial role, repelling counterattacks and enabling further advances.By June 14, 1999, Tololing and the Hump were captured, setting the stage for the assault on Point 5140. After intense all-night fighting, Tololing Hill was regained the next morning, with dozens of casualties, including the loss of Major Gupta.

22. 13 Jammu and Kashmir Rifles, moved to relieve the exhausted 2 Rajputana Rifles, were tasked with capturing the remainder of Tololing Ridge, including Point 5140. Captain SS Jamwal and Captian Vikram Batra stood ready, watching the devastating effect of the Bofors guns as they fired directly onto the enemy bunkers at Point 5140. By 2030 hours on June 19th, the relentless barrage had successfully forced the enemy deeper into their bunkers. With the path partially cleared, the two companies began their ascent towards their objective—a steep climb of 500-600 meters—anticipating it would take about three hours to reach the target.

23. The advancing troops were supported by artillery fire, which struck perilously close to their position to ensure maximum impact on the enemy. After six grueling hours, the soldiers had reached within 20 meters of the enemy bunkers. Their silent approach confused the enemy, leading them to believe the attack was concentrated in the west and northeast, where heavy gunfire exchanges were occurring. Exploiting this misjudgment, Bravo Company advanced swiftly to the first sangar, catching the enemy completely off guard. In the ensuing firefight, three enemy combatants were neutralized. On 20 June, following intense gunfighting, grenade bombing, and close combat, Lieutenant Batra was injured but victorious, as he radioed '*Yeh Dil Maange More*' (the heart wants more) to signal the retaking of Point 5140.

24. The Three Pimples Complex on Marpola Ridge posed a significant threat to NH1A during the Kargil War. Recognizing its strategic importance, the regrouped 2 Rajputana Rifles carried out reconnaissance on 20 June, uncovering the need to first secure Point 4700 before reaching Point 5060. Further findings revealed that capturing the Three Pimples Ridge alongside Point 4700 would be vital in the initial phase of operations, with subsequent efforts

focusing on Point 5100 for quicker access to the Line of Control (LOC). The assault was planned for the night of 28 June, with Alpha Company under Maj Padmapani Acharya tasked with capturing Knoll, Delta Company under Maj Mohit Saxena targeting Lone Hill, and Bravo Company rushing to the junction area after the fall of Lone Hill.



A map of the enemy-held areas between Tiger Hill (left) and Chorbat La

25. The operation commenced at 2030 hrs on 28 June, facing fierce enemy resistance. Lt Vijayant Thapar, leading his platoon, was caught in enemy artillery fire, resulting in casualties and injuries. Despite setbacks, Maj Padmapani Acharya led his troops toward Knoll, engaging two enemy sangars. While the first sangar was captured, tragedy struck as a grenade explosion claimed Maj Acharya's life and severely injured the JCO. Lt Thapar, having regained command, stepped into the fray, decisively assessing the battle situation. He led his men in a bold assault on the second sangar, but while advancing, he was fatally struck by enemy fire. His sacrifice exemplified extraordinary valor.

26. By dawn, the Three Pimples Complex was cleared, marking a turning point in the campaign. The operation showcased the bravery and selflessness of Indian soldiers like Lt Thapar and Maj Acharya, whose sacrifices ensured the nation's sovereignty.

Artillery Operations

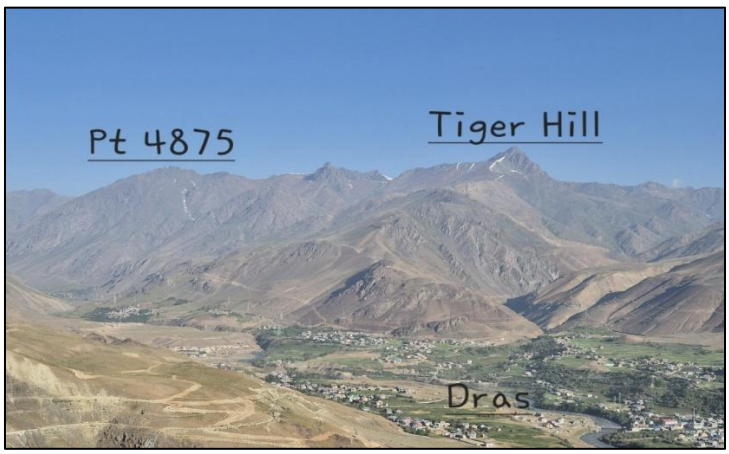
27 By mid-May, Indian troops realised that strong artillery support was essential for advancing on occupied areas. Initially, 121 Brigade’s artillery regiment used mortars and 105 mm guns. In June, the 8 Mountain Division’s artillery brigade enhanced this with 105 mm and 120 mm guns, alongside Swedish-made 155 mm Bofors FH-77B howitzers moved from Kashmir. These howitzers, with a 35-km range and high-altitude endurance, were highly effective. By July, Grad B rockets and Pinaka multi-barrel rocket launchers were also introduced. Over 200 guns from six regiments targeted enemy positions across sectors, firing continuously. Together with the IAF bombings, this artillery fire proved vital in weakening enemy strongholds, with the Bofors howitzers playing a key role in shelling operations.

Indian Artillery Deployed in Kargil

Battles of Point 4875 and Tiger Hill

28 After retaking Tololing Ridge, Major General Mohinder Puri of 8 Mountain Division shifted focus to Point 4875 and Tiger Hill, where Pakistani infiltrators held firm despite dwindling supplies. Securing Point 4875 in Mushkoh Valley, crucial due to its proximity to NH1A, became a major priority. On 2 July, 13 Jammu and Kashmir Rifles under Lieutenant Colonel YK Joshi, supported by the 17 Jat and 12 Mahar regiments, began their ascent. Despite heavy enemy gunfire and a counter-attack, gradual progress was made. On 7 July, Vikram Batra, promoted Captain, charged with reinforcements. He destroyed an enemy gun-nest, but was killed rescuing a soldier hours before the recapture of Point 4875. Captain Batra posthumously received the Param Vir Chakra for his valour.

29. Meanwhile, having begun climbing on 3 July, troops of 18 Grenadiers and 8 Sikh advanced on Tiger Hill (or Point 5060), assisted by strong artillery cover. Braving sporadic rain, they chose unconventional, steep routes to catch the NLI infiltrators off guard. Despite initial attrition due to heavy enemy fire, the Pakistani defence got divided by resilient multi-sided climbs by Indian troops. Grenadier Yogendra Singh Yadav managed to make the climb despite getting hit by enemy bullets and destroyed an enemy bunker. He went on to receive the Param Vir Chakra. After hours of close combat, the Tiger Hill was won on 8 July.



The peaks of Point 4875 and Tiger Hill

LIEUTENANT BALWAN SINGH PANGHAL

Lieutenant Balwan Singh Panghal, three months into his short-service commission, led the Ghatak Platoon of 18 Grenadiers during the Battle of Tiger Hill. On 3 July, under heavy artillery fire, he guided his troops to scale a vertical cliff in a gruelling 12-hour effort. Despite being injured upon reaching the top, he engaged in close combat, eliminating four enemy soldiers. His bravery and leadership secured the position and earned him the Maha Vir Chakra.

Operations in Batalik

30. In the Batalik subsector, Pakistani infiltrators occupied Kukarthang, Jubar complex, Khalubar ridgeline, and Point 5203, overlooking the Leh-Batalik-Kargil Road. 12 Jammu and Kashmir Rifles, supported by 2 Parachute Regiment and Ladakh Scouts, advanced on Point 5203 on 20 June, regaining it on 11 July. The Khalubar ridgeline, vital for its closeness to the Munthadalo logistics dump, faced an assault on 30 June from 22 Grenadiers, which the enemy repelled. The task was then given to 1/11 Gorkha Rifles under Colonel Lalit Rai, which began scaling Khalubar on 2 July. Amidst heavy fire, Major Manoj Kumar Pandey destroyed four bunkers before being killed by enemy fire. Khalubar was retaken, earning Major Pandey a posthumous Param Vir Chakra.

The Battle to secure Khalubar Top

31. The recapture of Khalubar Top during Operation Vijay was a significant achievement in the Batalik sector, strategically vital for disrupting enemy defenses and supply lines. The Khalubhar Ridgeline, overseeing critical areas such as Junk Lungpa, Gragrio Nala, Kukarthang, and Muntho Dhalo, was the core of enemy operations and had to be reclaimed.

Officers & Jawans of the 1/11 Gorkha Rifles with captured weapons of the Pakistan Army after the capture of Jubar Top.

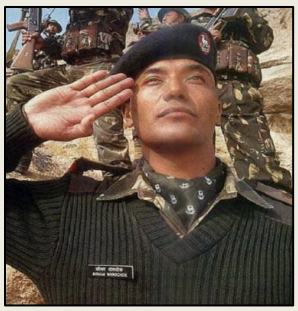
32 The initial assault by 22 Grenadiers on 30 June–1 July 1999 faced fierce counterattacks. The task was subsequently handed to 1/11 Gorkha Rifles, led by Colonel Lalit Rai. This seasoned unit, experienced in prior operations in Kashmir and Siachen, moved to an assembly area near Point 4812 on 2 July 1999 to prepare for the assault. On the night of 2–3 July, the Gorkhas undertook a grueling seven-hour climb up Khalubar's steep slopes under relentless fire from Pakistan's entrenched 8 Northern Light Infantry. The well-fortified enemy positions demanded close combat, leading to extraordinary acts of heroism.

33. Captain Manoj Kumar Pandey and his platoon encountered intense resistance while advancing. Despite heavy enemy fire, he strategically maneuvered his platoon and personally led assaults on four bunkers, killing enemy soldiers even after sustaining severe injuries. At the fourth bunker, Captain Pandey destroyed it with a grenade but was fatally wounded. His extraordinary valor inspired his troops and paved the way for the mission's success.

34. The capture of Khalubar, supported by well-coordinated artillery fire, disrupted enemy logistics and weakened their defenses. Captain Pandey's sacrifice, honored with the Param Vir Chakra (posthumously), symbolized the courage and dedication that defined this critical victory.

MAJOR SONAM WANGCHUK

On 1 June, the Ladakh Scouts secured the Chorbat La pass in eastern Batalik subsector. Major Sonam Wangchuk led 40 troops through deep snow, halting midway under heavy enemy fire. Holding their position for two days, his forces made a daring pre-dawn climb to the top, surprising 130 occupiers. Engaging in combat, they killed several and forced the rest to retreat. For his exemplary leadership and bravery, Major Wangchuk gained the title of 'Lion of Ladakh' and was awarded the Maha Vir Chakra.



Operation Talwar

35. During the Kargil War, the Indian Navy played a crucial role through Operation Talwar. The Eastern Naval Command secured the Bay of Bengal and the Malacca Strait, while the Western Naval Command, led by Vice Admiral Madhavendra Singh, pushed warships and submarines towards Pakistan's Makran coast. The Indian Navy acted decisively during the Kargil conflict to counter threats from the Pakistan Navy and protect vital offshore assets. Intelligence and surveillance operations were ramped up to monitor Pakistani warships in the North Arabian Sea. By 25 May, the Western Fleet, fully armed, conducted exercises to establish a deterrent presence. Soon after, the Eastern Fleet joined the effort, reinforcing India's readiness for an all-out conflict.

36. A key aspect of their strategy was the clever use of information warfare—images of missile-equipped Eastern Fleet warships in Cochin harbor were circulated to apply psychological pressure on Pakistan. Meanwhile, the Western Fleet advanced westward,

conducting electronic warfare drills near Oman. Intelligence revealed Pakistan's defensive moves, such as escorting oil tankers along the Makran Coast and dispersing its ships to various harbors, haunted by memories of India's 1971 Operation Trident.

37. Pakistan's announcement to deploy nuclear-capable missile ships saw the Indian Navy escalate its operations by tightening its grip on Karachi. It also intercepted a North Korean ship carrying missile component to Pakistan. By late June, India mobilized amphibious forces towards Goa, and its dominant naval presence caused foreign merchant vessels to avoid Karachi. This reduced shipping crippled Pakistan's supply chains, with oil reserves reportedly down to six days.

38. The Indian Navy's deployment of 30 warships, combined with clear rules of engagement, underlined its readiness for full-scale war. Its restrained yet menacing posture successfully countered Pakistan's nuclear threat, demonstrating strategic brilliance and shaping the conflict's decisive outcome without direct confrontation.

PART IV : OUTCOMES AND AFTERMATH

39. By 26 July 1999, India reclaimed all Pakistani-occupied points in Dras, Kargil, and Mushkoh, marking it as 'Vijay Diwas' (Victory Day). In all, to restore pre-war conditions, India lost 524 troops compared to Pakistan's 3,000-4,000 casualties. In October, Prime Minister Vajpayee's coalition government was re-elected with a strong majority. India cut off its ties with Pakistan and strengthened its defence, as Pakistan faced military, diplomatic, and economic setbacks. In August, in order to avoid another escalation, the Sharif government failed to respond after the IAF shot down a trespassing Pakistani aircraft. By October, an attempt to dismiss General Musharraf backfired and ended in a swift military coup against Sharif.

40. India's treatment of unclaimed bodies of Pakistani soldiers stands as a testament to its moral high ground and adherence to humanitarian values, even in the face of conflict. Despite the hostility of the conflict, the Indian Army buried these soldiers with full military honours, adhering to Islamic traditions. This act of respect stood in stark contrast to Pakistan's refusal to acknowledge its fallen soldiers, even as India recovered over 200 bodies of Pakistani personnel within its territory. By offering proper burials, India not only honoured the sanctity of life but also highlighted the stark contrast between its approach and Pakistan's denial of its own soldiers. This moral victory resonated globally, reinforcing India's image as a nation that values humanity above hostility.

Unclaimed dead bodies of Pakistani troops being buried by Indian soldiers with Islamic rituals

Captain Vikram Batra and his troops with captured weapons of Pakistan Army

Captured Documents of Pakistan Army showcasing involvement of Pak Army in the conflict

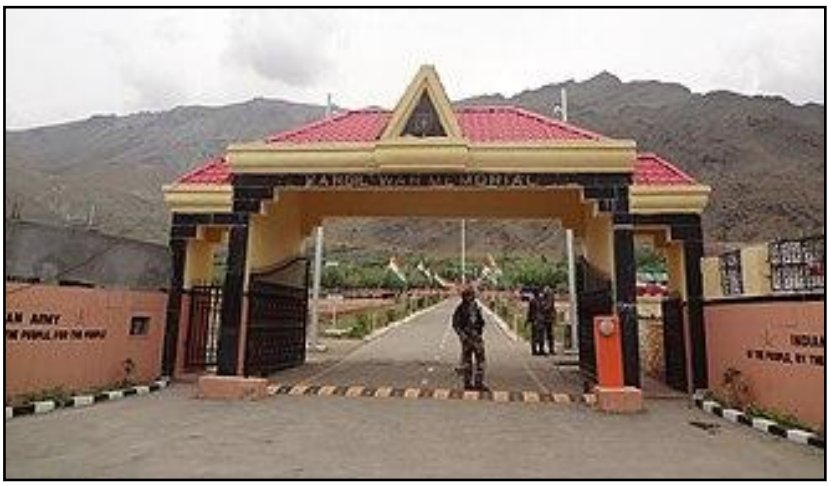
GENERAL VED PRAKASH MALIK

An alumnus of Defence Services Staff College, Wellington; National Defence College, New Delhi; and the University of Madras, Ved Prakash Malik joined the Indian Army in 1959. Becoming a Major General in 1990, he led 8 Mountain Division as its General Officer Commanding. (The division played a major role at Dras and Mushkoh in the Kargil War.) In 1997, while he was Vice Chief of Army Staff, General Malik was elevated to India's Chief of Army Staff. He also headed the Chiefs of Staff Committee responsible for coordination between the services from 1999 to 2000. General Malik retired in September 2000.

Indian Media's Response.

41. The Kargil War was South Asia's first conflict to showcase the strong role of the media's wartime reporting, as previously seen during the Gulf War of 1990-91. Supported by advanced briefings and battlefield tours from the Indian Army, Indian television channels provided live updates, shaping the understanding and popular narrative for viewers. General VP Malik commended the media for revealing Pakistan's troop involvement in the infiltrations early by broadcasting confiscated enemy documents and weapons. The war also highlighted the rise of private news channels in India, which surpassed state-run *Doordarshan* in their reporting despite having limited resources and warzone experience.

The Kargil War Memorial



42. The Kargil War Memorial, located at the foothills of Tololing Hill in Dras, stands as a distinguished testament to the valor and sacrifices of the Indian soldiers during the 1999 conflict. Positioned approximately five kilometers from the city center and in proximity to the renowned Tiger Hill, this memorial symbolizes the indomitable spirit of the Armed Forces. At the entrance, visitors are greeted by an inscription of the celebrated poem "Pushp Ki Abhilasha" (Wish of a Flower), composed by the acclaimed Hindi poet Makhanlal Chaturvedi, imparting a profound sense of reverence.

43 The Memorial Wall features the engraved names of the martyrs who valiantly gave their lives for the nation, ensuring their legacy endures for posterity. Adjacent to the memorial lies a museum dedicated to Operation Vijay, which exhibits an array of historical artifacts, including photographs of the soldiers, archival documents, equipment recovered from the adversary, and official emblems associated with the conflict. A monumental national flag weighing 15 kilograms was hoisted at the memorial on Kargil Vijay Diwas to commemorate the 13th anniversary of India's triumph.

CONCLUSION

44. The Kargil War of 1999 began with a coordinated infiltration by Pakistani forces across the LoC, capturing key high-altitude positions under Operation Badr. In reply, India launched Operation Vijay, overcoming initial challenges to reclaim these strategic areas. Showcasing expertise in high-altitude warfare, the Indian Army led the efforts, supported by the Indian Air Force's Operation Safed Sagar and Indian Navy's Operation Talwar. Artillery fire played a key role in dislodging the enemy from occupied peaks. Ultimately, the conflict proved a misadventure for Pakistan, while helping India boost its military and diplomatic stature.

SUMMARY

- The Kargil War was triggered by an organized multi-point infiltration by Pakistani troops across the LoC in 1999.
- 132 strategically important high-altitude points across a 130-km area fell to enemy capture under Operation Badr.
- In retaliation, India launched Operation Vijay after getting ground reports about the infiltrators. The operation met with initial setbacks before the Indian armed forces readjusted tactics and bounced back strongly.
- The Indian Army displayed its expertise in high-altitude warfare.
- The IAF and the Indian Navy played their crucial parts during the war in Operation Safed Sagar and Operation Talwar respectively.
- Consistent artillery support proved instrumental in the advance of troops on enemy-occupied peaks and features.
- India's dignified burial of unclaimed Pakistani soldiers during the Kargil War underscores its unwavering commitment to humanitarian values and moral integrity amidst conflict.
- The war ended in a humiliating defeat for Pakistan, hurting its diplomatic reputation and relations with the West.

ASSESSMENT EXERCISE

Multiple Choice Questions

Q1. Who was the Prime Minister of India during the Kargil War?

a) Dr Manmohan Singh

b) Inder Kumar Gujral

c) Atal Bihari Vajpayee

d) HD Deve Gowda

Q2. What was the name of the military operation conducted by India to evict the Pakistani intruders from Kargil?

a) Operation Polo

b) Operation Vijay

c) Operation Meghdoot

d) Operation Badr

Q3. Which regiment was the PVC awardee Captain Vikram Batra a member of?

a) 18 Grenadiers

b) 40 Ladakh Scouts

c) 13 Jammu and Kashmir Rifles

d) 2 Rajputana Rifles

Q4. What was the primary purpose of Operation Talwar conducted by the Indian Navy during the Kargil War?

a) Naval blockade to cut off Pakistani supply lines

b) Amphibious assault on Karachi

c) Destroying Pakistani submarines in the Arabian Sea

d) Conducting missile strikes on enemy positions

Q5. Which of the following was NOT a major challenge faced by Indian soldiers during the Kargil War?

a) Harsh high-altitude conditions

b) Lack of air support

c) Well-fortified enemy positions

d) Surprise element of the attack

Q6. What was the global diplomatic outcome of the Kargil War?

a) Pakistan gained international support for Kashmir

b) Pakistan was globally isolated and condemned

c) Pakistan signed a peace deal with India

d) The UN decided to intervene militarily in Kashmir

Q7. Which Indian Army General was instrumental in spearheading the recapture of Tololing Ridge during the Kargil War?

a) Lt Gen Mohinder Puri (then Maj Gen)

b) Lt Gen YK Joshi (then Lt Colonel)

c) Gen VP Malik (then Chief of Army Staff)

d) Lt Gen Amarjit Singh Kalkat (then Corps Commander)

Q8. True or false. General V.P. Malik was the Chief of Army Staff of India during the Kargil War.

a) True

b) False

Q9. True or false. India launched a full-scale invasion of Pakistan in response to the Kargil War.

a) True

b) False

Q10 True or false. The Kargil War was the first conflict in South Asia to prominently showcase the media's role in wartime coverage.

a) True

b) False

Short Answer Questions

1) What was India's initial response to the Pakistani incursion?

2) How did Grenadier Yogendra Singh Yadav contribute to India's successful recapture of Tiger Hill?

3) What was the international response to the Kargil War?

Long Answer Questions

1) How did Pakistan plan and execute Operation Badr?

2) What was the role of the Indian Air Force in Operation Safed Sagar?

3) Describe the artillery operations that took place during the Kargil War.

MH V (SD/SW)

CHAPTER V : OPERATION MEGHDOOT, OPERATION CACTUS (MALDIVES), & INDIA AND INTERNATIONAL PEACEKEEPING OPERATIONS

Indian Army soldiers on foot patrol in Siachen

TEACHING INSTRUCTIONS:

Period(s) : **03 (1 each for 1st year, 2nd Year & 3rd Year)**

Type : **Lecture and discussion**

Year : **SD/SW (First Year, Second Year, Third Year)**

Training Aids : **Classroom, computer with OHP, screen, pointer staff, presentation or videos, script or book flagged or lesson plan in file, and chart / poster.**

Time-plan:

- Part I : Operation Meghdoot, 1984 : 40 mins
- Part II : Operation Cactus, 1988 : 40 mins.
- Part III : India and International Peacekeeping Operations : 40 mins.

OVERVIEW	LEARNING OBJECTIVES
(a) Part I : Operation Meghdoot, 1984 (b) Part II : Operation Cactus, 1988 (c) Part III : India and International Peacekeeping Operations	➢ To understand the operations' background, prelude, and cause(s). ➢ To become aware of the strategic vitality of Siachen and Maldives. ➢ To appreciate the ability of the Indian armed forces to respond to sudden contingencies that require adaptive warfare, including on foreign soil. ➢ To know about the conflict's key battles and heroic figures. ➢ To learn about the scale of India's role in international peacekeeping. ➢ To trace the key peace operations that India participated in since 1953. ➢ To appreciate India's challenges and contributions in these operations. ➢ To know about the ongoing UN missions that India continues to assist.

PART I : OPERATION MEGHDOOT

Introduction

1. Operation Meghdoot, launched in April 1984, was a bold and decisive mission aimed at securing the strategically vital Siachen Glacier in Ladakh. Acting on intelligence that revealed Pakistan's intentions to occupy the glacier, India pre-emptively airlifted troops, artillery, and supplies to establish control over heights exceeding 18,000 feet. This action made Siachen the world's highest battlefield. The operation successfully ensured India's dominance over the glacier, its tributary glaciers, and crucial mountain passes, creating a critical buffer zone that separated Pakistan-controlled territories from those under Chinese influence, securing India's strategic interests in the region.

Geography

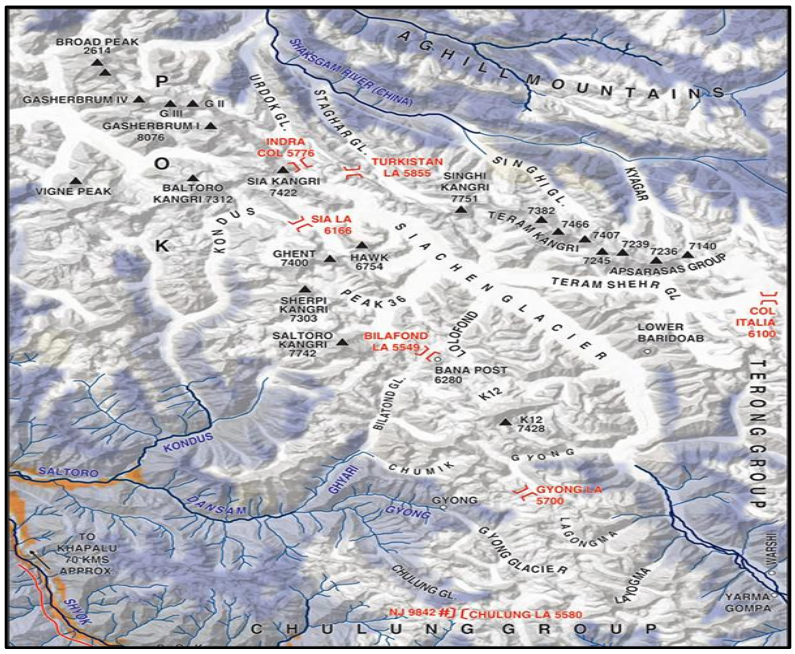
2. The Siachen Glacier is the world's second largest mass of ice outside the polar regions and forms part of the eastern Karakoram Range of the Himalayas. It is located northeast of NJ9842, the peak that formally marks the end of the Line of Control (LoC) between India and Pakistan. Between Indira Col, its northernmost point at a summit height of 18,875 feet, and the Siachen Base Camp at its south in the Nubra Valley, the glacier is about 75 km. long, 5 km. wide, and spans 700 sq. km. in the area. This area includes multiple tributary glaciers. Indira Col overlooks the Shaksgam Valley, which was ceded by Pakistan to China in 1963.

3. To the immediate west of the Siachen Glacier lies the Saltoro Ridge. At its highest point, the crest of the ridge touches 23,330 feet. There are multiple crucial passes that link the Saltoro Ridge and the Siachen Glacier. From north to south, these are the Sia La, Bilafond La, and

Gyong La, with Bilafond La being the lowest of the three at 17,880 feet. The Nubra River, which flows out of Siachen Glacier, is a tributary of the Indus River. The glacier is accessed through the Nubra Valley after crossing the Ladakh Range via the Khardung La pass from Leh. Snow-clad year-long, the area's terrain is immensely harsh, and is prone to avalanches and strong snow storms, with temperatures falling as low as -70 degrees Celsius.

STRATEGIC IMPORTANCE

Since securing the Siachen Glacier through Operation Meghdoot in April 1984, India controls the entire area and formally includes it as a part of its Ladakh Union Territory at present. Despite continuing to claim the full area, Pakistan's physical control ends at the area west of the Saltoro Ridge, where its military posts lie about 3,000 feet lower than India's. While bilateral clashes in the area have been limited and sporadic, India and Pakistan continue to deploy an entire brigade each to defend their positions at the world's highest battlefield. The Siachen Glacier has high strategic value for India, which justifies the risks and costs borne to keep it secure. If Pakistan gains its control, it shall be able to dominate the Nubra Valley and obtain access to Leh. Further, the Shaksgam Valley now occupied by China lies at the glacier's adjacent north. Controlling the Siachen Glacier allows India the advantages of dominating this valley from Indira Col. Further, India gets to dominate the Karakoram Highway between Pakistan and China, making the Siachen Glacier a vital obstruction to China-Pakistan linkages near Ladakh.



A map of the Siachen Glacier

Prelude and Cause

4. Two German citizens, who had successfully rafted down the Indus River from Ladakh with assistance from the Indian Army in 1975, requested permission for a similar rafting expedition on the Nubra River flowing down the Siachen Glacier in 1977. For this purpose, they submitted some US-made maps to mountaineering expert Colonel Narinder Kumar (famously nicknamed 'Bull'), who noticed that the LoC was shown to be extending northeast from NJ9842 to the Karakoram Pass. This implied that these maps clubbed the

Siachen Glacier with Pakistan-occupied Kashmir in violation of bilateral agreements since 1949. Colonel Kumar ensured that the finding reached General TN Raina, India's Chief of Army Staff.

5. Indian Army realised that it had limited intelligence about the area northwards of NJ9842 since Pakistan's ceding of Shaksgam Valley to China. For a survey, Colonel Kumar was asked to undertake an expedition to the remote, treacherous area, which he successfully completed by October 1978. This was followed by a second expedition led by Colonel Kumar between April and August 1981, and the landing of a HAL Chetak helicopter on the Siachen Glacier in September. These missions confirmed that Pakistan had been encouraging mountaineering tourism at the Siachen Glacier from its Gilgit-Baltistan region to justify its claim on maps.

A Pakistani helicopter spotted at a forward area close to Siachen

6. Having launched further expeditions to the area in 1983, India saw two formal protests in August from Pakistan, which insisted on its claim on Siachen Glacier. After rejecting the claim, the Indian Army obtained intelligence about the Pakistan Army's preparations to mobilise troops in the area. In September, at the glacier's Bilafond La pass, India's Ladakh Scouts and Pakistan's Special Service Group (SSG) nearly faced off. Lieutenant General Jahandad Khan, then commanding Pakistan Army's X Corps, later confirmed that he was anticipating an Indian hold on the Siachen Glacier by 1984 and so, was making his own preparations.

Siachen, meaning "land of roses" in the Balti language spoken in Baltistan, is one of the five largest glaciers in the East Karakoram Range of the northern Himalayas. The name presents a stark irony, as the barren landscape is utterly devoid of vegetation, not even a single blade of grass.

Indian troops making an advance in April 1984

7. Expecting Pakistani troop movement in the region in turn, Lieutenant General ML Chibber, India's Director of Military Operations, instructed the Indian Army's XV Corps to prepare for a landing on Saltoro Ridge and the Bilafond La and Sia La passes to Siachen Glacier. Occupied by the escalating insurgent movements in Punjab and India's northeast at the time, Indira Gandhi, India's Prime Minister, only approved a swift securing of the glacier. By March 1984, a task force for the operation, which included Indian Air Force (IAF) helicopters, was prepared.

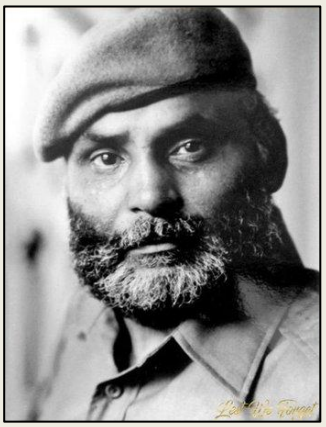
8. In the early hours of 13 April, IAF helicopters began transporting troops of 4 Kumaon under Captain Sanjay Kulkarni to Bilafond La, with 17 sorties airlifting 30 troops by noon. The Indian flag was soon raised there. However, the condition was so harsh that by 15 April, the troops were down to 27, with 21 of them having frostbite and contingent losing contact with base camp. On 17 April, only after the weather improved, the IAF sent reinforcements and supplies to Bilafond La, while transporting a platoon of Ladakh Scouts under Major Ajay Bahuguna to Sia La. They secured Sia La that day after climbing about five km. further on foot.

9. Restoring radio contact, Captain Kulkarni informed that the Pakistanis had already taken note of the Indian presence at Bilafond La. Expanding their foothold rapidly on the Siachen Glacier, the Indian Army built three more camps and linked up with Bilafond La by 26 April. Three days later, a camp was also made on Indira Col at the glacier's northwestern edge. A Ladakh Scouts contingent under Major N S Salaria also managed to link up with the post at Sia La by then. On 29 April, Operation Meghdoot, aiming to secure the Siachen Glacier, was completed. In reply, Pakistan had opened fire against Indian positions only once on 25 April.

LIEUTENANT GENERAL PN HOON

A freedom fighter's son, Pran Nath Hoon joined the Indian Military Academy in 1947. After seeing initial postings in Kashmir and action in the 1962 and 1965 wars, he headed the Indian Army's Special Mountain Force in the Kargil sector. As a Lieutenant General, he led the XV Corps as General Officer Commanding (GOC) by 1984 and steered Operation Meghdoot. Between 1985 and 1987, he was Director General of Military Operations. Lieutenant General Hoon retired as the GOC-in-Chief of the Western Army in 1987.

"BULL"



Colonel Narendra "Bull" Kumar (1933-2020) was an Indian Army officer, mountaineer, and strategic pioneer. His significant achievement was securing the Siachen Glacier through expeditions in the late 1970s and early 1980s, leading to Operation Meghdoot in 1984. Kumar was the first to climb the glacier, uncovering cartographic errors that misrepresented the area as part of Pakistan. In 1978, Col. Kumar formed a team from the High Altitude Warfare School and started his trek to Siachen. In 1981-82, he undertook a trip to the glacier again and mapped the entire area. Kumar's well-documented expedition to the glacier helped the Indian Govt, to authorize Operation Meghdoot, the Indian Armed Forces' operation to seize control of the Siachen Glacier in Kashmir which established the world's highest battlefield.

His leadership in mountaineering included scaling Mount Everest (1965), expeditions in Bhutan, Sikkim, and Nepal. Honored with Padma Shri, Arjuna Award, Param Vishisht Seva Medal, Kirti Chakra, Ati Vishisht Seva Medal and MacGregor Medal.

10. Yet, with Bilafond La and Sia La held, India expected a Pakistani counter from the Saltoro Ridge and via Gyong La pass at the glacier's southwest. Lieutenant Colonel Pushkar Chand led his reinforcements from the Ladakh Scouts to Saltoro Ridge. 19 Kumaon under Lieutenant Colonel DK Khanna (which had marched to the Siachen Glacier on foot via Zoji La during Operation Meghdoot) established a position at Gyong La by early June. By then, India's posts stood strengthened by artillery. With most of the weapons carried by troops on foot in disassembled form, India's fire power in the area eventually ranged up to 105 mm guns.

RACE TO SIACHEN

Role of Research & Analysis Wing (R&AW). The Research and Analysis Wing, India's intelligence agency, played a pivotal role in uncovering Pakistan's plans to capture the Siachen Glacier in the early 1980s. Pakistan had ordered specialized Arctic gear for its troops from a London-based supplier, intending to deploy them in Siachen by April 1984. However, R&AW intercepted this information and acted swiftly. India pre-emptively ordered a larger quantity of similar gear, ensuring that Pakistan's supplies were delayed.

The "Race to Siachen" signifies the military and strategic rivalry between India and Pakistan over control of the Siachen Glacier. Sparked by maps from a German bookstore, this competition underscored the importance of the glacier's strategic location, granting access to vital passes and heights in the Karakoram range. Pakistan had prepared Operation Ababeel to take control of the region; however, India acted pre-emptively with Operation Meghdoot in 1984. Through this operation, India established its presence on the Siachen Glacier and its surrounding territories, marking a pivotal moment in the conflict. Indian troops, braving extreme weather conditions, treacherous terrain, and altitudes of over 5,400 metres (17,700 feet), displayed heroism. Despite the hostile environment and initial challenges, they established control over the glacier and its surrounding areas. This daring military operation is considered one of the most challenging and audacious acts in modern warfare.To this day, the Siachen dispute remains a major source of tension, with both nations maintaining military forces in the area.

Aftermath

11. As India gained control of nearly the entire area, Pakistan initially retaliated. While it was already too late for Pakistan to undertake **Operation Ababeel**, which was its own design to capture the Siachen Glacier by force, the Pakistan Army mounted a serious counter-offensive on 23 June 1984. Having quietly climbed up near the Indian camp at Bilafond La, 30 enemy troops attempted an assault, but were spotted by Lance Naik Chanchal Singh of 4 Kumaon. Despite shooting him down, the Pakistani troops lost their surprise element, and fired their machine guns and mortars at the Indian side. The swift Indian counter-fire, with only small arms and machine guns, cost the enemy 26 troops and forced their retreat.

12. By February 1985, the Indian Army began defending the Siachen Glacier with rotational battalions. It rushed a Ladakh Scouts team under Major MS Dahiya to Saddle, a peak near Sia La, where Pakistani build-ups were spotted by an IAF helicopter on 21 February. Between 22 and 24 February, the Indian troops fired back to block attempted enemy attacks, until the Pakistani troops were eventually forced to retreat. By June, the Ladakh Scouts also secured point NL60654 to dominate Pakistani movements on the adjacent Gyong Glacier.

13. In a major mountaineering campaign, Pakistan's SSG managed to capture the southern shoulder of Bilafond La and establish the Quaid Post at an elevation of over 21,000 feet in April 1987. The Indian camps in the zone fell within enemy firing range as a result, but poor weather made an aerial retaliation difficult. The daring attempt by a team of the 8 Jammu and Kashmir Light Infantry to climb the steep wall in May proved costly. A similar second attempt was aborted days later. Eventually, a final climb led by Naib Subedar Bana Singh on 26 June succeeded despite heavy snowing. The SSG troops were eliminated after the intense close combat that ensued. Quaid Post was taken and renamed 'Bana Top'.

Extreme Climate Clothing Uniform

Indian troops at Siachen in 1999

14. Thereafter, the Pakistan Army attempted to mount assaults at the Indian posts or establish threatening positions in 1987, 1989, 1992, and 1995, but were thwarted by the Indian troops each time. By the time of the Kargil War of 1999, the Siachen Glacier has become secure enough to witness only one major battle. On 27 June 1999, Major Navdeep Singh Cheema and Captain Shyamal Sinha of 9 Kumaon led a team of 27 Rajput to advance from Siachen to Point 5770, which was then under Pakistani occupation. After ascending the peak, the Indian troops took out the enemy, recaptured Point 5770, and renamed it 'Navdeep Top'.

CONCLUSION

15. Operation Meghdoot stands as a beacon of unity and coordination of the Indian Army and Air Force. Operating on the world's highest battlefield, they have exhibited exceptional bravery and commitment in India's longest joint military mission. Beyond the front lines, logistic teams, medical professionals, and organizations like the Border Roads

Organization have played a vital role in maintaining defenses and building infrastructure in this unforgiving terrain.

16. Over the years, significant advancements have enhanced conditions for troops stationed in the glacier and Karakoram Range. The introduction of VSAT technology has revolutionized communication, enabling internet access, real-time situational awareness, telemedicine, and family connectivity. Mobility improvements, fresh rations, specialized clothing, and precise weather updates further ensure troop safety and efficiency, reflecting the indomitable spirit of those involved in this historic mission.

17.Operation Meghdoot has made remarkable progress in enhancing troop mobility and living conditions in the glacier's harsh environment. The introduction of All-Terrain Vehicles (ATVs), ATV bridges, Chinook helicopters, and logistic drones has ensured efficient delivery of supplies, even to isolated posts during winters. Fresh rations and vegetables now reach forward areas, improving nutrition. Soldiers are better equipped with advanced clothing and mountaineering gear. These measures enable them to endure extreme temperatures as low as -60°C while maintaining safety and operational effectiveness. As the operation marks 41 years on April 13, 2025, it stands as a testament to the resilience and valor of the Indian Armed Forces. The scroll at Siachen Base Camp epitomizes their spirit: ***"Quartered in Snow, Silent to Remain. When the Bugle Calls, They Shall Rise and March Again."***

PART II: OPERATION CACTUS, 1988

Introduction

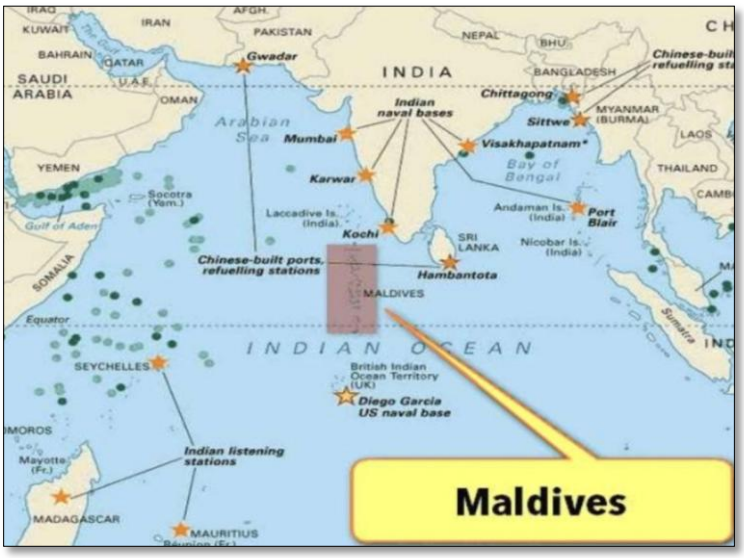
18. Operation Cactus was a remarkable demonstration of India's swift and decisive action in the Indian Ocean Region. On November 3, 1988, a coup attempt led by businessman Abdullah Luthufi, supported by mercenaries from the Tamil secessionist group People's Liberation Organisation of Tamil Eelam (PLOTE), aimed to overthrow Maldivian President Maumoon Abdul Gayoom. The operation also involved the Indian Navy intercepting the hijacked freighter used by the mercenaries. Indian paratroopers moved in to restore control in Male by rescuing hostages and reinstating President Gayoom, in effect, reaffirming India's importance for security in the Indian Ocean Region.

Geography and Strategic Importance

19. Maldives' proximity to the west coast of India (barely 70 nautical miles away from Minicoy and 300 nautical miles away from India's West coast), and its situation at the hub of commercial sea-lanes running through Indian Ocean (particularly the 8° N and 1 ½° N channels) imbues it with significant strategic importance to India. Despite being the smallest Asian nation, the Maldives stands out as one of the world's most geographically scattered countries. It spans a vast 960-kilometer submarine ridge running north to south, forming a natural barrier in the middle of the Indian Ocean.

20. Situated in the Indian Ocean, Maldives is an archipelago of 1,192 coral islands grouped into 26 atolls. The South Asian country lies about 600 km. from India's southern coast and nearly 700 km. southwest of Sri Lanka, with the Lakshadweep Islands of India to its north and the UK-administered Chagos Islands to its south. Maldives' islands spread over an area of about 90,000 sq. km., making it one of the most dispersed countries in the world. Its coral-formed atolls create lagoons and white sandy beaches that attract tourists worldwide. Its position along crucial sea routes has historically made Maldives important for trade and navigation.

21. Maldives holds strategic significance for India due to its location along vital shipping lanes in the Indian Ocean Region (IOR), enhancing India's role as the main actor to monitor and secure trade routes between the Gulf of Aden and the Strait of Malacca. The stability of Maldives is key, for instance, to India's energy security, since a major part of its energy imports passes through nearby maritime routes. Maldives serves as a frontline platform for India's defence against piracy, drug trafficking, and terrorism in the IOR. Further, maintaining a close relationship with it enhances India's maritime presence and surveillance in the Arabian Sea, while a weakening of ties favours rivalling external influencers such as China.



Strategic Importance of Maldives for India in the Indian Ocean Region'

EARLY RELATIONS WITH INDIA AND SRI LANKA

After its independence from the British in 1965, India was swift in recognising Maldives. Their bilateral ties expanded rapidly thereon, as India contributed to the island nation's development with cultural, technological, infrastructural, and economic inputs. The status of the Minicoy Island of Lakshadweep, a source of bilateral concern, was solved with a maritime boundary treaty in 1976, which recognized it as a part of India. While Maldives signed a comprehensive trade treaty with India in 1981, Sri Lanka was also amongst its major regional trade partners, supplying 65 percent of its imports. Further, Sri Lanka was a key host of Maldivians seeking foreign healthcare and education at the time.

Prelude and Cause

22. When Ibrahim Nasir, who had governed Maldives since 1957, chose not to seek re-election in 1978, the parliament selected Maumoon Abdul Gayoom as his unopposed successor. Gayoom, once a critic of Nasir, had risen as a prominent statesman after receiving a pardon from arrest and had served as a diplomat in Sri Lanka. His 30-year rule was characterized by strengthened ties with India and Sri Lanka, Maldives' closest neighbours, but also by economic challenges, protests, and crackdowns. Between 1980 and 1988, Gayoom survived three minor coup attempts. Businessman Abdullah Luthufi, a key opposition figure, had strong ties with the militant People's Liberation Organisation of Tamil Eelam (PLOTE) group, a faction involved in Sri Lanka's civil war. Convinced of the need for violent means to overthrow Gayoom, Luthufi orchestrated a coup attempt involving 80 PLOTE mercenaries. On November 3, 1988, the mercenaries seized key government buildings in Male but failed to capture the Presidential Palace. Gayoom was evacuated to safety by his military and was stationed at Maldives National Security Service headquarters. Maldives sent out distress calls for help to India, Sri Lanka, Singapore, Pakistan, US and UK – Pakistan expressed their inability but others, though willing were in no position to render timely assistance or without someone else supplementing them in terms of air transportation or naval support. After unsuccessful pleas for help from other nations, Gayoom turned to India, which responded to counter the coup attempt.

Indian troops at the Male International Airport

Operation

23. Indian government was quick to respond to the call. Soon after an emergency high level meeting in New Delhi, an Ilyushin Il-76 transport aircraft of the Indian Air Force (IAF) took off with troops of the 50 Independent Parachute Brigade, 6 Parachute Regiment, and 17 Parachute Field Regiment. Within nine hours of receiving the request from Gayoom, the Indian Army had landed at the Male International Airport on Hulhule Island by the night of 3

November. With the airport secured, the troops rushed to the adjacent island capital of Male. The PLOTE infiltrators could not resist, with some being neutralised and the rest retreating.

24. As Indian troops arrived in Malé, around 60 rebels fled aboard the merchant vessel MV Progress Light, taking seven hostages, including Maldives' Transport Minister Ahmed Mujuthaba and his wife. The Indian Navy launched a swift rescue mission, deploying IL-38 reconnaissance aircraft, helicopters, and three ships: INS Betwa, INS Godavari, and INS Tir. While INS Betwa and INS Godavari pursued the rogue ship, INS Tir patrolled Malé to apprehend remaining rebels. Later, INS Deepak joined with 25 Indian Marine Commandos. Efforts to negotiate with the rebels' failed, and one hostage was tragically killed. Subsequently, INS Godavari and INS Betwa fired on the ship, compelling the rebels to surrender. INS Betwa and INS Tir departed Malé within a week, while INS Godavari remained to ensure security in the Maldives for a month, completing the operation successfully

25. With the fleeing infiltrators, Luthufi hijacked a merchant vessel off the Male Harbour and attempted to escape to Sri Lanka, carrying 27 hostages including a cabinet minister. A task force of the Indian Navy under Captain SV Gopalachari quickly went after it, with *INS* Godavari and INS Betwa in the lead. Despite attempts to communicate with him, Luthufi continued to sail towards Sri Lanka. However, having learnt that the Sri Lankan Navy was ready to blow up the hijacked vessel, the Indian task force raced to intercept it. After negotiations began to stall, it took some warning fire against the hijacked ship to force Luthufi's surrender.

<u>Decisive Elements in Operation Cactus' Success</u>

26. The success of Operation Cactus was primarily due to swift decision-making, rapid military readiness, and exceptional coordination. The Indian leadership acted decisively, while military units were prepared within 2.5–3 hours, and the entire brigade mobilized in just 12 hours. Despite no formal orders, units began preparations immediately after receiving the Maldives' SOS, with officers and junior commissioned officers leading from the front to ensure quick deployment. The collective willpower and determination of the armed forces were evident as they navigated significant risks, including a challenging night landing on an unlit runway, successfully executed by Group Captain Bewoor on the first attempt.

27. The operation highlighted seamless collaboration between the army and air force. The Indian Air Force demonstrated remarkable flexibility, swiftly resolving challenges and adapting to the army's requirements. The crew of the first IL-76 even stepped in to offload ammunition when no team was available, ensuring the mission proceeded without delay. Preparations such as rehearsals for assaulting an ATC building at Agra further strengthened the operation's effectiveness.

28. Additionally, the NSS played a critical role in preventing mercenaries from seizing strategic locations before Indian forces arrived. The inexperience of the mercenaries, particularly their failure to disrupt communications, further contributed to the mission's success.

Gayoom meeting Prime Minister Rajiv Gandhi

DO YOU KNOW

- One significant challenge during the planning of Operation Cactus was the limited knowledge of the Maldives' geography and infrastructure. Fortunately, the Indian High Commissioner to the Maldives was in Delhi at the time and played a crucial role by offering valuable insights about the country and the airfield, which proved instrumental in the mission's success.

Aftermath

29. Gayoom's government was restored before 3 November ended. The grateful Maldivian President requested the Indian paratroopers involved in Operation Cactus to stay back for a year and train his own military. It marked the beginning of deepening bilateral ties, which extended to the area of defence by the 1990s.

30. Prime Minister Rajiv Gandhi received praise from India's parliament when he expressed satisfaction at his military's effort to assist a friendly nation and protect democracy in its neighbourhood. The US and the UK, which had been reluctant to get involved in the matter directly, appreciated the operation by agreeing with its rationale. While Pakistan expectedly criticized the intervention as over-reach, the governments of Bangladesh, Bhutan, and Nepal endorsed it. Some Western media outlets took note of India's cementing role as an influential regional power not just in South Asia, but also across the wider Indian Ocean Region.

India-Maldives Defence and Security Cooperation

31. Since the 1990s, India and the Maldives have emerged as mutually beneficial partners, working together to safeguard their interests in the Indian Ocean Region. The Maldives has relied on India to secure its waters, while India trusts the Maldives to bolster its maritime security and strategic presence in the Arabian Sea. India is the primary provider of training for Maldivian armed forces personnel, starting with the supply of armoured fighting vehicles in 1992 and offering small batches of defence equipment over the years. Since 2015-16, the partnership has expanded to include joint military exercises and surveys in the Indian Ocean.

32. India and the Maldives are committed allies, addressing shared maritime challenges that impact regional security and development. India plays a crucial role in supporting the Maldives National Defence Force (MNDF) through the provision of defence platforms, capacity-building initiatives, and expertise-sharing. This cooperation aims to tackle threats like piracy, illegal fishing, drug trafficking, and terrorism. India's involvement also includes advancing the MNDF 'Ekatha' harbor project at Uthuru Thila Falhu (UTF), which will significantly enhance MNDF's operational capabilities.

33. Furthermore, India assists the Maldives with modern infrastructure development, including the construction of a state-of-the-art Ministry of Defence (MoD) building in Malé to strengthen defence operations. It also supports hydrographic initiatives, offering training and capacity-building programs tailored to Maldives' requirements. India helps enhance MNDF's surveillance and monitoring systems through the provision of radar technology and essential equipment.

34. Disaster response and risk mitigation form another area of cooperation, with joint exercises and development of standard operating procedures (SOPs) to improve interoperability. India also aids the Maldives in information sharing by building infrastructure, providing training and exchanging best practices.

35. India further fosters growth by increasing capacity-building opportunities under the ITEC programmes and other customized training initiatives for MNDF, Maldives Police Services (MPS), and other security entities. Additionally, India extends financial assistance to develop and modernize MNDF infrastructure. These efforts strengthen strategic ties, enhance operational capabilities, and contribute to the security and stability of the Indian Ocean Region.

SUMMARY

- India's concerns about Siachen Glacier emerged from its intelligence inputs about a Pakistani plan to claim the area militarily and on maps.
- India responded with Operation Meghdoot in April 1984 to swiftly land in the area and secures the glacier, its tributary glaciers, and key passes.
- Thereafter, multiple attempted assaults by Pakistan against the Indian presence in the area were repelled to maintain India's control over it.
- Operation Cactus was essentially a single-day intervention by the Indian armed forces in November 1988 requested by the Maldivian President.
- President Gayoom requested India's military assistance after his rival led armed mercenaries of a Tamil secessionist organisation from Sri Lanka, the People's Liberation Organisation of Tamil Eelam Group to take over Maldives.
- After Indian troops landed in Maldives to restore Gayoom's government in hours, the Indian Navy chased and arrested several perpetrators.
- India and the Maldives have emerged as mutually beneficial partners, working together to safeguard their interests in the Indian Ocean Region.

PART III: INDIA AND INTERNATIONAL PEACEKEEPING OPERATIONS

Introduction

36. India's armed forces are not only the guardians of its own national security, but are also one of the world's leading neutral preservers of peace on foreign soil. In its strong legacy of participating in international peacekeeping operations, various services and branches of India's armed forces have been involved in securing post-conflict stability, rebuilding, rehabilitation, relief, aid, and confidence-building for almost as long as the country has been independent. This has highlighted the long-standing Indian regard for the principles for international peace and security enshrined in the United Nations (UN) Charter. Beginning in the 1950s, the Indian efforts in international peacekeeping have remained substantial and professional; in line with the principle of 'Vasudhaiva Kutumbakam' (the world is one family).

INDIAN AND UN PEACEKEEPING: SOME FIGURES

Starting in the 1950s, India has sent over 290,000 personnel as peacekeepers to over 50 missions. Currently, India has over 5,300 personnel deployed in UN missions across various conflict zones. As of January 2025, UN sources listed India as the fourth-largest contributor of manpower to its peacekeeping missions, closely behind Nepal, Rwanda, and Bangladesh. About 180 Indian personnel have laid down their lives during these missions for the cause of global peace.

An IAF contingent in Congo, 2009

KEY PEACEKEEPING OPERATIONS, 1945-1991

1953-1954: Neutral Nations Repatriation Committee (NNRC), Korean War

37. The Korean Peninsula was under the rule of imperial Japan from 1910 to 1945. After Japan's defeat in the Second World War, the region was divided into two halves along the 38th Parallel between the Allied powers, with the Soviet Union controlling the north and the United States controlling the south. This resulted in the formation of two separate governments with competing loyalties. Tensions between the two halves escalated into the Korean War, which lasted from 1950 to 1953. UNSC Resolution 83 authorized a UN-led military intervention to

support South Korea. As the Soviet Union vetoed the proposal, the UN General Assembly (UNGA) adopted Resolution 377A ('Uniting for Peace') to reauthorise it. Notably, the resolution did not authorise neutral peacekeepers for the Korean Peninsula.

38. Under Prime Minister Jawaharlal Nehru, non-aligned India remained neutral and played a vital diplomatic role in concluding the Korean War, contributing to the Armistice Agreement of 1953. The Neutral Nations Repatriation Commission (NNRC) was formed by the agreement to repatriate prisoners, with Indian Army's Lieutenant General KS Thimayya chairing it. 60 Parachute Field Ambulance, led by Lieutenant Colonel AG Rangaraj, served in Korea from 1950 to 1954, treating over 200,000 patients and performing 23,000 surgeries to earn the nickname, 'Angels in Maroon Berets'. Among those honoured for the mission was Lieutenant Colonel Rangaraj, who received a Maha Vir Chakra. India also led the Custodian Force of India under Major General SSP Thorat, facilitating the repatriation of over 22,000 POWs in humane conditions before their 1954 return to India.

An Indian Army soldier checks on an injured Korean combatant

1954-1970: International Commission for Supervision and Control (ICSC), Indochina Wars

39. The independence movement of Vietnam, led by Ho Chi Minh, culminated in the 1954 Geneva Agreement, dividing Vietnam along the 17th Parallel into North Vietnam (supported by the Soviet Union and China) and South Vietnam (backed by the US-led West). India chaired the International Commission for Supervision and Control (ICSC), formed for monitoring the ceasefire and the partition of the former French colony, with Canada and Poland representing opposing blocs. While remaining neutral, Prime Minister Nehru stayed sympathetic to Vietnam's independence, as Indian diplomats such as Gopalaswami Parthasarathy and MJ Desai, and JN Khosla played a key role in upholding India's stance. While ICSC was modelled on a UN observer mission, it was not a formal UN commission.

40. Under the mandate of the ICSC, its member nations contributed peacekeepers to Vietnam, Cambodia, and Laos. The Indian contingent drew military observers, medical teams, and troops from the Parachute Regiment, Brigade of the Guards, and Maratha Light Infantry. The Army Medical Corps led the initiative of providing essential medical aid. Further, in Cambodia, the ICSC peacekeepers, including its Indian troops, maintained neutrality and prevented foreign interference, while in Laos, they monitored the implementation of ceasefire

agreements. Owing to an aircraft accident, India even lost five peacekeepers in October 1965. However, escalating Cold War tensions and US involvement in Vietnam caused the ICSC's effectiveness, and India's role in it, to diminish by the late 1960s.

United Nations peacekeeping operations play a vital role in maintaining global peace and security, categorized as follows:

- **Conflict Prevention and Mediation**: This involves diplomatic actions to prevent intra-state or inter-state disputes from escalating into violence. Activities may include the Secretary-General's "good offices," preventive deployment of UN missions, or conflict mediation led by the Department of Political Affairs.
- **Peacemaking**: Peacemaking addresses active conflicts through diplomatic efforts aimed at negotiating agreements between hostile parties. Peacemakers can be envoys, governments, groups of states, regional organizations, or representatives of the United Nations.
- **Peace Enforcement**: This includes coercive measures, such as the use of military force, authorized explicitly by the Security Council to restore peace and security. It is applied in response to threats, breaches of peace, or acts of aggression.
- **Peace building**: Focused on reducing the risk of conflict recurrence, peace building strengthens national capacities for conflict management and fosters sustainable peace and development. It addresses systemic issues affecting society and enhances the state's ability to function effectively and legitimately.

1956-67: UN Emergency Force (UNEF), Suez Crisis

41. The Suez Crisis broke in 1956 when Egypt nationalized the Suez Canal, a vital UK-controlled shipping link between the Mediterranean Sea and Indian Ocean. This triggered military intervention by Britain, France, and Israel. In response, the UNSC intervened and established the UN Emergency Force (UNEF) to oversee ceasefires and troop withdrawals. To what was the first formal UN peacekeeping mission, India contributed troops, observers, and medical teams from the 1 Sikh Regiment, led by General PS Gyani and Major General Indar Jit Rikhye.

Indian and Scandinavian troops of UNEF landing in Gaza

42. The Indian peacekeepers part of UNEF were stationed in Gaza and the Sinai Peninsula to minimise clashes between Egyptian and Israeli forces, which were becoming increasingly hostile. When tensions escalated into the Six-Day War in 1967, Egypt requested UNEF's withdrawal, compelling the UN forces to leave as the conflict between the Middle Eastern neighbours renewed. During their stay, 39 Indian peacekeepers laid down their lives to maintain peace. The experience with UNEF only strengthened India's stature as a committed peacekeeper.

1960-64: UN Operation in the Congo (ONUC)

43. Democratic Republic of the Congo (DRC), formerly a Belgian colony, gained independence in June 1960, but political instability followed. Its government, led by Prime Minister Patrice Lumumba and President Joseph Kasavubu, faced huge challenges, including the secession of Katanga and South Kasai, backed by Belgium and Western powers. The Cold War intensified tensions when Lumumba sought Soviet assistance, raising fears of communist influence in the region. In response, UNSC Resolution 143 authorized the deployment of the UN Operation in the Congo (ONUC) mission to restore stability in July 1960.

44. The Indian Army contributed over 3,000 troops to ONUC, including contingents from 3/1 Gorkha Rifles, 4/5 Gorkha Rifles, 1 Maratha Light Infantry, and the Sikh Regiment. Brigadier RS Noronha led the Indian brigade's entry, following which, Major General KAS Raja led counterinsurgency, patrolling and humanitarian aid operations. Indian Air Force, under Air Commodore AD Naik, provided essential reconnaissance, transport, and air support with Canberra and Toofani aircraft. The conditions for the mission remained harsh, with movement and operations hindered by hostile militias and logistics constraints. Indian peacekeepers earned accolades like the Maha Vir Chakra and Param Vir Chakra for their efforts. ONUC concluded in 1964, greatly enhancing India's peacekeeping reputation.

Major General KAS Raja (centre) inspecting ONUC troops in Congo

CAPTAIN GURBACHAN SINGH SALARIA

Having joined King George's Royal Indian Military College, Bangalore in 1946, Gurbachan Singh Salaria went on to attend its Jalandhar counterpart. He was part of the 9th batch of the National Defence Academy at Khadakwasla and in 1957, commissioned into 1 Gorkha Rifles. In the Civil War in Congo, India sent a brigade with the UN peacekeeping mission.

On 5 December 1961, Captain Salaria's platoon and two Swedish armoured carriers were tasked with removing rebel barricades near Elizabethville airfield, Lubumbashi. Against 90 rebel troops, Salaria led an assault despite neck injuries from gunfire, destroying two armoured cars and killing 40 rebels to force a retreat and secure the UN Headquarters, before being fatally wounded.

1989-99: UN Angola Verification Mission (UNAVEM) and UN Monitor Observer Mission in Angola (MONUA)

45. Angola, a former Portuguese colony, struggled with the bloc politics of the Cold War after independence, as the rival Soviet-supported MPLA and West-backed UNITA factions sparked the Angolan Civil War in 1974. Despite the Bicesse and Lusaka Peace Accords, their conflict persisted, prompting the UN to establish the Angola Verification Mission (UNAVEM) in 1989, followed by the UN Monitor Observer Mission in Angola (MONUA) in 1997. The civil war became the longest conflict in Africa, lasting until 2002, but the UN presence in Angola ended in 1999.

46. India sent significant troops, observers, and medical teams to UNAVEM. The contingent saw contributions from the 14 Punjab Regiment and 21 Mechanised Infantry, which excelled in ensuring the stability of northern Angola. During an action, Indian observers were detained by an arm of UNITA, but they stood firm with empathy-driven negotiations. In another case, the Indian Mechanised Task Force (INDMTF) protected a UN Food Program convoy in extreme conditions. Despite the peace process's collapse, the humane approach and consistent effort for community building by the Indian peacekeepers won wide praise.

KEY PEACEKEEPING OPERATIONS, 1992-2000

1992-93: UN Transitional Authority in Cambodia (UNTAC)

47. Following Cambodia's independence from France in 1953, a civil war fought by North Vietnam-aided Khmer guerrillas and the West-backed Khmer Republic ended in 1975 with the establishment of communist rule by Khmer Rouge under Pol Pot. This led to widespread killings, forcing UNSC to establish the UNAMIC peacekeeping mission via Resolution 717, followed by the UNTAC to oversee the setting up of a succeeding government in 1992. The Indian contingent included contributions for education and mediation from 1 Assam Rifles and management of elections from 4 Jammu and Kashmir Rifles. In spite of sporadic assaults from Khmer guerrillas, the Indian forces extended monitoring up to the Vietnam border and operated multiple field hospitals, winning accolades for a multi-layered role.

1992-94: UN Operation in Mozambique (ONUMOZ)

48. After ceasing to be a Portuguese settlement in 1975, Mozambique saw a civil war erupt between the FRELIMO, a socialist faction involved in its independence movement, and

RENAMO, a faction backed by the West and South Africa. The conflict claimed millions of lives until the Rome Peace Accord was signed. This was followed by UNSC Resolution 797, which authorised ONUMUZ to fulfil set political, military, humanitarian, and electoral objectives. In its peacekeeping unit, India contributed from the engineering, logistics, and administrative branches of its military. The Indian contingent was committed in its support of counterparts from Europe and Latin America, facilitating the elections and rebuilding process.

CAPFS IN PEACEKEEPING OPERATIONS

Along with India's armed forces, its Central Armed Police Forces (CAPFs) have also been occasional providers of manpower and support to UN peacekeeping missions. The Indo-Tibetan Border Police (ITBP) has, for instance, deployed its personnel for UN peacekeeping operations in Angola, Namibia, Cambodia, Mozambique, and Kosovo, while the Central Reserve Police Force (CRPF) has contributed to the missions in Namibia, Somalia, Haiti, Bosnia, and Kosovo. A couple of police units from the Border Security Force (BSF) and Indo-Tibetan Border Police (ITBP) have been part of MONUSCO since 2009.

1993-94: UN Operation in Somalia (UNOSOM)

49. Despite major involvement of US troops, Somalia's political instability, marked by a military coup, droughts, and civil war, continued to persist in the early 1990s, leading to UN intervention through UNSC Resolutions 733, 751, and 814. India responded to the UN's call for peacekeepers in the second phase of UNOSOM, with the 66 (Independent) Brigade, trained in Somali language and aware of local customs, deployed in southern Somalia. It was tasked to focus on reconciliation and humanitarian efforts, and further mandated to provide medical facilities and safeguard important infrastructure. However, in the course of their participation, Indian forces also engaged competing armed clans, conducted risky operations for relief, and suffered casualties. While UNOSOM was eventually compelled to withdraw from Somalia, the Indian contingent served with credit and highlighted India's long-standing commitment to helping uphold peace in Africa.

‘THE BLUE BERETS’ AND FUNDAMENTAL PRINCIPLES

Peacekeepers also referred to as 'The Blue Berets' or 'The Blue Helmets', are not an independent UN force but serving members of the armed forces of contributing nations. They assist nations in post-conflict situations only after a peace agreement is signed. Peacekeepers operate under three fundamental principles: the consent of all parties to the conflict, strict impartiality and the use of force solely in self-defence and to protect their mandate.

1994-96: UN Assistance Mission for Rwanda (UNAMIR)

50. Under Belgian trusteeship, Rwanda had developed colonially imposed socio-political divides between its Hutus, Tutsis, and Twa ethnic groups. Decades of Hutu-Tutsi clashes followed, eventually leading the Tutsi-led Rwandan Patriotic Front (RPF) to engage in a civil war against Hutu-dominated state forces, which eventually resulted in the Arusha Accords in 1993, following a stalemate. Despite UN Resolution 872 authorising the deployment of the UN Assistance Mission for Rwanda (UNAMIR) to help implement the accords, a severe massacre occurred in 1994, which led to a significant hike in the number of peacekeepers in Rwanda.

51. India contributed contingents of 3 Gorkha Rifles, as well as its Engineer, and Signals Corps. They were mandated to focus on upkeep of infrastructure, repairs, mine clearing, refugee rehabilitation, community reintegration, and medical care. The Indian troops also assisted Operation Support Hope, a US-led mission for providing relief to Rwandan refugees. Yet, troubles like ethnic clashes, shortages, and a stampede at a refugee camp continued during the peacekeeping tenure of the mission, and dealt with effectively with the Indian forces. Brigadier Shiva Kumar of the Jat Regiment was the final force commander of UNAMIR in 1995-96.

1999-01: UN Mission in Sierra Leone (UNAMSIL)

52. Sierra Leone, a former British colony, gained independence in 1961 but faced internal conflicts, including coups and the rise of the Revolutionary United Front (RUF). Amid conflicts over diamond mining, the UNSC sent observers, including Indians, and later enacted Resolution 1270 to authorise the UN Mission in Sierra Leone (UNAMSIL). India sent troops of Gorkha Rifles, Mechanized Infantry, and Indian Air Force for disarmament, demobilization, and reintegration (DDR) efforts. When the RUF took hostages at Kailahun, India launched Operation Khukri with 2 Parachute Regiment and IAF helicopters to lift the siege. India also led health and education programs. While UNAMSIL gained praise for Operation Khukri, it was eventually withdrawn by 2001 for political compulsions.

ONGOING PEACEKEEPING OPERATIONS

1998-Present: UN Interim Force in Lebanon (UNIFIL)

53. UN Interim Force in Lebanon (UNIFIL) was sent by UNSC in 1978 to oversee Israel's troop withdrawal from Lebanon, restore peace, and support the Lebanese Government in re-establishing its authority. Its mandate was revised twice, following events of the Lebanon

War of 1982 and the Southern Lebanon Crisis of 2000. After the Second Lebanon War of 2006, the UNSC expanded UNIFIL's role to include monitoring the cessation of hostilities, assisting the Lebanese armed forces in their deployment in south Lebanon, and facilitating humanitarian access. Additionally, it supports the voluntary and safe return of displaced persons.

54. These enhancements strengthened UNIFIL's mission to maintain stability, aid civilian populations, and support Lebanon's efforts in consolidating peace and security in the region. Until now, the UNIFIL has suffered 58 fatalities. India has been sending manpower and support services to it since 1998. As of early 2025, India's chief contribution to UNIFIL was an infantry battalion group. At the time, 897 of the 9,522 troops (about 9 percent) constituting UNIFIL were from India, making it the second-largest troop contributor to the mission. Major General Lalit M. Tewari served as the Force Commander of UNIFIL between 2001 and 2004.

A 2004 Indian postage stamp on its UN peace-keeping

2006-Present: UN Disengagement Observer Force (UNDOF), Golan Heights

55. In March 1974, rising tensions between Israel and Syria over control of the Golan Heights area led to the establishment of the UN Disengagement Observer Force (UNDOF) in May 1974 via UNSC Resolution 350. Tasked with maintaining the ceasefire and overseeing disengagement agreements in the Golan Heights, UNDOF faced ceasefire violations during the Syrian Civil War of 2011, as military activity escalated in the separation area between the two countries.

56. In 2020, UNSC Resolution 2555 extended UNDOF to hold the ceasefire and supervise separation areas. The resolution also highlighted the need to provide UNDOF with resources and capacity to ensure safer operations. Throughout its deployment, UNDOF has suffered 58 fatalities. India has been a participant of the mission since 2006. As of early 2024, India's primary contribution to UNDOF was a logistics battalion. Then, 199 of the 1,169 troops (about 17 percent) constituting UNDOF were from India, making it the third-largest contributor of troops to the mission. Major General Iqbal Singh Singha served as the Force Commander and Head of Mission between 2012 and 2015, while Major General Jai Shankar Menon served as Force Commander from 2016 to 2017.

2010-Present: UN Organisation Stabilisation Mission in the Democratic Republic of Congo (MONUSCO)

57. In July 2010, MONUSCO succeeded the UN Organization Mission in Democratic Republic of the Congo (MONUC) under UN Resolution 1925, reflecting a new phase of rebuilding in the country following the Second Congo War and the minor ethnic conflicts that followed. MONUSCO was initially mandated to protect local civilians, humanitarian personnel, and human rights preservers. It continues to support the Democratic Republic of the Congo's (DRC) government in its efforts toward stabilization, peace consolidation, and preserving vulnerable populations for long-term regional stability.

Indian Peacekeeping Troops with a child at Democratic Republic of Congo

58. From the time of its creation, MONUSCO has suffered 289 fatalities. As of early 2025, India's vital contributions to MONUSCO included infantry battalions, medical units, and support staff. At the time, 1,115 of the 14,000 troops (about 8 percent) and 160 of the 600 police-persons (about 24 percent) which constitute MONUSCO were from India, making it the third- and fourth-largest contributor of military and policing personnel to the mission respectively. Lieutenant General Chander Prakash served as the Force Commander between 2010 and 2013. General Bipin Rawat, before becoming India's Chief of Defence Staff (CDS), had commanded a brigade of MONUSCO.

2011-Present: UN Interim Security Force for Abyei (UNISFA), Sudan

59. In June 2011, UNSC Resolution 1990 approved the UN Interim Security Force for Abyei (UNISFA) to address escalating violence, tensions, and displacement in the resource-rich Abyei region, a traditional point of contention between Sudan and South Sudan, which became separate countries that year. UNISFA is tasked with monitoring the disputed border region, facilitating humanitarian aid, and protecting civilians. Its creation followed an agreement between the Government of Sudan and the Sudan People's Liberation Movement (SPLM) in Ethiopia to demilitarize Abyei and deploy a peacekeeping force of mostly Ethiopian troops.

60. UNISFA has continued to play a crucial role in ensuring security and stability in the region amid ongoing challenges. In its tenure, the UNISFA has suffered 57 fatalities. Indian

manpower has strengthened the mission since its formation. As of early 2025, India's contributions to UNISFA were a team of military observers and Staff Officers. At the time, 595 of the 3,550 troops (about 17 percent) which constituted UNISFA were from India, making it the third-largest troop contributor.

2011-Present: UN Mission in the Republic of South Sudan (UNMISS)

61. South Sudan became Africa's newest nation in July 2011, creating a separate identity from Sudan, with a peace process leading to the 2005 Comprehensive Peace Agreement (CPA). However, recognizing continuing threats to peace in the region, the UNSC adopted Resolution 1996 that month, establishing the UN Mission in the Republic of South Sudan (UNMISS) to consolidate peace, ensure security, and promote development. After the outbreak of the South Sudanese Civil War in December 2013, which led to widespread abuses of human rights, UNSC Resolution 2155, reinforced UNMISS by 2014 and shifted its emphasis to protecting civilians, human rights monitoring, aid delivery, and implementing the Cessation of Hostilities Agreement between the conflicting parties. \

62. UNMISS remains integral to the socio-political stability of South Sudan and its recovery efforts. Since its creation, the UNMISS has suffered 143 fatalities. As of early 2025, India's effective contributions to UNMISS were an infantry battalion, medical personnel, and engineering units. At the time, 2,397 of the 13,251 troops (about 18 percent) constituting UNMISS were from India, making it the second-largest troop contributor to the mission. Brigadier Asit Mistry was Deputy Force Commander between 2012 and 2014. Since 2022, ieutenant General Mohan Subramanian has served as the Force Commander.

A Veterinary Team of the Indian Army Serving in South Sudan

2014-PRESENT: UN MULTIDIMENSIONAL INTEGRATED STABILIZATION MISSION IN THE CENTRAL AFRICAN REPUBLIC (MINUSCA)

When the Central African Republic's government struck a ceasefire agreement to halt the civil war which began in that country in 2012, a peacekeeping force of the African Union was replaced by the MINUSCA, authorised by the UNSC via Resolution 2149 in 2014. The peacekeeping force deployed thereafter saw India participate until 2021-22 mainly with the deployment of military observers and police units. However, UN sources no longer listed India as a contributor of military, police, or support personnel to MINUSCA as of January 2025.

INDIAN WOMEN AND UN PEACEKEEPING

Women have long been crucial to peacekeeping missions, helping gain access to vulnerable communities in a peace process, enhance community rebuilding, and prevent sexual violence. While women still constitute less than 10 percent of the total peacekeepers currently active, India has been a strong advocate of women participation in UN peacekeeping since the 1960s. As of January 2025, India had 150 women peacekeepers deployed across six missions. In February 2007, India became the first country to deploy an all-woman unit to a peacekeeping mission, when a women police unit of the CRPF was sent to Liberia to serve with the UNMIL. In January 2023, the Indian Army deployed its largest ever contingent of women peacekeepers, when a platoon of women troops joined the Indian brigade that constituted UNISFA in Abyei. The Indian armed forces have established protocols for the training and capacity-building of women peacekeepers from India and other Global South nations.

CONCLUSION

- The Indian Armed Forces demonstrated remarkable courage and dedication in Operations Meghdoot and Cactus. By securing the Siachen Glacier amidst harsh conditions, they showcased unparalleled resilience. Similarly, Operation Cactus highlighted their swift and decisive action in neutralizing a coup attempt in the Maldives, restoring stability and earning international respect.

- India’s concerns about the strategically vital Siachen Glacier arose after getting information about a Pakistani plot to capture it. With Operation Meghdoot in 1984, Indian troops secured the glacier, its tributary glaciers, and key passes. Subsequent Pakistani attempts to reclaim the area were repelled.

- Operation Cactus was requested by Maldivian President Gayoom in 1988 to halt a coup by foreign infiltrators hired by a rival. Indian troops quickly regained control and restored Gayoom’s government, as the Indian Navy captured several perpetrators, thereby reinforcing India’s role as a security-provider in the Indian Ocean.

- India has consistently demonstrated leadership and dedication to international peacekeeping efforts since its early post-independence years. Contributing to over 50 missions, India’s involvement began in the Korean War, showcasing its commitment to the UN Charter. Over decades, Indian troops, police persons, medical teams, and logistics have been integral to UN missions across conflict zones. India's peacekeeping has consistently earned acclaim. Further, India has backed progressive causes like the inclusion of women in peacekeeping and the promotion of community- and peace-building in post-conflict scenarios.

SUMMARY

- India's concerns about Siachen Glacier emerged from its intelligence inputs about a Pakistani plan to claim the area militarily and on maps.
- India responded with Operation Meghdoot in April 1984 to swiftly land in the area and secures the glacier, its tributary glaciers, and key passes.
- Thereafter, multiple attempted assaults by Pakistan against the Indian presence in the area were repelled to maintain India's control over it.
- Operation Cactus was essentially a single-day intervention by the Indian armed forces in November 1988 requested by the Maldivian President.
- President Gayoom requested India's military assistance after his rival led armed mercenaries of a Tamil secessionist organisation from Sri Lanka, the People's Liberation Organisation of Tamil Eelam group to take over Maldives.
- After Indian troops landed in Maldives to restore Gayoom's government in hours, the Indian Navy chased and arrested several perpetrators.
- India has played a commendable and leading role through the history of its association with international peacekeeping.
- The Indian contribution has spanned over 50 peacekeeping missions, to which, it has cumulatively contributed about 290,000 personnel.
- India began showing its commitment to international peace and security, as enshrined in the UN Charter, just six years after independence.
- Since then, India has routinely sent troops, police units, medical teams, support staff, and even Force Commanders to UN missions
- In various conflict and post-conflict zones overseas, from Gaza to Sudan and Angola to Golan, Indian peacekeeping roles have won praise.
- India has also proactively supported the cause of sending more women personnel for peacekeeping, being one of the leaders of this practice.

ASSESSMENT EXERCISE

Multiple Choice Questions

Q1. What was the primary objective of Operation Meghdoot launched in April 1984?

a) To counter a military coup in Maldives

b) To secure the Siachen Glacier from foreign occupation

c) To safeguard the Kargil region

d) To form a buffer zone between India and Sri Lanka

Q2. Which point marks the northernmost tip of the Siachen Glacier?

a) Bilafond La

b) Khardung La

c) NJ9842

d) Indira Col

Q3. Who led the reinforcements from the Ladakh Scouts to Saltoro Ridge?

a) Major NS Salaria

b) Captain Kulkarni

c) Lieutenant Colonel Pushkar Chand

d) Lieutenant Colonel DK Khanna

Q4. Which Indian Navy ships led the task force during Operation Cactus?

a) INS Delhi and INS Vikrant

b) INS Godavari and INS Betwa

c) INS Shivalik and INS Jalashwa

d) INS Rajput and INS Trishul

Q5. Which treaty resolved the status of Minicoy Island as part of India?

a) Maritime Boundary Treaty of 1976

b) Comprehensive Trade Treaty of 1981

c) Independence Treaty of 1965

d) Bilateral Development Treaty

Q6. Who requested Indian assistance during the 1988 coup attempt in Maldives?

a) JR Jayawardene

b) President Maumoon Abdul Gayoom

c) AK Banerjee

d) Captain SV Gopalachari

Q7. What percentage of Maldives' imports came from Sri Lanka in the early years?

a) 50%

b) 65%

c) 75%

d) 90%

Q8. Why is Maldives strategically significant to India?

a) It enhances India's connectivity with Europe

b) It is located along vital shipping lanes in the Indian Ocean

c) It serves as a major export hub for India

d) It connects the Strait of Hormuz and the Arabian Sea

Q9. What was Quaid Post renamed after its capture by Indian troops on 26 June 1987?

a) Navdeep Top

b) Bana Top

c) Saddle Peak

d) Bana Top

Q10. What was the name of Pakistan's plan to capture the Siachen Glacier by force?

a) Operation Meghdoot

b) Operation Ababeel

c) Operation Cactus

d) Operation Vijay

Q11. What role did India play in the Korean War through the Neutral Nations Repatriation Commission (NNRC)?

a) Acted as a military ally to South Korea

b) Maintained neutrality and chaired the NNRC

c) Deployed armed forces for combat missions

d) Organized a military blockade at the 38th Parallel

Q12. How many Indian personnel have participated in UN peacekeeping missions since the 1950s?

a) Over 100,000

b) Over 290,000

c) Over 500,000

d) Over 1,000,000

Q13. As of January 2025, where does India rank in terms of manpower contribution to UN peacekeeping missions?

a) First

b) Second

c) Third

d) Fourth

Q14. ASWhat nickname did 60 Parachute Field Ambulance earn during its mission in Korea?

a) Warriors in White

b) Angels in Maroon Berets

c) Guardians of the North

d) Medics Without Borders

Q15. How many Indian peacekeepers were lost in an aircraft accident in October 1965?

a) Three

b) Five

c) Seven

d) Ten

Q16 What was the first formal UN peacekeeping mission in which India participated?

a) Korean War

b) Vietnam War

c) UN Emergency Force (UNEF) during the Suez Crisis

d) Cambodian ceasefire mission

Q17. Which nations were parts of the ICSC along with India?

a) Japan and China

b) Canada and Poland

c) USA and France

d) USSR and UK

Q18. In the UN Operation in Mozambique (ONUMOZ), which branches of the Indian military contributed?

a) Engineering, logistics, and administrative branches

b) Infantry and artillery branches

c) Parachute Regiment and medical corps

d) Combat aviation and armored divisions

Q19. What was the primary task of India's 66 (Independent) Brigade in UNOSOM?

a) Conducting combat missions against armed clans

b) Focusing on reconciliation and humanitarian efforts

c) Training Somali troops in modern warfare

d) Guarding international diplomatic missions

Q20. Which significant achievement made India a pioneer in women peacekeeping?

a) First country to deploy an all-woman unit to Liberia under UNIMIL

b) First nation to send women troops to Vietnam during UNTAC

c) Deployment of women medics in Somalia under UNOSOM

d) Hosting the largest contingent of women peacekeepers globally

Short Answer Questions

Q1. What prompted India to launch Operation Cactus in 1988?

Q2. Who led the Indian troops to capture Quaid Post in 1987?

Q3. What led Maumoon Abdul Gayoom to become President of Maldives

Q4. Name the three countries that, along with India, formed the Neutral Nations Repatriation Commission (NNRC) during the Korean War.

Q5. What was the primary objective of the Indian peacekeeping contingent during the United Nations Interim Force in Lebanon (UNIFIL)?

Q6. What was the significance of the Indian contribution to the UNTAC Resolution in Cambodia, and how did it impact the peace process?

Long Answer Questions

Q1. How did Operation Cactus contribute to India's influence in the Indian Ocean Region?

Q2. Why is the Siachen Glacier called the world's highest battlefield, and what are the challenges of maintaining control over it?

Q3. Explain the strategic importance of Maldives for India in terms of geography and maritime security.

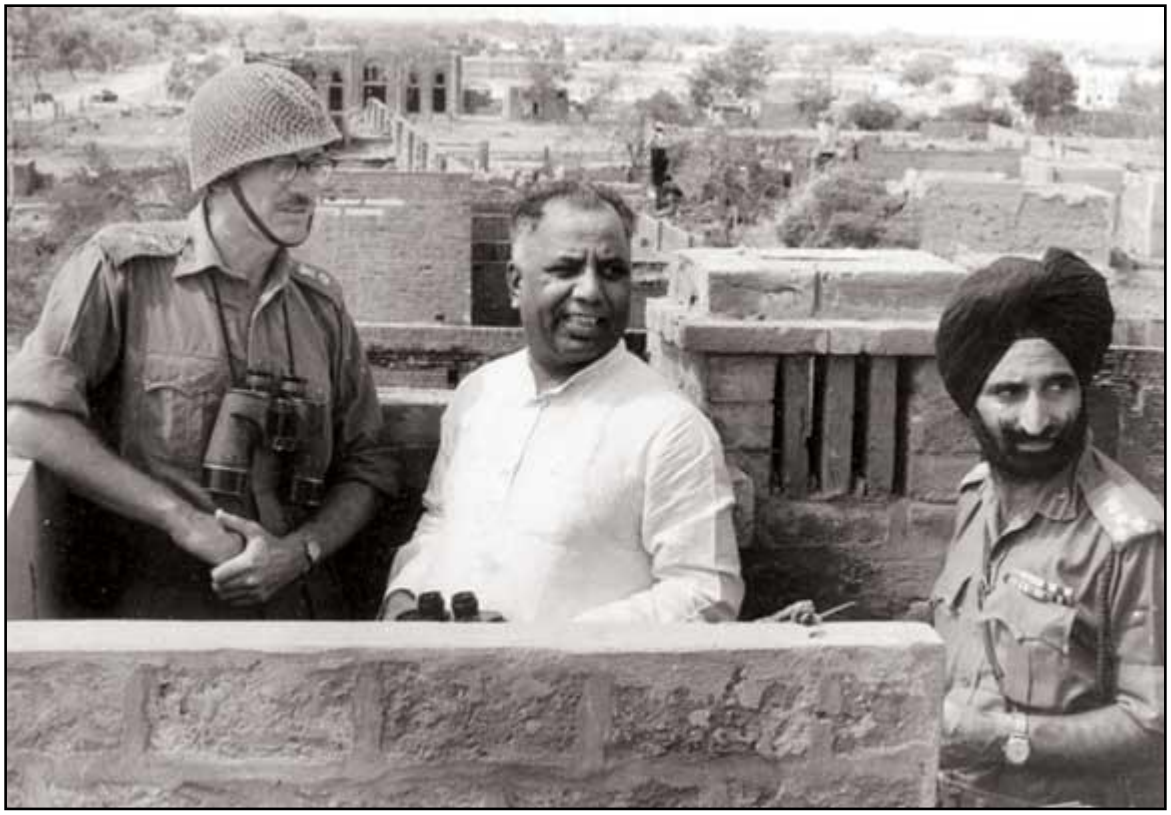
Q4. Discuss the role of Indian peacekeepers in the United Nations Mission in Ethiopia and Eritrea (UNMEE). What were the key challenges they faced, and how did they contribute to the mission's objectives?

Q5. Outline the role of the Indian contingent in the United Nations Mission in Sierra Leone (UNAMSIL). How did Operation Khukri demonstrate India's commitment to peacekeeping efforts?

Q6. Explain the purpose of the United Nations Assistance Mission in Rwanda (UNAMIR). How did Indian peacekeepers contribute to humanitarian aid and conflict resolution during the mission?

MH VI (SD/SW)

CHAPTER VI : EXEMPLARY MILITARY OPS.



Lt Col Desmond Hayde, MVC, CO 3 JAT (Left) with defence minister Yashwantrao Chavan at captured pakistani town of Dograi after the Battle of Dograi in 1965 Indo-Pak war.

TEACHING INSTRUCTIONS:

Period(s) : **02**

Type : **Lecture and discussion**

Year : **SD/SW (Third Year)**

Training Aids : **Classroom, computer with OHP, screen, pointer staff, presentation or videos, script or book flagged or lesson plan in file, and chart / poster.**

Time-plan

Introduction:	Overview	:	5 mins.
Part I	: On Land: Battle of Dograi	:	25 mins.
Part II	: In Air: Battle of Longewala	:	25 mins.
Part III	: At Sea: Operation Trident	:	25 mins.

INTRODUCTION

1. India's armed forces have set many an example of their operational abilities through their history. Yet, the Battle of Dograi, Battle of Longewala, and Operation Trident stand apart as exemplary military operations on land, in air, and at sea respectively. In all three cases, the Indian unit primarily involved was either faced with tremendous odds or achieved a feat that was witnessed until then. The Battle of Dograi saw the 3 Jat Regiment cross into enemy territory and capture the town of Dograi outside Lahore in 1965. In the Battle of Longewala, 122 Squadron of the Indian Air Force crippled a massive enemy tank advance towards Jaisalmer in 1971. Finally, with Operation Trident, again in 1971, the Indian Navy retaliated against Pakistan's aggression on India by counter-attacking its navy at Karachi.

OVERVIEW

(a) Introduction

(b) Part I : Battle of Dograi

(c) Part II: Battle of Longewala

(d) Part III : Operation Trident

LEARNING OBJECTIVES

- To learn about three exemplary actions of the Indian armed forces.
- To take a detailed look at their planning, execution, and outcomes.
- To appreciate the unique aspects of each of these three actions.
- To know about each action's key challenges and their solutions.

PART I: BATTLE OF DOGRAI

Brief Background

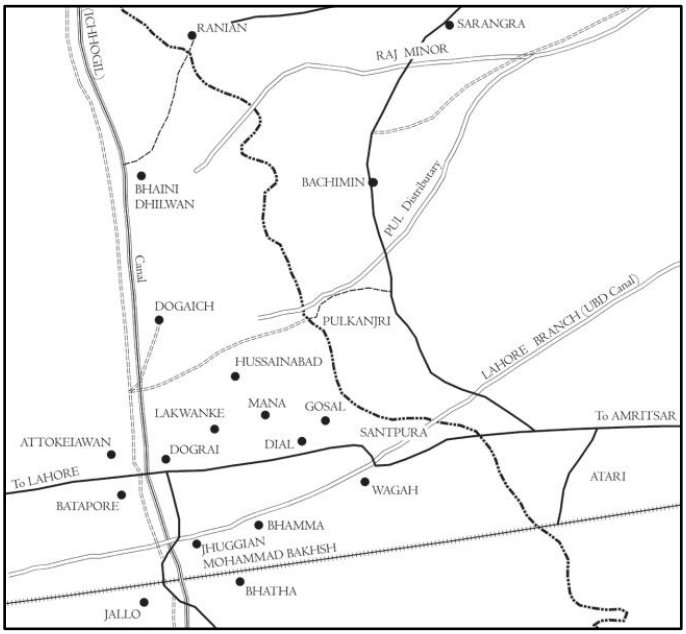
2. On 1 September 1965, Pakistan began Operation Grand Slam to take Akhnoor and disrupt Indian supply routes. Although initially successful, the offensive was halted by the Indian Army and Air Force by 3 September. In further retaliation, India also initiated counter-attacks across the international border in Jammu and Kashmir and Punjab on 6 September, as sanctioned by the Lal Bahadur Shastri government. To relieve pressure in Chhamb, India targeted Lahore and Sialkot, aiming to spread Pakistan's military capabilities and secure strategic territory for post-war leverage. These moves sought to counter Pakistan's advances while positioning India advantageously in the War of 1965.

Planning

3. In Punjab, the Indian offensive targeted the area from Dera Baba Nanak to the Sutlej River. This flat, fertile plain featured numerous roads and railways, with two strategic bridges spanning the Beas River. Pakistan had fortified the area with the Bambanwala-Ravi-Bedian Link Canal, also known as the Ichogil Canal, which served as a defensive waterway. The canal, running 5 to 14 km from the border, carried water from Marala Ravi Link Canal to the Sutlej, and had fortified banks. It crossed Grand Trunk (GT) Road near Dograi and included defensive natural features like a raised bank that acted as a protective barrier.

4. A key Indian objective of the XI Corps was to launch an offensive threatening the vital city of Lahore, with the broader goal being to drive a divide between the Lahore and Sialkot sectors to paralyse the enemy's potential. The Indian counter-offensives began early on 6 September, with 15 Infantry Division advancing along the Amritsar-Lahore axis, 7 Infantry Division along the Khalra-Barki axis, and 4 Mountain Division on the Khem Karan-Kasur axis. This strategic approach aimed to cripple Pakistan's defence and assert Indian dominance in these areas.

5. On 6 September, India's offensive began with 54 Infantry Brigade advancing along the GT Road. 3 Jat, led by Lieutenant Colonel Desmond Hayde, captured Gosal Dial, killing 35 Pakistani troops and capturing enemy weapons, vehicles, and supplies. Despite facing air attacks and losing their second-in-command, the 3 Jat regrouped and advanced toward the Ichogil Canal outside Lahore. By noon, two companies managed to cross the canal using a damaged bridge. Pakistan launched tank and aerial counterattacks, creating intense pressure, but the Indian troops held their ground. Despite the gains, the lack of reinforcements and anti-tank weapons forced 3 Jat to retreat to Gosal Dial under Brigadier MS Rikh's orders. Lieutenant Colonel Hayde's bravery earned him a Maha Vir Chakra.



Map showing Ichogil Canal and Dograi

6. Thereafter, Indian troops failed to capture the fortified town of Dograi despite multiple attempts. On 13 September, the 54 Infantry Brigade was entasked with taking Dograi, adjacent to the Ichogil Canal. Prior surveillance by 3 Jat revealed strong enemy defences, including minefields, wire entanglements, and concrete pillboxes. Despite these hurdles, the final assault was launched on the night of 22 September to surprise the enemy. 3 Jat fought fiercely, clearing resistance and piercing Dograi with reinforcements. After over 24 hours of intense fighting, the Indian troops forced the enemy to retreat. The action highlighted the resilience of 3 Jat in securing a critical objective amidst the War of 1965.

LIEUTENANT COLONEL DESMOND HAYDE

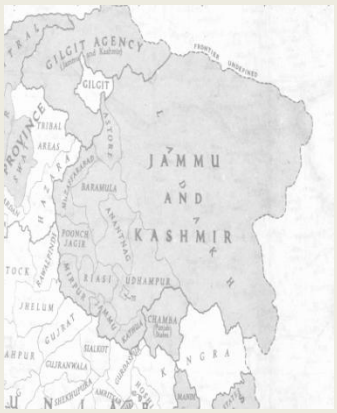
The son of an official of the Indian Railways, Desmond Hayde was born in 1926 at Exeter, England. Of Irish-Indian descent, he was educated in Asansol and Bangalore before joining the Indian Military Academy. He was commissioned into the Jat Regiment in 1948. During the War of 1965, Hayde's leadership was key to capturing Dograi, a critical and fortified enemy stronghold near Lahore. Hayde's order, 'not a single man will turn back', inspired his troops to hold fort. The victory at Dograi was a testament to his indomitable spirit and pride. He earned a Maha Vir Chakra for the action. After retiring as a Brigadier in 1978, he served as Inspector General in the Mizoram Police until 1984. Hayde then spent the rest of his life in Uttarakhand, where he passed away in 2013. One of his sons also went on to serve as an officer in the Indian Army.

CAPTAIN KAPIL SINGH THAPA

Born in 1937 near Dehradun, Uttarakhand, Kapil Singh Thapa was the son of Subedar Major DS Thapa. He aspired to be soldier at an early age and was commissioned into the Jat Regiment in 1963.

During the Battle of Dograi, he led a platoon through a stretch of minefield to the northeast side of the town. Despite heavy enemy machine gun fire, he led from the front, lobbing grenades at enemy positions and bayonetting incoming troops. After a bout of intense close quarters combat, his troops managed to secure their objective. Captain Thapa, however, succumbed to his injuries. His exceptional valour and resilience earned him a posthumous Maha Vir Chakra.

SUBEDAR KHAZAN SINGH



Born in Jhajjar, Haryana in 1926, Khazan Singh was a third-generation soldier of the Indian Army. In 1944, he joined 3 Jat Regiment, where his father Subedar Tulsi Ram as well as his grandfather had served. During the War of 1965, Subedar Singh led a company during the first assault on Dograi on the night of 5-6 September. Facing heavy machine gunfire, a bullet struck his helmet and knocked him unconscious. When he regained consciousness, Subedar Singh charged back to neutralise an enemy machine gun and shot the enemy Company Commander dead. Despite being injured, he led another spirited assault and engaged in lengthy close quarters combat in order to secure his company's advance on Dograi with minimal casualties. For remarkable leadership and resistance, he was awarded a Vir Chakra.

ISHAPORE RIFLES

Replacing the Second World War-era Lee Enfield bolt-action rifles, which were the primary arm of Indian infantrymen, the Ishapore 7.62 mm self-loading rifles were introduced before the War of 1965. Developed by Rifle Factory Ishapore (RFI) within three years, it marked such a such a key advancement in the arming of Indian frontline troops that KC Banerjee, the General Manager of RFI, received a Padma Shri for his efforts. Owing to the urgency behind its development, the Ishapore Rifles were essentially inspired from the Belgian FN FAL Rifles.

Ishapore 7.62 mm Self-Loading Rifle

Outcome and Lessons

7. The success at Dograi was a shining example of infantry resilience, but came at a heavy cost, with 58 killed and 157 wounded. Notwithstanding, several Indian troops distinguished themselves. Major Asa Ram Tyagi led the attack on the east edge of Dograi. Despite sustaining two bullet injuries, he pressed on against the Pakistani defences, continuing to lead his men until two further bullet hits felled him. Likewise, Captain Kapil Singh Thapa led a company across a minefield to a Pakistani position while braving gunfire, but perished while engaging the enemy in close combat. Both officers were awarded Maha Vir Chakras posthumously.

8. The battle adequately emphasised the primacy of the infantry battalion as the primary fighting unit of the Indian Army; of the junior leaders' abilities to adapt to the situation and steer troops from the front; and of training and battle readiness during peacetime. The Battle of Dograi, while being a tale of high determination, also demonstrated how grit alone could not bring victories in testing battles. As a signifier of this, the 3 Jat under Lieutenant Colonel Hayde was wise to withdraw initially after finding that its reinforcement and resupply column was stuck.

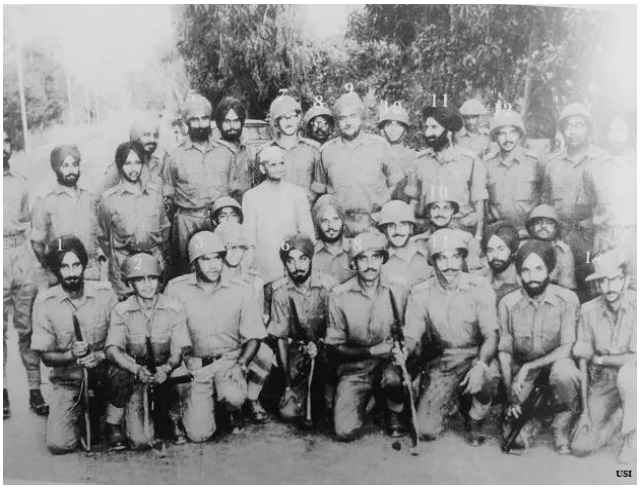
SEQUENCE OF THE INDIAN ARMY'S ACTIONS

Night hours, 21 September 1965: Indian Army's recces revealed that Dograi was fortified with enemy troops positioned with machine guns in pill-boxes and buildings, while minefields protected the towns perimeter. However, 3 Jat made an advance towards Dograi at 2330 hours, taking advantage of the darkness.

Before dawn, 22 September 1965: Troops of the 3 Jat dodged the minefield and attacked the defences of the town from three sides, silencing machine guns in pill-boxes and engaging the enemy in close quarters combat.

Early hours, 22 September 1965: After hours of tough fighting, the 13 Punjab Regiment captured the 13 Mile objective along the GT Road. Despite costing 31 troops, the action enabled 13 Punjab to contain a chunk of enemy troops at the GT Road axis. This helped the 3 Jat to press on at Dograi.

0530 hours, 22 September 1965: Despite suffering heavy losses, troops of 3 Jat managed to take most of Dograi by early morning, with enemy troops hiding inside houses and buildings along the GT Road flushed out shortly after. The Indians lost 58 soldiers, while 157 others were wounded. Meanwhile, about 300 enemy kills were also recorded, affirming the intensity of the battle.



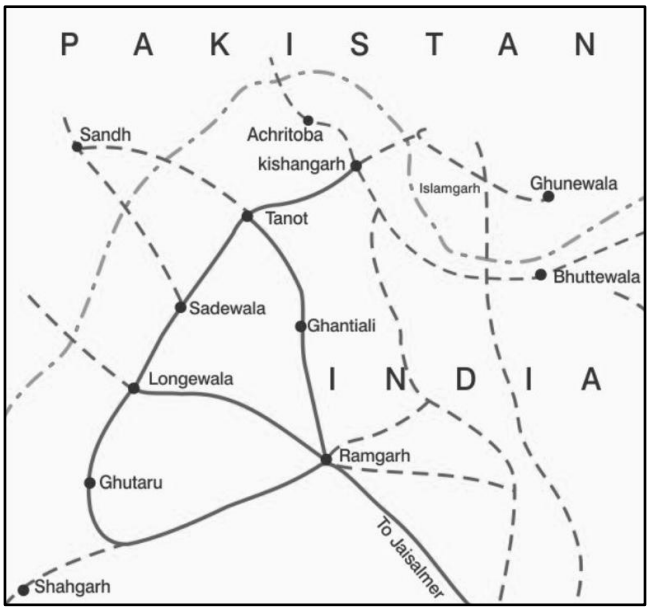
Soldiers and officers of the 3 Jat with Prime Minister Lal Bahadur Shastri

Chief of Army Staff Gen. JN Chaudhuri and Lt. Col. Hayde (right) along the Ichogil Canal

PART II : BATTLE OF LONGEWALA

Brief Background

9. By late 1971, tensions between India and Pakistan escalated into direct military clashes, fuelled by the refugee crisis in India's east due to the persecution of Bengalis in East Pakistan. On 3 December, Pakistan launched a pre-emptive strike on Indian Air Force bases, prompting India to respond with land, sea, and air offensives the next day. As part of its plans, Pakistan initiated an ambitious attack on 4 December in the Longewala sector, seeking to advance to Jodhpur. However, the Pakistani offensive, led by its 18 Infantry Division and two armoured regiments, was repelled by a small Indian force comprising troops of 23 Punjab and the Border Security Force (BSF), along with air support from the IAF.



Map of the Rajasthan Sector in 1971

Planning

10. A border village in the Thar Desert, located in Rajasthan's Jaisalmer district, Longewala was a strategically vital gateway into western India. Initially a post of the BSF, it was reinforced by troops of 23 Punjab Regiment as bilateral tensions with Pakistan escalated in 1971. Recognizing the need for air bases in Rajasthan after the War of 1965, the airfields at Uttarlai, Jaisalmer, and Nal were built. As tensions rose, these bases were activated by September. Multiple Hawker Hunter aircraft of 122 Squadron were relocated from Jamnagar to Jaisalmer to handle air defence and close air support to the 12 Infantry Division. Additionally, an air observation post was also positioned near the 12 Division Headquarters.

HAWKER HUNTERS

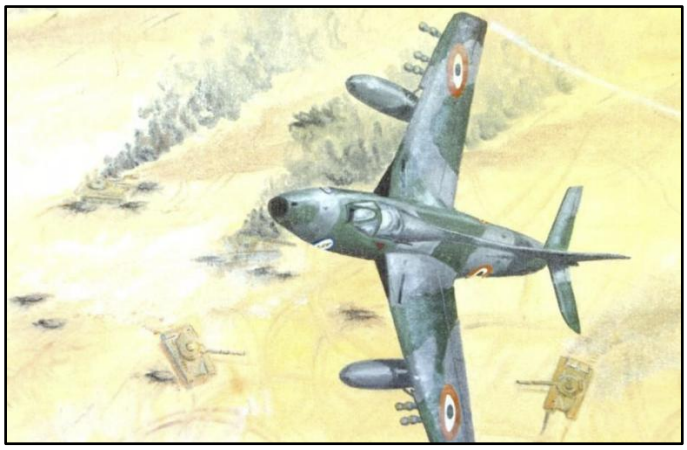
The IAF acquired Hawker Hunter jet aircraft from the UK in the 1960s. The Hawker played a key role in India's air defence during the India-Pakistani War of 1965 alongside the Folland Gnat. By the War of 1971, India possessed six Hunter squadrons, including the 122 Squadron at Jaisalmer. Armed with four 30 mm cannons, these could carry a combination of bombs and rockets on its underwing, making them versatile for both air defence and ground-attack roles. The aircraft proved crucial during the conflict, showcasing their effectiveness in varying combat scenarios and getting cementing as a key asset for IAF.

Execution

11. On the night of 4-5 December, Pakistan's 18 Division moved tanks and combat vehicles towards Longewala. An Indian Army patrol alerted the 23 Punjab and its Divisional Headquarters. Soon after, reinforcements of the 17 Rajputana Rifles and AMX-13 tanks of 20 Lancers arrived to resisted the enemy, slowing down the advance to Longewala. Despite intense pressure, the Indian defenders held on, with Dafadar Harbir Singh receiving a posthumous Vir Chakra for his role in the action. Meanwhile, Divisional Headquarters contacted Wing Commander MS Bawa at Jaisalmer airbase for urgent IAF air support. However, the Hunters at his disposal were unequipped for a night mission and had to wait until dawn.

12. Under Major Kuldip Singh Chandpuri, 120 soldiers of 23 Punjab replacing the BSF had to defend their post through the night. While outnumbered by 2,000 troops of Pakistan's 51 Infantry Brigade and 22 Armoured Regiment, Chandpuri and his troops held their ground. They inflicted heavy casualties and kept the enemy on the backfoot, with some forced to abandon their tanks. With the arrival of the Hunters from Jaisalmer at dawn, the Pakistani troops tanks were knocked out or forced to retreat. For his resoluteness, valour, and leadership in the face of such high odds, Major Chandpuri was awarded a Maha Vir Chakra.

13. 122 Squadron undertook 11 sorties, crippling 17 tanks, damaging 23 more, and striking enemy combat vehicles and supply trains. The Hunters continued strikes on retreating Pakistani forces, as reinforcements from Jamnagar brought the squadron's strength up to 14 aircraft. By 8 December, 18 IAF sorties left 37 tank wrecks near Longewala. The IAF's assaults on the enemy continued around Jaisalmer until 9 December, leaving nine tanks, 32 vehicles, three artillery guns, and one armoured personnel carrier of Pakistan destroyed. Multiple members of the 122 Squadron, including its Commanding Officer Wing Commander Donald Melvyn Conquest, were awarded Vir Chakras for the effort.



An artist's rendition of the IAF's assault on Pakistani tanks at Longewala

Outcome and Lessons

14. By the end of the Battle of Longewala, the IAF Hunters had destroyed dozens of Pakistani tanks and combat vehicles, along with some supply trains, effectively crippling a

massive enemy armoured advance before it could make any headway. While the role of Major Chandpuri's troops in fending off the enemy for hours until the arrival of air support at dawn is a legendary feat, the victory eventually came with the devastating display of IAF's air power. As revealed in intercepted enemy signals, the IAF's actions over Longewala and Jaisalmer dealt a heavy blow not just to Pakistan's material capabilities, but also to its morale and ambitions.

15. The IAF's timely deployment of Hunters against an armoured thrust across the tough terrain of the Thar Desert demonstrated how air power could decisively change the course of a conflict on land. The action also revealed the weaknesses of the most advanced of tanks against a coordinated aerial assault. It also showed Pakistan the perils of underestimating India's air offense capabilities, as its tanks rolled towards Longewala despite being aware of Pakistan Air Force's inability to provide them air support against a potential IAF attack. The IAF's decision to set up more bases close to the border with Pakistan also proved to be significant.

Longewala after the battle in 1971

MAJOR KULDIP SINGH CHANDPURI

Belonging to a family with multiple servicemen, Kuldip Singh Chandpuri was an NCC cadet while in college. He attended the Officers Training Academy in Chennai and went on to join the Punjab Regiment in 1963. He saw action in the India-Pakistan War of 1965, formed part of the UN peacekeeping force in Gaza, and served as an instructor at the Infantry School, Mhow. As a Major, he commanded a company of the 23 Punjab Regiment in the defence of the far-flung Indian post at Longewala near Jaisalmer, Rajasthan during the India-Pakistan War of 1971. He led his 120 troops to block the advance of a 2,000-strong Pakistani force, backed by tanks, through the night of 4 December. The determined leadership and heroics of Major Chandpuri and his men allowed the IAF to mount an attack on the enemy force by dawn. He received a Maha Vir Chakra for the effort and retired as a Brigadier in 1996.

WING COMMANDER DONALD MELVYN CONQUEST

Donald Melvyn Conquest was commissioned in the IAF in 1954, following which, he served in several bomber squadrons, at National Defence Academy, and a radar unit. As Wing Commander, he was placed in charge of the Operational Training Unit at Jamnagar, Gujarat that got converted the unit into the 122 (Ad-hoc) Squadron after the outbreak of the War of 1971. Before the Battle of Longewala, Wing Commander Conquest had already led a daring mission to bomb fuel storages at Karachi. Over Longewala, he led his squadron's fierce assault against Pakistani tanks and troops in the early hours of 5 December, causing major losses to enemy tanks and supply trains. He then led an attack against a Pakistani airfield and warehouse by 6 December. During one such mission, his aircraft was struck by enemy fire, injuring him severely. Yet, he managed to lead his squadron to safety. For his valour and leadership, Wing Commander Conquest received a Vir Chakra.

SQUADRON LEADER JAGBIR SINGH

Born in 1939, Jagbir Singh was commissioned into the IAF at the age of 20. Besides becoming an expert in aerial combat, he went on to gain praise for his expertise in tactical reconnaissance. Having served as a flying instructor in Iraq, he joined the Operational Training Unit (OTU) at Jaisalmer, which went on to become the IAF's 122 Squadron amidst the War of 1971. During the Battle of Longewala, on 6 December, Squadron Leader Singh undertook a reconnaissance operation deep into enemy airspace, gaining vital details of Pakistan's armoured columns around Jaisalmer. On the same day, he also flew an offensive sortie to destroy multiple enemy vehicles and tanks. Squadron Leader Singh then repeated this feat on 9 December. His efforts earned him a Vir Chakra. He went on to retire as an Air Vice Marshal in 1994, having served as Commandant of the College of Air Warfare, Secunderabad.

SEQUENCE OF THE INDIAN AIR FORCE'S ACTIONS

Around midnight, 5 December 1971: Pakistani artillery fired at the Jaisalmer sector to support their advancing invasion force of around 40 tanks, dozens of combat vehicles, and about 2,000 troops. The Indian troops of 23 Punjab engaged this massive force with anti-tank weapons and small arms.

At dawn, 5 December 1971: Hawker Hunters of the IAF's 122 (Ad-hoc) Squadron took off from Jaisalmer airbase and reached the skies of Longewala by 0700 hours to bomb enemy tanks and combat vehicles, sending their troops into disarray. By the afternoon, the IAF knocked out multiple Pakistani tanks, combat vehicles, and supply trains bringing

reinforcements to halt the enemy advance. The IAF suffered no losses despite heavy enemy ground-fire.

Morning hours, 6 December 1971: Pakistan restarted its artillery shelling, as some enemy tanks began to roll towards Longewala again around noon. In response, IAF aircraft were redeployed. By afternoon, the Indian aerial attack knocked out several more enemy tanks and combat vehicles.

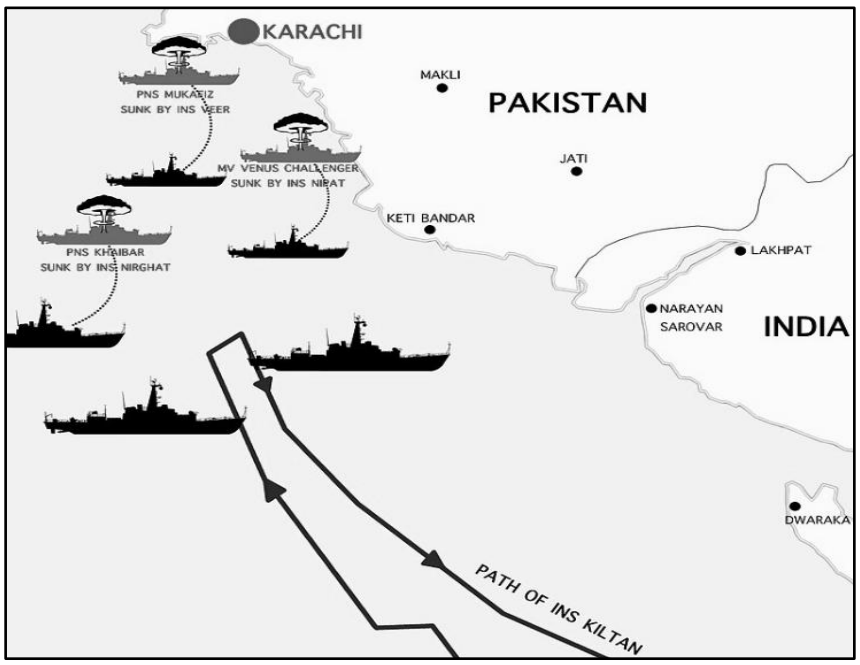
8 December 1971: The IAF flew 20 offensive sorties to destroy a large section of the enemy's armoured column assembled in the area between Longewala and Ghabbar, leaving much of the Pakistani arsenal burning in the desert.

9 December 1971: The IAF's Hunters undertook 22 further sorties against the retreating Pakistani armour, vehicles, and infantry, knocking out one armoured personnel carrier, three artillery guns, nine tanks, and 32 combat vehicles. This was the decisive blow that quashed all enemy hopes of piercing Jaisalmer.

PART III : OPERATION TRIDENT

Brief Background

16. In the India-Pakistan War of 1971, under Operation Trident on 4-5 December, the Indian Navy utilized Vidyut Class Missile Boats and Arnala Class Corvettes to mount a daring assault on the Karachi port in Pakistan, disrupting the enemy's naval capabilities and maritime supply routes. As opposed to the War of 1965, where the Indian Navy's role was limited to being defensive, Operation Trident gave the maritime force an opportunity to showcase its abilities. It marked the first combat use of anti-ship missiles by India, which dealt humiliating damage to the Pakistan Navy. This was followed by another bold attack with Operation Python.



Map of Operation Trident

Planning

17. As bilateral tensions mounted in 1971, in November, India set up INS Dwarka, a forward base at Okha, Gujarat near Pakistan's Karachi port, home to Pakistan's Naval Headquarters and almost its entire naval fleet. One of India's aims was to stay prepared to respond to Pakistan's first act of war with a strike on Karachi. A Task Group was raised for the purpose, including Vidyut Class missile boats, and Arnala and Veer Class corvettes. As part of the Task Group's plan to attack on Karachi, the Arnala corvettes would halt near Karachi, while Vidyut missile boats would sail ahead to strike the port and Pakistani vessels before retreating.

18. With the plan in place, the Western Naval Command Headquarters monitored enemy wireless relays to pick up indications of a potential naval attack on India. While the aim was to retaliate immediately after Pakistan's first act of aggression, the war commenced with an aerial attack by the Pakistan Air Force on multiple Indian airfields on 3 December, which delayed the Indian Navy's response to the following day. On December 4, the Task Group, headed by Commander Babru Bhan Yadav, was led towards Karachi by the 25 Killer Squadron, comprising two Arnala Class corvettes and three Vidyut Class missile boats.

A Vidyut class missile boat in action

VIDYUT CLASS MISSILE BOATS

The Project 205 Moskit, known by its NATO name 'Osa', was a class of missile boats developed for the Soviet Navy in the late 1950s. India acquired nine of these Osa Class boats between 1968 and 1971 and redesignated them Vidyut Class. With a crew of 28, including four officers, a Vidyut Class boat could reach speeds of over 70 km/h. and had a firing range of 930 km. These vessels were armed with 30 mm Close-In Weapon Systems (CIWS) guns and SS-N-2 Styx anti-ship missiles, showcasing high offensive and defensive capabilities.

Execution

19. Setting sail for Karachi on 4 December, Indian Navy's Task Group reached within 70 nautical miles south of the Pakistani port without any confrontation or resistance on the way. At a pre-decided halting point, the missile boat *INS Nirghat* engaged and sunk the first target, *PNS Khaibar*, a Pakistani destroyer, which thus became the first warship in Asia to be sunk by an anti-ship missile. Meanwhile, *INS Nipat*, another missile boat attacked and sunk a Pakistani merchant vessel carrying ammunition and severely damaging its escort vessel, *PNS Shah Jahan*.

20. Minutes later, the *INS Veer* missile boat struck and sunk *PNS Muhafiz*, an enemy minesweeper. With no more Pakistani vessels in sight to target, *INS Nipat* was ordered to launch a missile at the Karachi port and retreat, which it did. Yet, *INS Kiltan*, an Arnala corvette failed to receive the withdrawal order and took time to make its return. The delay caused it to almost get mistaken for an enemy ship and attacked. However, with the disaster avoided, Operation Trident succeeded and the Indian ships reassembled at the Saurashtra port to refuel on 5 December.

COMMANDER KP GOPAL RAO

Born at Mangalore in 1926, KP Gopal Rao was the brother of Major KPS Rao, an Indian Army veteran who had fought in the Second World War. He attended the Presidency College, Chennai and was commissioned in the Indian Navy in 1950. Known for his tactical aptitude, he was also quick to became an expert on gunnery. As Commander, he was the Commanding Officer of the Arnala class corvette, *INS Kiltan*, which formed part of the Indian Navy Task Group responsible for Operation Trident. Commander Rao led from the front in matters of target identification and communications during the action. Constantly motivating his colleagues during the operation, he demanded every man to overcome their fears, contribute their best, and work as a team. For his exceptional leadership role and masterful steering of the action, Commander Rao received a Maha Vir Chakra.

LIEUTENANT COMMANDER BAHADUR NARIMAN KAVINA

Born in a Parsi family in Bhusawal, Maharashtra, Bahadur Nariman Kavina was an NCC cadet and attended Jai Hind College, Bombay. He went on to attend the National Defence Academy and joined the Indian Navy in 1965. In the India-Pakistan War of 1965, he was involved in patrolling missions along the Gujarat coast. In 1969, he was sent to the Soviet Union to train on missile boats.

As a Lieutenant Commander, Kavina commanded the missile boat INS Nipat on 4 December 1971 as part of Operation Trident. During the mission, it sank MV Venus Challenger, a Pakistani merchant vessel carrying ammunition, and PNS Shah Jahan, the enemy frigate escorting it, along Karachi. INS Nipat then proceeded to bomb a fuel storage at the Karachi port, uniquely using an anti-ship missile for an attack on land. A temporary loss of communication raised fears that INS Nipat may have been sunk. However, Lieutenant Commander guided it back to safety soon. For the effort, he was awarded a Vir Chakra.

CAPTAIN GULAB MOHANLAL HIRANANDANI

Born to a Sindhi household in Karachi, Gulab Mohanlal Hiranandani joined the Indian Navy in 1949, going on to specialise in missiles and gunnery and attend the Royal Naval College, Greenwich in 1965. As an officer tasked with a key role in the Indian Navy's Weapons Policy and Tactics Branch, he was involved closely in securing the acquisition of the Vidyut class missile boats by India. Captain Hiranandani, known for being a brilliant tactician and innovator, developed an efficient method to tow the missile boats from the harbour to the high seas, which proved useful during Operations Trident and Python. He was awarded a Nau Sena Medal for his planning and logistical contributions to the two operations. He went on to command the *INS Rajput*, India's first destroyer, and serve as Official Historian of the Indian Navy. Retiring in 1989 as a Vice Admiral, he continued to be regarded for his skilled planning throughout his career.

Outcome and Lessons

21. Operation Trident marked a key success for Indian Navy during the 1971 War, as it sunk three Pakistani ships and damaging another in its first major offensive action. It sent a clear message to Pakistan about its vulnerability and the ability to India to strike its critical assets. The element of surprise in the attack caught the enemy off guard and cost it a major set-back early in the war. For leading the operation, Commander Yadav became India's first naval officer to receive a Maha Vir Chakra. Encouraged by its achievement, the Indian Navy launched Operation Python, returning to attack Karachi's naval defences further on 8 December.

22. The operation showed the utility of optimizing resources, planning in advance for contingencies, and timing actions to maximize surprise. The attack leveraged Pakistan's unpreparedness, striking swiftly after its aerial aggression. Admiral SM Nanda, the Chief of Naval Staff, also emphasised the importance of implementing high-risk plans such as that of mounting a direct offensive on the enemy's naval headquarters with a small squadron of boats. It was seen as his way of avenging the raid on Dwarka by the Pakistan Navy during the War of 1965. 4 December, the day on which Operation Trident was conducted, is celebrated as 'Navy Day' by the Indian Navy.

INS Nipat on patrol in the Arabian SeA

SEQUENCE OF THE INDIAN NAVY'S ACTIONS

Morning hours, 4 December 1971: The Indian Navy's Task Group, led by 25 Killer Squadron, sailed from Gujarat's Okha port and stopped about 460 km. south of Karachi's coast, avoiding detection by the Pakistan Air Force (PAF).

Night hours, 4 December 1971: At about 11 pm, the Task Group advanced towards Karachi, detecting enemy vessels about 130 km north near the coast of Karachi. Due to its lack of night-flying capabilities, no PAF cover was in sight.

2315 hours, 4 December 1971: *INS Nirghat* fired a missile at *PNS Khaibar*, an enemy destroyer, damaging it. Distressed, the enemy onboard interpreted it as an aerial attack by India and failed to respond, allowing a second missile fired by *INS Nirghat* to sink *PNS Khaibar* soon after.

2330 hours, 4 December 1971: *INS Nipat* fired a missile each at *MV Venus Challenger*, an enemy vessel carrying ammunitions, and its escort, *PNS Shah Jahan*, a destroyer. While the merchant vessel exploded and sunk, the enemy destroyer was severely damaged and crippled. *PNS Shah Jahan* was so badly damaged in the assault that it had to be eventually scrapped.

Around midnight, 4 December 1971: A missile fired by *INS Veer* struck *PNS Muhafiz*, an enemy minesweeper, and sunk it swiftly even before it could send a distress signal to the Pakistan Navy's HQ. Alongside, INS Nipat sped towards the Karachi harbour. From 25 km. away, it fired two missiles at the harbour, one of which hit the harbour's oil storage tanks and destroyed several of them.

Morning hours, 5 December 1971: After successfully completing Operation Trident, the Indian Navy's Task Group returned to Indian waters and was directed to the Saurashtra port for refuelling. The PAF retaliated by bombing the Okha port, but could not cause much damage to the alert Indian Navy.

6 December 1971: A Pakistani reconnaissance aircraft mistook *PNS* Zulfikar, their own frigate, for an Indian attack vessel in the Arabian Sea, causing PAF to open friendly fire and damage it.

8-9 December 1971: Another Indian Navy Task Group led by the missile boat *INS Vinash* made another night-time advance towards the Karachi harbour. It was detected by the enemy. Before heading back, *INS Vinash* rapidly fired four missiles, with one hitting the harbour's oil tankers and another damaging *PNS Dacca*, an enemy fleet tanker. This marked the success of Operation Python, which completed the early setback for the Pakistan Navy.

CONCLUSION

In the Battle of Dograi in 1965, 3 Jat initially crossed the Ichogil Canal near Lahore but lacked reinforcements to advance further. Soon after, they broke through enemy defences and secured Dograi following over a day of relentless combat. At the Battle of Longewala in 1971, 23 Punjab, vastly outnumbered, successfully defended their post against 2,000 Pakistani troops and tanks. The IAF later provided crucial air support, destroying multiple enemy tanks and vehicles, delivering substantial losses. Finally, as part of Operation Trident in 1971, the Indian Navy approached Karachi, sinking three Pakistani vessels. It boldly targeted Karachi's port facilities before a swift withdrawal.

SUMMARY

- In the Battle of Dograi, 3 Jat Regiment initially crossed the Ichogil Canal outside Lahore, but lacking reinforcements, it could not progress.
- Soon after, however, 3 Jat overcame enemy fortifications and captured the town Dograi braving over an entire day of intense combat.
- During the Battle of Longewala, 23 Punjab Regiment initially defended Longewala against 2,000 Pakistani troops and tanks.
- Then, the IAF arrived to destroy dozens of enemy tanks and vehicles, inflicting heavy losses during its consistent air support missions.
- As part of Operation Trident, an Indian Navy Task Group sailed near Karachi, sank three and damaged one Pakistani vessel.
- The Indian naval forces also managed to successfully target Karachi's port facilities before swiftly withdrawing.

ASSESSMENT EXERCISE

Multiple Choice Questions

Q1. What was the key strategic objective of India's offensive during the Battle of Dograi in 1965?

a) To capture the Sialkot sector

b) To divide and weaken Pakistan's defences in the Lahore and Sialkot sectors

c) To establish a military base in Lahore

d) To retaliate for the attack on Amritsar

Q2. What defensive advantage did Pakistan hold in the Lahore sector during the Battle of Dograi?

a) The presence of a large tank division

b) The natural barrier of the Sutlej River

c) The fortified Ichogil Canal

d) Air superiority

Q3. Who led the 3 Jat Regiment during the successful capture of Dograi?

a) Major Somnath Sharma

b) Lieutenant Colonel Desmond Hayde

c) Brigadier MS Rikh

d) Major Shaitan Singh

Q4. What delayed the Indian Air Force's support during the Battle of Longewala on the night of 4 December 1971?

a) Poor weather conditions

b) Lack of available aircraft

c) The Hunters were not equipped for night operations

d) A communication failure with the base

Q5. How many Pakistani tanks were destroyed or damaged by the Indian Air Force during the Battle of Longewala?

a) 20

b) 23

c) 37

d) 50

Q6. During Operation Trident, which Pakistani destroyer became the first warship in Asia to be sunk by an anti-ship missile?

a) PNS Shah Jahan

b) PNS Badr

c) PNS Khaibar

d) PNS Muhafiz

Q7. Which Indian Navy missile boat launched the decisive strike on Karachi port during Operation Trident?

a) INS Veer

b) INS Nirghat

c) INS Kiltan

d) INS Nipat

Q8. What was the key lesson learned from the success of Operation Trident?

a) The importance of ground-to-sea coordination

b) The value of surprise and resource optimization

c) The dominance of large naval fleets

d) The advantage of submarine warfare

Q9. Who was the Chief of Naval Staff who approved the high-risk decision to strike Karachi during Operation Trident?

a) Admiral SM Nanda

b) Admiral Vishnu Bhagwat

c) Admiral Ronnie Pereira

d) Admiral Madhvendra Singh

Q10. What aspect of the Indian Navy's strategy during Operation Trident made it distinct from past naval engagements?

a) Use of aircraft carriers

b) First-time use of nuclear submarines

c) Use of anti-ship missiles in combat

d) Deployment of coastal defence systems

Short Answer Questions

Q1. What key role did the 122 Squadron of the Indian Air Force play during the Battle of Longewala?

Q2. Why was the successful capture of Dograi significant for India’s position in the 1965 War?

Q3. What strategic advantage did the Indian Navy gain after the success of Operation Trident in the 1971 War?

Long Answer Questions

Q1. Discuss the planning and execution of the Battle of Dograi. What challenges did the Indian Army face, and how did they overcome them to secure victory?

Q2. How did the Indian Air Force’s coordinated effort at Longewala change the course of the 1971 War? Discuss the role of ground and air forces in the battle.

Q3. Explain the strategic and tactical significance of Operation Trident. How did the operation showcase the Indian Navy’s ability to plan and execute a complex maritime assault?

MH VII (SD/SW)

CHAPTER VII: PARAMVIRCHAKRA AWARDEES

TEACHING INSTRUCTIONS:

Period(s) : **03 (01 Each for 1st Year, 2nd Year and 3rd Year)**

Type : **Lecture and discussion**

Year : **SD/SW (First Year, Second Year, Third Year)**

Training Aids : **Classroom, computer with OHP, screen, pointer staff, presentation or videos, script or book flagged or lesson plan in file, and chart / poster.**

Time-plan

- Introduction : 5 mins.
- Part I : PVC Awardees, 1947-1965 : 35 mins.
- Part II : PVC Awardees, 1966-1971 : 35 mins.
- Part III : PVC Awardees, 1972-Present : 35 mins.

INTRODUCTION

1. The Param Vir Chakra (PVC) represents the pinnacle of bravery and selflessness in India's armed forces, symbolizing acts of valor in the face of grave danger during wartime. Instituted in 1950, as India transitioned into a republic, the PVC was made effective from 1947 to honor exceptional acts of courage during the country's formative military challenges. The award not only embodies national pride but serves as a testament to the extraordinary sacrifices of the recipients.

OVERVIEW

(a) Introduction

(b) Part – I : PVC Awardees, 1947-1965

(c) Part – II : PVC Awardees, 1966-1971

(d) Part – III : PVC Awardees, 1972-Present

LEARNING OBJECTIVES

- To understand the gravity and vitality of the Param Vir Chakra (PVC).
- To learn about the deeds of exceptional heroism and valour committed by PVC awardees since India's independence.
- To appreciate the qualities that makes a PVC awardees extraordinary.

2. This rare distinction has been conferred only 21 times in over seven decades, reflecting the immense gravity and significance of the honor. Of these 21 recipien ts, only seven survived to narrate their tales of heroism, with the rest making the ultimate sacrifice for their nation.

3. The PVCs have been awarded mainly after India's conflicts against Pakistan in 1947-48, 1965, 1971, and 1999, and against China in 1962. It was also awarded for distinct operations in 1960, 1984, and 1987. The last PVC was awarded in 1999, during the Kargil War, highlighting the rarity of this prestigious accolade .Each recipient's story is a chronicle of extraordinary heroism, whether it was holding ground against insurmountable odds, rescuing comrades in peril, or taking decisive action that turned the ti de of battle. For the armed forces, the PVC is not just an honor but a source of inspiration, driving them to uphold the highest traditions of courage, duty, and sacrifice.

WHAT AND WHY:

- The Param Vir Chakra (PVC) is the highest wartime gallantry award in India. It recognises exceptional acts of valour, daring, endurance, skill, or sacrifice by armed forces personnel during a war or conflict. Since its establishment on 26 January 1950, only 21 servicemen have received this prestigious honour, with 14 awarded posthumously. The name 'Param Vir Chakra' translates into the 'Wheel (or Cross) of the Ultimate Brave', as derived from Sanskrit. The award remains the highest symbol of extraordinary military courage in India. It is equivalent to the British Victoria Cross, US Medal of Honour, and French Legion of Honour.

DESIGN OF THE MEDAL AND DESIGNER:

Circular in shape, made of bronze, one and three eighth inches in diameter and on obverse, four replicas of “Indra’s Vajra” with the State Emblem (including the motto), embossed in the centre. On its reverse, it shall have embossed Param Vir Chakra both in Hindi and English with two lotus flowers between Hindi and English. The fitting will be swivel mounting. Mrs Savitri Khanolka*r*, wife of Maj Gen Vikram Khanolkar of the Sikh Regiment, designed the medal for the PVC. Mrs Khanolkar was chosen to design the medals owing to her in-depth understanding of Indian culture and her artistic skills. Besides designing the PVC, she designed the major Gallantry Medals for both war and peace.

PART I: PVC Awardees, 1947-1965

Major Somnath Sharma, PVC (Posthumous)

4. Early Life: Major Somnath Sharma was born on January 31, 1923, in Kangra, Himachal Pradesh. His family had a strong military background. His father was Major General Amarnath Sharma, and his brothers were Lt Gen Surinder Nath Sharma and General Vishwa Nath Sharma. His sister, Major Kamla Tewari, was a doctor. Somnath went to Sherwood College in Nainital and joined the Prince of Wales Royal Military College (now Rashtriya Indian Military College) in Dehra Dun at the age of ten. Later, he attended the Indian Military Academy. His grandfather's teachings of the Bhagavad Gita influenced his values.

5. Military Career: Hailing from family with a rich military legacy, he followed their footsteps and was commissioned into the 8th Battalion, of 19th Hyderabad Regiment (later 4th Battalion of KUMAON Regiment) on 22 February 1942. He fought during the Second World War wherein he played a crucial role in the Arakan Operations during Second World War and he was awarded a 'Mention-in-Despatches'.

Last known photograph of Major Somnath Sharma before he was airlifted to Srinagar to join the battle against Pakistan infiltrators. Note his left hand is in plaster sustained at the hockey field. Despite his injury, he insisted on going to the battle front along with his company. His argument was **“who knows my men better than me”**

Subject :- HONOURS AND AWARDS.

Herewith I am forwarding the following names for an immediate award for personal courage and bravery :-

1. No. Rank	Name	Unit	Appointment
IC-621 T/MAJOR	SOM NATH SHARMA	4 KUMAON	O.C.'D' COY.

2. HONOUR RECOMMENDED FOR :- Immediate Award of M.C.

3. CITATION :- On landing at SIRINAGAR airfield Major S.N.Sharma 'D' Coy was despatched to BADGAM village, with a view to prevent enemy from infiltrating and attacking SIRINAGAR Airfield. Major Sharma's Coy was involved in action against approximately 1000 enemy strong.

Major Sharma's leadership and personal courage and sacrificing his life by moving from post to post under heavy mortar and automatic fire he was responsible for his Coy holding against an overwhelming majority of enemy for nearly 4 hours and inflicting over 300 casualties on the enemy. Not only this even after his death his personal example of heroic enthusiasm made the Coy to fight for over an hour and only withdrew in an orderly fashion when ordered by the re-inforcement Commander. But for this Offr's bravery and sacrifice of his own life it is most probable that the SIRINAGAR Airfield would have been over run by the enemy and jeopardised the whole KASHMIR operations.

4. Date and Place of Action :- 3 Nov'47. BADGAM VILLAGE.

Lt.Col.
Comd 4 Kumaon Regt.
(M.N.KHANNA)

6. **Battle of Badgam:** On October 22, 1947, Pakistan launched a tribal invasion of Jammu and Kashmir with the intent to capture the Kashmir Valley by force. After the state formally acceded to the Indian Union on October 26, its defense became India's responsibility. Indian troops were swiftly sent to Srinagar, arriving on the morning of October 27, just in time to repel the invaders at the city's outskirts.

7. Among the reinforcements was D Company of the 4 Kumaon Regiment, led by Major Somnath Sharma, who was airlifted to Srinagar on October 31. Despite having his arm in a plaster cast and being advised to rest, Major Sharma insisted on leading his company during this critical hour. His resolute determination and sense of duty made him an exemplary leader in this pivotal moment.

8. On November 3, 1947, a patrol of three companies was sent to Badgam to scout for enemy raiders approaching Srinagar from the north. By 0930 hours, the troops had established a base in Badgam. As no enemy was encountered, two companies returned to Srinagar by 1400 hours, but D Company, led by Major Somnath Sharma, was ordered to remain south of Badgam until 1500 hours.

9. At 1435 hours, D Company came under fire from houses in Badgam village. Choosing not to retaliate to avoid harming civilians, Major Sharma assessed the situation with the Brigade Commander. Suddenly, a force of about 700 enemy fighters emerged from a depression to the west, launching an intense attack with small arms, mortars, and heavy weapons. The accurate fire caused heavy casualties among the Indian troops.

10. Despite the grave situation, Major Sharma recognized the threat to Srinagar and its airfield and urged his men to hold their ground. Under relentless fire, he directed panels to guide Indian aircraft to their targets. For six grueling hours, the company resisted against overwhelming odds. To inspire and motivate his troops, he moved between sections under intense enemy fire. He also ensured that aircraft could reach their targets by marking out landing zones with cloth strips. Although injured, he personally loaded magazines and distributed them to soldiers operating light machine guns; Major Sharma distributed ammunition, filled magazines, and operated light machine guns.

11. At the 161 Brigade Headquarters, charged with defending the Kashmir valley against Pakistani infiltrators, the wireless crackled with Major Somnath's resolute voice amidst a backdrop of relentless machine gun fire: "***The enemy is only 50 yards from us. We are heavily outnumbered and under devastating fire. I shall not withdraw an inch but will fight to the last man and the last round."*** Tragically, a mortar shell struck the ammunition near Major Sharma, killing him. Major Sharma's valiant efforts delayed the enemy advance by six hours and bought time for our reinforcements to arrive at Humhama in order to counter the enemy offensive.

12. Major Sharma sacrificed his life. His bravery and selflessness delayed the enemy's advance, safeguarding Srinagar and its airfield during critical hours. His valor remains an enduring testament to his dedication to the nation.

Lance Naik Karam Singh, PVC, MM

13. Early Life: Karam Singh was born on 15th September 1915 in the village of Sehna, located in the Barnala district of Punjab. He was the son of Sardar Uttam Singh, a farmer. Drawn by the heroic stories of village veterans who served in World War I and inspired by his uncle's military service, Karam Singh joined the 1st Battalion of the Sikh Regiment at the age of 26. It didn't take long for him to establish himself as a brave and fearless soldier.

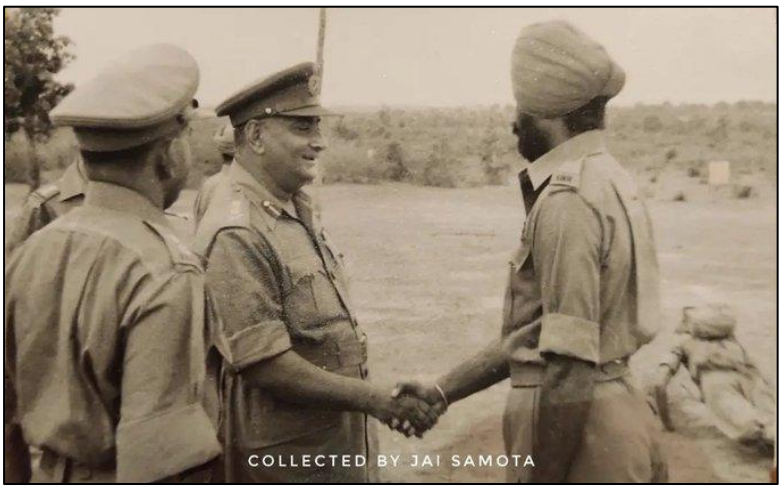
14. Military Career: During World War II, Karam Singh showcased exceptional bravery in the Burma Campaign's 'Battle of Admin Box,' earning the prestigious Military Medal for his courage. However, his most celebrated act of heroism occurred during the Indo-Pak Conflict of 1947-48, at the iconic 'Battle of Tithwal.'

15. Battle of Tithwal: On October 13, 1948, Pakistan launched an intense brigade-level offensive to capture Richhmar Gali, bypass Tithwal, and enter the Srinagar Valley. Lance Naik Karam Singh, leading the Alpha Company outpost at Richhmar Gali, found himself confronting overwhelming forces. Despite being gravely injured and heavily outnumbered, he inspired his men to endure through eight relentless enemy offensives.

16. When ammunition ran dangerously low, Karam Singh rejoined the main company position, fully understanding the unlikelihood of reinforcements amidst heavy shelling. Though wounded, he courageously rescued two comrades, aided by another soldier. Crawling through persistent enemy fire, he motivated his men, using grenades to fend off attackers.

17. Twice injured, Karam Singh refused evacuation and continued his defence at the forward trenches. The fifth assault brought ferocious intensity. When two enemy soldiers advanced dangerously close, Karam Singh, prioritizing his team's safety, leapt out of the trench and eliminated them with his bayonet. This extraordinary act shattered the enemy's resolve, forcing their retreat.

18. A rare photograph of Honorary Captain Karam Singh, PVC, MM with General Maharaja Rajendra Sinh Jadeja, DSO and Lt Col Jaswant Singh



19. In recognition of his exceptional bravery and heroic actions, Karam Singh was honored with the Param Vir Chakra, becoming its first living recipient. His remarkable feats at Tithwal became a lasting emblem of the indomitable spirit and courage of the Sikh Regiment, one of the most highly decorated regiments in the Indian Army.

Naik Jadunath Singh, PVC (Posthumous)

20. **Early Life:** Born on Nov 21st, 1916, in the quiet village of Khajuri, Shahjahanpur Distt, Uttar Pradesh, Jadunath Singh grew up in a humble agrarian family. He was one of eight siblings and had limited access to formal education, attending the village school up to Grade 4 while assisting in farming. Known for his wrestling skills, he earned a reputation for strength and valour in his community.

21. **Military Career:** On 21st Nov 1941, he joined Rajput Regimental Centre at Fatehgarh. After completing his training, he was posted to 1 Rajput and fought in WWII. By 1947, as India stood at the dawn of

independence, he was promoted to Lance Naik and had already proven himself as a fearless warrior. In Dec 1947, Naik Jadunath Singh's unit, 1 Rajput was deployed in Jammu & Kashmir to take part in the ongoing war with Pakistan after it had attacked Kashmir in Oct 1947.

Battle of Taindhar:

22. In December 1947, Pakistan invaded Jammu and Kashmir, prompting India to dispatch the 1 Rajput Regiment to defend the crucial Naushera sector. Among the many strategic points targeted by Pakistan, Taindhar Ridge held immense importance—it was a key route to capture the Srinagar airfield. On February 1, 1948, India's 50 Para Brigade launched a counteroffensive, successfully reclaiming control over Naushera and inflicting heavy losses on the enemy, forcing them into retreat.

23. However, the battle was far from over. On February 6, 1948, Naik Jadunath Singh and his nine men displayed unparalleled bravery as they faced relentless enemy assaults on the Taindhar Ridge. Despite being heavily outnumbered and under constant fire, his section fiercely resisted wave after wave of attackers. Wounded but undeterred, Naik Jadunath Singh took command of the Bren gun, holding his position against overwhelming odds. When ammunition ran out, he charged the enemy with a bayonet, fighting valiantly until his last breath.

24. As the enemy launched a third attack, Naik Jadunath Singh found himself the lone defender, having lost all his men. Still, he remained fearless in the face of adversity. With his sten gun in hand, he charged forward, sowing confusion among the enemy ranks and forcing them into retreat. His unmatched courage saved the post, stunned the enemy, and secured the defense of Naushera at a pivotal moment in the conflict. For his extraordinary sacrifice and heroism, Naik Jadunath Singh was posthumously awarded the Param Vir Chakra, India's highest military honor.

Memorial NK Jadunath at Taindhar Top Near Naushera (J&K)

Second Lieutenant Rama Raghoba Rane, PVC

25. **Early Life.** Major (then Second Lieutenant) Rama Raghoba Rane was born on June 26, 1918, in Chendia village, Karwar district, Karnataka. He received his education in various parts of India due to his father's job. In the 1930s, he was inspired by Mahatma Gandhi's call for youth to demand freedom from British rule. When his father learned about his involvement in the movement, Second Lieutenant Rane was sent back to his ancestral village in Chendia.

26. **Military Career.** At 22, Second Lieutenant Rane joined the British Indian Army during World War II. On July 10, 1940, he enlisted in the Bombay Engineer Regiment and was named "Best Recruit," receiving the Commandant's Cane for his performance. He was then promoted to Naik. After his training, Second Lieutenant Rane was posted to the 28th Field Company, an Engineer unit of the 26th Infantry Division, which was fighting the Japanese in Burma at the time. As his Division retreated from the Japanese after the failed Arakan Campaign, Second Lieutenant Rane and his two Sections were chosen by their Company Commander to stay behind at Buthidaung to destroy key assets and be evacuated by the Royal Indian Navy. Although they completed the objective, the evacuation did not happen. This forced Rane and his men to cross a river patrolled by the Japanese to reach their lines. They skillfully avoided the Japanese troops and joined the 26th Infantry Division at Bahri. For his actions, Second Lieutenant Rane was promoted to Havildar.

27. Second Lieutenant Rane later received a Viceroy's Commission as a Jemadar (now called Naib Subedar). Due to his dedication, hard work, and leadership skills, he was chosen for a Short Service Commission before partition. In 1947, after India's independence, he stayed in the Indian Army and was commissioned in the Corps of Engineers on December 15, 1947, as a Second Lieutenant.

28. **Recapture of Rajouri:** During the Indo-Pak Conflict of 1947-48, after Jhangar was recaptured, Rane's unit was tasked with clearing mines and roadblocks on the Naushera-Rajouri road to help Armoured and Infantry forces reach Rajouri. On April 8, 1948, while waiting near the tanks to clear the area, enemy bombardments began. Two soldiers were killed, and five others, including Rane, were wounded.Despite his injuries, Rane's dedication to his duty never wavered. He continued his mission, forcing the enemy to retreat. Without food and rest, and under the enemy's watch, he kept clearing the routes until 2100 Hrs the next day. Rane's unit used dynamite to remove big rocks near the river, making it easier for the tanks to pass.

Route Cleared By 2/Lt Rane And His Men Enabled Tanks Of Central India Horse To Reach Rajouri For Its Recapture

29. Rane's actions showed incredible courage, leadership, and determination. His efforts and contributions helped recapture Rajouri, preventing more enemy atrocities, and he was awarded the prestigious Param Vir Chakra (PVC). He continued to serve the Indian Army until his retirement in 1971 and passed away at the age of 73 in 1994.

Company Havildar Major Piru Singh, PVC (Posthumous)

30. **Early Life:** Company Havildar Major Piru Singh Shekhawat was born on May 20, 1918, in Rampura Beri village, Churu district, Rajasthan. He was the youngest in his family, with three brothers and four sisters. His parents were Shri Lal Singh and Smt Tarawati Kanwar (Jarav Devi). Piru Singh had a strong desire to join the Army from a young age and eventually got selected through a recruitment camp.

31. **Military Career:** Piru Singh joined the Army on his 18th birthday, May 20, 1936. He initially joined 10/1 Punjab but later moved to 5/1 Punjab of the Punjab Regiment, a famous infantry regiment. Because of his commitment he got promoted to Naik. He also served as an instructor at the Punjab Regimental Centre in Jhelum. In May 1945, he became Company Havildar Major. He fought in World War II and served in Japan with the Allied Forces. When he returned in September 1947, the Indian Army had reorganized, and he was sent to 6 Raj Rif of the Rajputana Rifles Regiment.

32. **Jammu and Kashmir Ops:** Darapari, a critical hill feature towering over 1,100 feet in Tithwal Valley, was the scene of a daring battle during the Indo-Pak Conflict of 1947-48. The 6 RAJPUTANA RIFLES was tasked with capturing the enemy-held position. Among the battalion, Delta Company, led by Company Havildar Major (CHM) Piru Singh, played a pivotal role. Time constraints prevented proper reconnaissance, and the assault was launched at 0130 hours on July 17-18.

34. The enemy had fortified their position with five trenches and three medium machine guns (MMGs), which delivered relentless fire as Delta Company advanced. Within thirty minutes, over half the troops were lost. When Subedar Bhika Singh, the platoon commander, was injured, CHM Piru Singh took charge. Undeterred by the intense fire, he led his platoon in a fearless attack on the heavily fortified bunkers. His leadership and extraordinary courage against overwhelming odds exemplified the highest traditions of the Indian Army.

35. Risking his life, Piru Singh motivated his remaining men with war cries and attacked the first trench despite his injuries. He captured it by firing at the enemy with a Sten-gun and then bayonetted them. Realizing he was the sole survivor of his company, he moved to capture the next trench. This drew the enemy's attention, and they bombarded him with bullets and grenades. Despite being hit by a grenade and suffering facial injuries, Piru Singh remained determined to complete his mission. He threw grenades at the enemy and bayonetted those in the second bunker. When he tried to capture the third bunker, he was fatally wounded when a bullet struck his head.

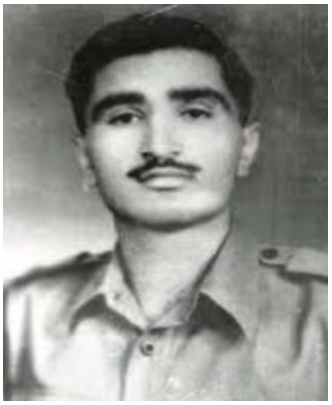
36. Performing one final act of courage, he managed to release the pin of a grenade and throw it at the third bunker, eliminating the enemies inside. For his self-sacrifice and determination, Piru Singh was awarded the PVC posthumously.

Tarawati Kanwar, The Mother Of Chm Piru Singh Shekhawat, Receiving The Param Vir Chakra From President Rajendra Prasad In 1950 On Behalf Of Her Son

DID YOU KNOW?

- The Shipping Corporation of India Ltd (SCI), named fifteen of her crude oil tankers in the Honour of the Param Vir Chakra recipients. The Crude oil tanker named MT"COMPANY HAVILDAR MAJOR PIRU SINGH, PVC" was delivered to SCI on 12 October 1984.

Captain Gurbachan Singh Salaria, PVC (Posthumous)



37. **Early Life.** Capt Gurbachan Singh Salaria was born on November 29, 1935, in Jamwal village near Shakargarh (then part of united Punjab). His family later moved to Jangal village in Gurdaspur district, Punjab. He was the second of five children of Sri Munshi Ram and Smt Dhan Devi. In 1946, he joined King George Royal Indian Military College in Bangalore (now Rashtriya Military School). He later attended King George Royal Military College in Jalandhar (now Rashtriya Military School Chail, Himachal Pradesh). Capt Gurbachan joined the 9th batch of the National Defence Academy at Khadakwasla and then the Indian Military Academy. In 1957, he was commissioned into 1 Gorkha Rifles, an infantry regiment known for its brave soldiers and many battle achievements.

To

The Ministry of Defence,
Government of India,
NEW DELHI.

Through :-
The Deputy Commissioner,
Gurdaspur District,
GURDASPUR
(Punjab)

Sir,

Subject :- FINANCIAL AID TO THE CADETS SELECTED FOR TRAINING AT THE JOINT SERVICES WING OF NATIONAL DEFENCE ACADEMY, DEHRA DUN

I have been selected for training as Cadet at the Joint Services Wing, National Defence Academy, Dehra Dun, after completing my educational career at the King George's School, NOWGONG, previously at JULLUNDUR.

My father is a Havildar Pensioner possessing a very small holding of land at village NOWSHEHRA NALBANDAN Tehsil Pathankot. He has a large family to support and he cannot therefore afford to support me at the Academy. I have no other source and I therefore request your honour to secure me the financial aid allowed under Government of India, Ministry of Defence letter No. F.130/49/D.1(a), dated 1 Nov '49.

For this kindness I shall be grateful to you.

Yours faithfully,

Dated
10 Jan '53

(GURBACHAN SINGH SALARIA)
S/o
Hav.Pensioner Munshi Ram
Village NOWSHEHRA NALBANDAN
Tehsil PATHANKOT

Captain Salaria's appeal letter for financial assistance to Deputy Commissioner, Gurdaspur to continue his education upon selection to NDA

38. **Military Career.** Captain Gurbachan Singh Salaria was part of the Indian contingent in the UN operation in Congo. The operation lasted from July 1960 to June 1964. Its goals were to withdraw Belgian forces, prevent civil war, and remove all foreign military personnel and mercenaries not under UN command. India sent the 99 Infantry Brigade in March 1961, and Capt Gurbachan Singh Salaria's unit, the 3/1 Gorkha Rifles, was part of that brigade.

UN Action in Congo

39. During the Congolese Civil War, India sent a brigade as part of a UN peacekeeping mission. The conflict grew more intense after December 2. On December 5, 1961, Capt Gurbachan Singh Salaria was assigned to remove rebel barricades near the Elizabethville airfield. His platoon of 16 soldiers, supported by 2 Swedish armoured personnel carriers, faced strong resistance from 90 rebel troops and two armoured cars. Capt Gurbachan Singh Salaria decided to confront the enemy directly and engaged in close combat. Despite suffering neck injuries from automatic gunfire, he fought bravely, destroying two armoured cars and killing 40 rebels.

40. The fierce confrontation with Indian troops left the rebels severely weakened, with nearly half their fighters lost. In a state of chaos, they retreated hastily, leaving behind their casualties and injured comrades. This allowed the main battalion to decisively overpower the Katangese forces, remove the roadblocks, and successfully prevent the rebels from encircling the UN Headquarters in Elizabethville. Capt Salaria eventually succumbed to his injuries and was posthumously awarded the Param Vir Chakra for his exceptional bravery and inspiring leadership.

Munshi Ram Salaria, Father Of Captain Gurbachan Singh Salaria, Receiving Param Vir Chakra From President Sarvapalli Radhakrishnan

INTERESTING FACT

- On 23 January 2023, on the occasion of Parakram Diwas, 21 largest unnamed islands of Andaman & Nicobar Islands after 21 Param Vir Chakra awardees. One of the islands was named after Captain Gurbachan Singh Salaria called “Salaira Dweep”.

Major Dhan Singh Thapa, PVC

41. Early Life: Lt Col Dhan Singh Thapa was born on April 28, 1928, in Shimla, Himachal Pradesh to Nepali parents. He was the son of Shri P.S. Thapa. He was commissioned into the 8th Gorkha Rifles on August 28, 1949. Soldiering came naturally to him, and he did it willingly and cheerfully, like most Gorkhas. He was known for being a deep-rooted soldier who was also affable, humble, and a good human being. Additionally, he was a keen sportsman and excelled in football. After a few years of service, Maj Thapa married Ms. Shukla, and they had two daughters, Poornima and Poonam, and a son, Param Deep.

42. Military Career: In October 1962, during the Sino-India War, the Indian Army established posts in Ladakh, including Sirijap 1, which was crucial for defending the Chushul airfield. This post, commanded by Major Thapa, was manned by 28 soldiers from a company of 1/8 Gorkha Rifles.

Sino-India War

43. In the wee hours of October 20th, the Chinese launched an attack on the post with heavy artillery and mortar fire. The attack lasted over two hours, setting the area on fire and damaging communication lines. Under Maj Thapa's leadership, the Gorkha soldiers fought back fiercely, causing heavy casualties to the enemy. The shelling continued for a long time, turning Sirijap into a fiery inferno with destruction everywhere. Maj Thapa watched his soldiers die and get wounded, making it hard for them to fight. Despite this, he kept them motivated to fight back.

Dhan Singh Thapa commanding the 1st Battalion of 8 Gorkha Rifles at Pangong Lake in Ladakh

44. The soldiers of D Company fought with incredible determination and bravery under the leadership of Maj Thapa. They repelled multiple attacks by Chinese soldiers, showing extraordinary courage. They picked up the rifles of their fallen comrades and retaliated with their regimental war cry, "Jai Mahakali, Ayo Gorkhali."

45. The Chinese launched a final attack on the Indian troops with tank support. Maj Thapa's post, already weakened by earlier attacks, fought bravely until they ran out of ammunition. The Chinese overpowered them with better weapons and larger numbers. Maj Thapa and his remaining soldiers were captured and taken as prisoners of war. However, Maj Thapa was believed to have been ‘killed in action’ and was awarded the nation’s highest gallantry award, “Param Vir Chakra” posthumously.

46. After being captured, he was treated very harshly, violating all established military conventions. He endured many punishments for causing heavy casualties to Chinese forces and for refusing to make statements against India as demanded by Chinese authorities. He was later released in May 1963, resumed his duty, and was promoted to the rank of Lt Col.

Lt Col Dhan Singh Thapa Receiving Param Vir Chakra From The President Of India Dr Sarvepalli Radha Krishnan

Subedar Joginder Singh, PVC (Posthumous)

47. **Early Life.** Subedar Joginder Singh was born on September 28, 1921, in Mahla Kalan village near Moga, Punjab. His parents, Sher Singh Sahnan and Krishan Kaur, were farmers. After passing his 10th-grade exams, he joined the British Indian Army's First Sikh Regiment on September 28, 1936. He later married Bibi Gurdyal Kaur Banga of saini family from the village Kothay Rara Singh near Kot Kapura. They had a son and two daughters.

48. **Military Career.** Soon after completing his training, Joginder Singh was sent to Burma (Second World War), where he served with distinction.

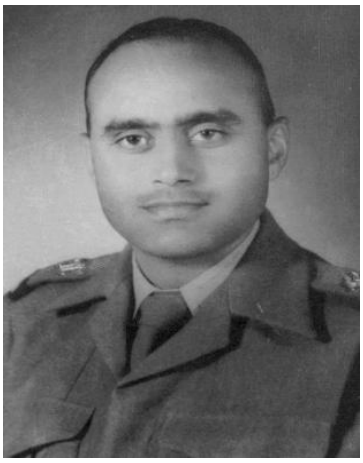
After India's independence, his regiment was posted to Srinagar, where they fought against Pakistani tribal laskhars who attacked Kashmir in 1947-48. He was a hardworking soldier who valued education, passing his professional exams to become a unit instructor. Joginder commanded respect from his troops for being a strict disciplinarian and a dedicated soldier. During the Sino-Indian War of 1962, Subedar Joginder Singh was stationed at the Tawang Sector in NEFA, commanding a platoon. In the early hours of October 23, 1962, the Chinese launched an assault on the Bumla axis with the aim of capturing Tawang. The attack was carried out in three waves, each consisting of 200 men. Singh's platoon successfully repelled the first and second waves, but by the time the third wave arrived, his platoon had suffered heavy casualties.

49. Despite his thigh injury, Subedar Joginder Singh stayed determined and motivated his men to fight until the end. As the Chinese advanced, he fired at them with his light machine gun, causing significant damage. The superior numbers and weapons of the Chinese Army did not deter Singh and his men. They charged at the enemy with bayonets, killing many of them in one final act of bravery. Subedar Joginder Singh was posthumously awarded the PVC for his exemplary courage and devotion to duty.

Smt Gurdayal Kaur, wife of Subedar Joginder Singh, receiving PVC from the President Dr Sarvepalli Radhakrishnan

Subedar Joginder Singh's memorial at Arunachal Pradesh

Major Shaitan Singh, PVC (Posthumous)



50. **Early Life.** Major Shaitan Singh Bhati was born on December 1, 1924, in Banasar village, Jodhpur district, Rajasthan, into a military family. His father, Lt Col Hem Singh Bhati, served in the Army and was awarded the 'Order of the British Empire' for his bravery during World War I. Inspired by his father, Maj Shaitan Singh aspired to be an Army officer from a young age. He attended Rajput High School in Chopasani, Jodhpur, and then graduated from Jaswant College in Jodhpur. He married Ms. Shagun Kanwar, and they had a son named Narpat.

51. **Military Career.** After graduating, Maj Shaitan Singh joined the Jodhpur Lancers (Horse Squadron) of the Jodhpur State Forces. He was transferred to the

KUMAON Regiment when the princely state of Jodhpur was merged into India on April 7, 1949. He was promoted to the rank of captain on November 25, 1955, and took part in operations in the Naga Hills. He also participated in 'Operation Vijay' in 1961. In June 1962, Maj Shaitan Singh's unit, the 13 KUMAON, which was stationed at Ambala, was moved to Jammu & Kashmir.

52. **Battle of Rezang La.** In June 1962, 13 KUMAON battalion moved from Ambala to Baramulla in Jammu & Kashmir. In September 1962, with tensions rising with China, the battalion was ordered to move to Leh. Maj Shaitan Singh, serving as the Company Commander of Charlie Company and the Quarter Master of the battalion, led his company as part of the 114 Infantry Brigade's operational plan, which deployed them at Rezang La.

53. The Chinese offensive in this sector started on November 18th. They launched a two-pronged attack against the Chushul defenses. The Northern prong targeted Gurung Hill, while the second prong attacked the Charlie Company of 13 KUMAON, also known as the Ahir Company, at Rezang La. Rezang La was an isolated location about 11 kilometers south of Spanggur Gap and controlled the vital road connecting Leh to Chushul via Dungti. On November 18, 1962, Chinese forces approached the Indian position through ravines leading up to the hilltop. By the time the seventh wave was launched at 9:00 AM, Indian troops had suffered heavy casualties.

54. Major Shaitan Singh was badly wounded in his arms and abdomen. When his troops tried to rescue him, they faced intense machine-gun fire. With tears in their eyes, the soldiers helped Major Shaitan Singh rest against a boulder before reluctantly leaving him. Major Shaitan Singh and the Charlie Company of 13 KUMAON fought with unwavering determination to ensure that the enemy paid a heavy price for their aggression at Rezang La. For every one of ours, the enemy suffered four or five casualties. Maj Shaitan Singh and his brave soldiers fought until the last man and the last bullet, and their heroic stand stopped the Chinese advance towards the Chushul airfield. Maj Shaitan Singh was awarded "Param Vir Chakra"(posthumously), the highest wartime gallantry medal, for his unfaltering courage, leadership, and exemplary devotion to duty.

War Memorial at Rezang La

Last rites of Maj Shaitan Singh at his village

Company Quarter Master Havildar Abdul Hamid, PVC (Posthumous)

55. **Early Life.** Abdul Hamid was born on July 1, 1933, in Dhamupur village, Ghazipur, Uttar Pradesh, to Mohammad Usman and Sakina Begum. He had two sisters and three brothers. He completed his education up to the eighth grade from a junior high school in Deva. Due to his family's financial difficulties, he couldn't continue his studies and had to join his father's tailoring shop. He married Rasloon Bibi at a very young age, and the couple had a daughter and four sons.

56. **Military Career.** In 1953, at the age of twenty, CQMH Abdul Hamid joined the Indian Army. He trained at the Grenadiers Regimental Center in Nasirabad and was assigned to the 4 GRENADIERS in 1955. He first served in a rifle company and later in recoil-less platoon. During his service, CQMH Abdul Hamid was stationed in various places, including Agra, Amritsar, Jammu & Kashmir, Delhi, NEFA, and Ramgarh. During the Sino-Indian War of 1962, his battalion, part of the 7th Infantry Brigade, fought in the Battle of Namka Chu against the Chinese. Surrounded and cut off, they escaped to Bhutan on foot and then to Misamari. After the war, he returned to Ambala and was appointed Company Quarter Master Havildar.

57. **Khem Karan Op. 1965.** After serving five years in the anti-tank section, CQMH Abdul Hamid was promoted and put in charge of his company's quartermaster stores. He was the best at shooting the 106 mm recoil-less rifle in the battalion, so he was reassigned to command the battalion's recoil-less rifle platoon.

58. On September 8, at midnight, the 4 GRENADIERS arrived in the Khemkaran sector from the Ichhogil Canal area. By dawn at 7:30 AM, the sound of many enemy tanks was heard. At 9:00 AM, a troop of Patton tanks appeared on the road. The battalion held their fire, and when the leading tank was just 30 yards away, CQMH Abdul Hamid knocked it out.

59. On September 10, 1965, around 8:00 AM, Pakistani forces attacked a key sector near the village of Chima on the Bhikhiwind road in the Khem Karan Sector with a regiment of Patton tanks. Heavy artillery shelling preceded the attack. By 9:00 AM, the enemy tanks had reached the forward position. Abdul Hamid moved to a flanking position with his gun mounted on a jeep amidst heavy enemy shelling and tank fire. He quickly changed positions, destroyed the leading enemy tank, and ignited another one.

60. After being spotted by the enemy tanks, intense fire with heavy explosives and concentrated machine gunfire targeted his jeep. CQMH Abdul Hamid continued firing his recoilless gun at another enemy tank without stopping. He was fatally wounded by an enemy high-explosive shell while doing so. For his remarkable bravery and courage, CQMH Abdul Hamid was posthumously awarded the nation's highest gallantry award, the "Param Vir Chakra."

Jeep used by CQMH Abdul Hamid during 1965 Indo-Pak War

CQMH Abdul Hamid was awarded Param Vir Chakra, India's highest gallantry award. On January 26, 1966, his wife Rasoolan Bibi received the award from Indian President Sarvepalli Radhakrishnan.

Lieutenant Colonel Ardeshir Burzorji Tarapore, PVC (Posthumous)

61. **Early Life.** Lieutenant Colonel Ardeshir Burzorji Tarapore was born on August 18, 1923, in Mumbai. His father worked with the Customs Department of Hyderabad State. He was the second of three children. At age seven, he joined Sardar Dastur Boys Boarding School in Pune and completed matriculation in 1940. He then joined the Hyderabad State Army and the Officers' Training School at Golconda. He married Perin, and they had a son, Xerxes, and a daughter, Zarine.

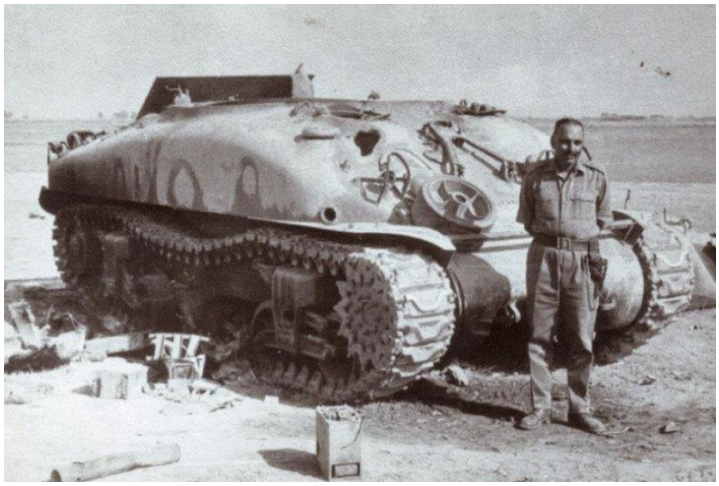
62. **Military Career.** On January 1, 1942, he was commissioned into the 7th Hyderabad Infantry. However, he wanted to serve in an armoured regiment, so he was transferred to the 1st Hyderabad Imperial Service Lancers. During World War II, he and other soldiers were posted to the Middle East. On April 1, 1951, after the Hyderabad State integrated with the Union of India, he was shifted to the Poona Horse. He received promotions and eventually became the Commanding Officer, leading his regiment in the 1965 war against Pakistan.

63. **Battle of Chawinda.** The Poona Horse, a distinguished armored regiment of the Indian Army, played a pivotal role during the Battle of Chawinda on September 11, 1965, as part of the Indo-Pak War. Their mission was to isolate Chawinda from the north by establishing a strategic pivot at Wazirwali, aiming to neutralize Pakistani armored forces. Chawinda held significant tactical importance, as it served as a base for enemy artillery observation posts, enabling precise and heavy shelling.

64. The Poona Horse launched an attack on Phillora, located in the Sialkot sector. Lieutenant Colonel Tarapore led the southern attack on the right flank. Between Phillora and Chawinda, they faced heavy enemy armour from Wazirwali. Despite continuous enemy fire, he held his ground and attacked Phillora. Even when wounded, he refused to leave. He led his regiment to capture Wazirwali on September 14 and Jassoran and Butur-Dograndi on September 16, 1965.

65. Though his tank was hit multiple times, he held his positions at both locations, aiding the infantry attacking Chawinda. Inspired by his leadership, the Regiment fiercely attacked the enemy armour, destroying around sixty Pakistani Army tanks while losing only nine of their own. Unfortunately, his tank was hit and caught fire, leading to his heroic death. His bravery during the six-day battle exemplified the highest traditions of the Indian Army. The regiment's efforts were instrumental in countering the enemy's armored strength and disrupting their operations in the region. The Battle of Chawinda is remembered as one of the largest tank battles since World War II, showcasing the bravery and strategic acumen of the Indian Army.

66. Lieutenant Colonel A.B. Tarapore's heroism during the six-day battle honored the greatest traditions of the Indian Army. He was cremated on September 17, 1965, in Jassoran as per his wishes. His ashes were taken to Poona and later immersed in the Sangam on November 29, 1965. Leading with exceptional skill and inspiring leadership, he made the ultimate sacrifice, laying down his life in the highest service of the nation. For his unparalleled valor, he was posthumously awarded the Param Vir Chakra, India's highest military honor for gallantry



Lieutenant Colonel AB TARAPORE standing besides destroyed Paki M4 Sherman Tank

A bust of Lieutenant Colonel Tarapore has been installed in the National War Memorial, New Delhi

PART II: PVC AWARDEES, 1966-1971

Lance Naik Alber Ekka, PVC (Posthumous)

67. **Early Life.** Lance Naik Albert Ekka was born on December 27, 1942, in Zari Village, Gumla district, Bihar (now in Jharkhand). He was the son of Sri Julius Ekka and Smt Mariam Ekka. From a young age, he showed a strong sense of adventure and a deep interest in serving the nation. His admiration for soldiers and their bravery fueled his desire to join the Indian Army.

68. **Military Career.** His dream came true on December 27, 1962, when he joined the 14th Battalion of the Brigade of the GUARDS at the age of 20. In addition to his military ambitions, Lance Naik Albert Ekka was a keen sportsman. He excelled in hockey, demonstrating agility, teamwork, and determination—traits that would later define his combat style. His disciplined nature and dedication to physical fitness made him an exceptional soldier, ready to face any challenge.

69. By 1971, Lance Naik Albert Ekka had served in the Indian Army for nine years. During this time, he was actively involved in counter-insurgency operations in the Northeast region, gaining valuable combat experience in challenging terrains. His rigorous training and exposure to real battlefield conditions honed his tactical skills and resilience.

India-Pakistan War of 1971

70. During the Indo-Pak War of 1971, the 14 GUARDS Battalion was tasked with capturing a heavily fortified Pakistani position at Gangasagar, 6 km west of Agartala, in Brahmanbaria district, East Pakistan. This stronghold was strategically important as it was on a major railway link to Dhaka. Capturing Gangasagar was crucial for the Indian Army's advance toward Akhaura and Dhaka. However, the enemy had anticipated the attack and fortified the position with heavy defences and extensive minefields.

71. On the night of December 3, 1971, the 14 GUARDS attacked enemy positions. Lance Naik Albert Ekka was part of the forward company leading the charge. As they advanced, they faced intense shelling and gunfire from the enemy. Despite the harsh conditions, they pressed on, engaging in fierce hand-to-hand combat with the Pakistani troops.

72. During the battle, Lance Naik Ekka saw an enemy Light Machine Gun (LMG) in a bunker causing heavy casualties. Ignoring his own safety, he charged the bunker, bayoneting two enemy soldiers and neutralizing the LMG. Despite serious injuries, he kept advancing, clearing bunkers with determination. When enemy fire from a fortified building halted the Indian advance, Lance Naik Ekka rose to the challenge. He sustained more injuries but continued fighting bravely, ensuring his company’s progress. His actions exemplified exceptional courage and dedication to his mission.

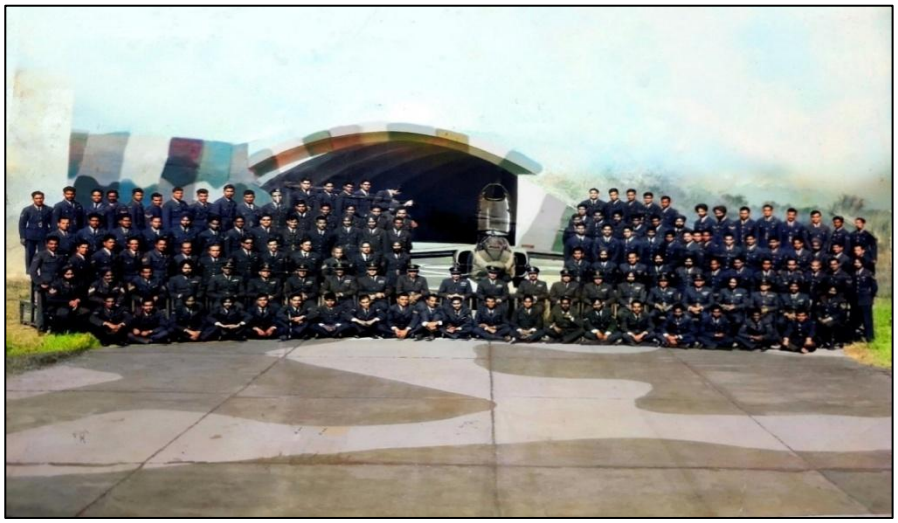
73. Despite serious injuries, Lance Naik Ekka crawled under intense enemy fire. He threw a grenade into a bunker, killing one soldier and injuring another. The MMG kept firing, but Ekka climbed the building's sidewall, entered the bunker, and bayoneted the remaining soldier, silencing the machine gun. His heroic actions saved lives, allowing his company to secure the objective and drive the enemy from Gangasagar. The fall of Gangasagar forced the enemy to retreat from Akhaura, enabling the Indian Army to advance toward Dhaka. Lance Naik Ekka succumbed to his injuries, making the ultimate sacrifice. For his extraordinary gallantry and selfless sacrifice, Lance Naik Albert Ekka was posthumously awarded the "Param Vir Chakra", India’s highest military honour.

A Bust Of Lance Naik Albert Ekka Has Been Installed In The National War Memorial, New Delhi

Flying Officer Nirmal Jit Singh Sekhon, PVC (Posthumous)

74. **Early Life.** Nirmal Jit Singh Sekhon was born on July 17, 1945, in Issewal, Ludhiana, Punjab. His parents were retired (Honorary) Flight Lieutenant Trilok Singh Sekhon and Harbans Kaur. He attended Khalsa High School in Ajitsar Mohie near Ludhiana and later joined Dayalbagh Engineering College in Agra in 1962. He left the engineering course midway to join the Indian Air Force (IAF) on June 4, 1967, as a fighter pilot. In October 1968, he was assigned to No. 18 Squadron, also known as the "Flying Bullets."

75. **Military Career.** He left his engineering course midway to join the Indian Air Force (IAF) as a fighter pilot on 4 June 1967. In October 1968, Sekhon was assigned to No. 18 Squadron, the 'Flying Bullets'.



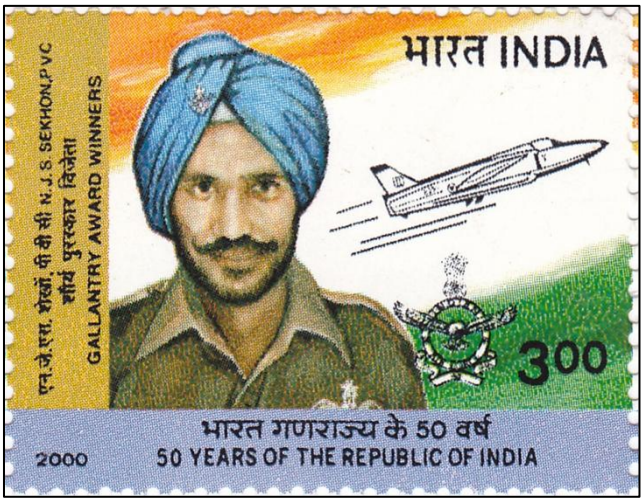
Nirmal Jit Singh Sekhon in a Colorized Photograph of the no. 18 squadron iaf just a few months before the indo-pakistani war of 1971. He is sitting in the 2nd row from the bottom,4th from the right

India-Pakistan War of 1971

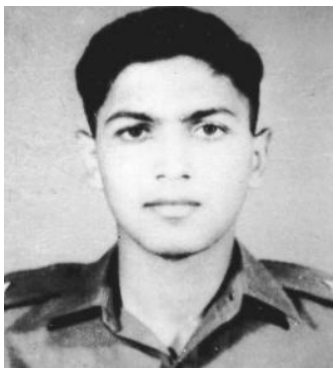
76. During the Indo-Pakistani War of 1971, Flying Officer Nirmaljit Singh Sekhon was a Gnat pilot based in Srinagar. On December 14, six Pakistani F-86 jets attacked the airfield. As bombs fell, he prepared for take-off as the second Gnat in formation, led by Flt Lt Ghumman. Delayed by dust from the first Gnat, he managed to take off amid the attack. Despite the danger, he bravely engaged two enemy Sabres, scoring a direct hit on one and setting another on fire.He thus succeeded in damaging and knocking off two of the enemy aircraft.Sekhon was outnumbered when more Sabre aircraft arrived as reinforcements. Despite being encircled and at a significant disadvantage, he fought valiantly. His aircraft was hit by direct fire from the Sabres.

77. His aircraft crashed, and he was martyred, but his sacrifice did not go in vain. The Sabre jets, unable to complete their attack on the town and airfield, retreated. Flying Officer Sekhon's heroism, courage, flying skill, and determination, beyond the call of duty, were in the finest tradition of the IAF. His bravery and skills earned him India's highest Wartime medal for gallantry, the "Param Vir Chakra".

78. Flying Offr Sekhon was the first officer of the IAF to have received the nation's highest gallantry award, "Param Vir Chakra" and continues to be remembered as one of the greatest air warriors of the IAF.



Second Lieutenant Arun Khetarpal, PVC (Posthumous)



79. **Early Life.** Second Lieutenant Arun Khetarpal was born on October 14, 1950, in Pune, into a distinguished military family. His father was Brigadier M.L. Khetarpal, and his mother was Smt Maheshwari Khetarpal. As the eldest of two sons, he was destined to follow the family's proud military tradition. His great-grandfather served in the Sikh army, and his grandfather fought in World War I with the British Army. Arun Khetarpal attended the prestigious Lawrence School, Sanawar in Himachal Pradesh, where he excelled academically and in sports, distinguishing himself in leadership roles.

80. **Military Career.** In June 1967, 2nd Lt Arun Khetarpal joined the 38th Course of the National Defence Academy (NDA) at Khadakwasla, where his leadership earned him the position of Squadron Cadet Captain. He was commissioned into the 17th Poona Horse regiment on June 13, 1971. Six months into his service, the Indo-Pakistani War of 1971 began on December 3. At that time, he was attending the Young Officers' Course in Ahmednagar. Duty called him to the front lines, and he swiftly rejoined his regiment to take part in the pivotal Battle of Basantar in the Shakargarh Sector.

2/LT ARUN KHETARPAL during his training at NDA

Battle of Basantar

81. During the Indo-Pak War of 1971, the 17 Poona Horse regiment, played a role in the Battle of Basantar in the Shakargarh Sector. This strategically important battle required the brigade to establish a bridgehead across the River Basantar. Commanded by Lt Col Hanut Singh (later Maj Gen), was assigned to support the 47th Infantry Brigade functioning under the operational control of 54 Infantry Division of 1 Corps. Reconnaissance reports indicated enemy armour reserves in the Ghazipur Forest. Recognizing its strategic importance, securing the Ghazipur Forest was deemed crucial.

82. On December 15, 1971, the brigade captured its objective. The next day, the Pakistani Army counterattacked under a smokescreen, targeting "B" Squadron at Jarpal. Two troops from "A" Squadron, including 2nd Lt Arun Khetarpal, moved to reinforce, destroying a Recoilless Gun crew and a Patton tank.

83. In the clash, 2nd Lt Arun Khetarpal destroyed four out of ten Pakistani tanks. Commanding a tank named 'Famagusta,' he led the offensive, refusing to let the enemy advance. Despite the intense battle, he fought valiantly. His tank was hit by enemy fire, but he refused to abandon it. His final words over the radio were: **"No Sir, I will not abandon my tank. My main gun is still working, and I will get them."** He destroyed an enemy tank just 100 meters away before being fatally injured by a shell.

84. On 17th Dec 1971, his mortal remains and his tank were returned to the Indian Army. He was cremated near Samba district, and his ashes were sent to his family. For his indomitable spirit, exceptional courage, and supreme sacrifice at the age of just 21, 2nd Lt Arun Khetarpal was posthumously awarded the Param Vir Chakra, India's highest gallantry award.

'Famagusta' (Centurion) Tank Of 2/Lt Arun Khetarpal Displayed At Armoured Corps Training Centre ,Ahmednagar

Mother Of Second Lieutenant Arun Khetarpal Receiving Param Vir Chakra From Then President V.V. Giri

Major Hoshiar Singh, PVC

85. **Early Life.** Hoshiar Singh was born on May 5, 1937, in Sisana village on the Rohtak-Sonipat road. His father, Chaudhary Hira Singh, was a respected farmer, and his mother, Mathuri Devi, was a kind-hearted housewife. Maj Hoshiar Singh married Dhanno Devi while still in 7th grade and had three sons. He completed his schooling in his hometown and studied for a year at Jat College in Rohtak before joining the Indian Army.

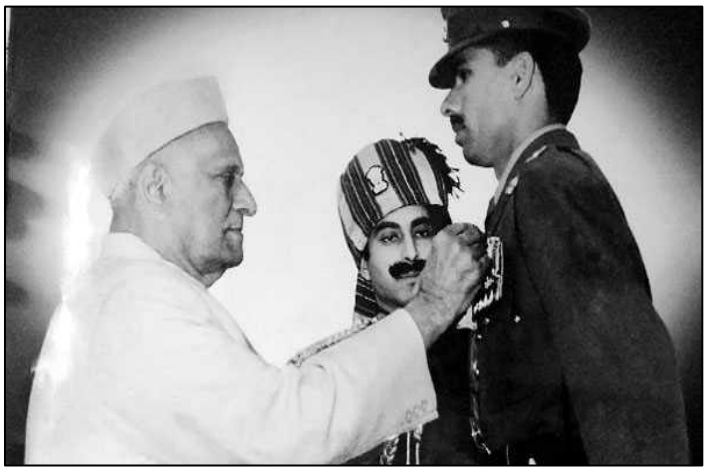
86. **Military Career.** He joined the Indian Army as a soldier and later commissioned as an officer in the Grenadiers Regiment on 30 June 1963, NEFA (North-East Frontier Agency) being his first assignment as an officer. During the 1965 Indo-Pak War, he saw action in the Rajasthan sector.

India-Pakistan War of 1971

87. During the Indo-Pak War of 1971, the Grenadiers Battalion spearheaded the Shakargarh Sector. On December 15, Major Hoshiar Singh's 3rd Grenadiers were tasked with creating a bridgehead across the Basantar River. Although this was not an easy task, as the river had deep minefields on both sides and was heavily guarded by the Pakistani army. Major Singh, leading C Company, aimed to capture Jarpal. The company faced intense shelling and crossfire, and on December 16, endured three counterattacks, two supported by armour. Despite heavy bombardment, Major Hoshiar Singh moved from trench to trench, encouraging his troops to fight.

88. On December 17, 1971, the enemy launched another attack with a battalion supported by heavy artillery fire. Despite being seriously wounded, Major Hoshiar Singh remained unflinching. He moved from trench to trench, motivating his men. The attack was successfully repelled, and the enemy retreated, leaving behind 85 dead, including their Commanding Officer and three other officers.

89. Major Hoshiar Singh was awarded the nation’s highest gallantry award, “Param Vir Chakra” for his absolute bravery and steadfast devotion in the line of duty.



Then Major Hoshiar Singh Dahiya Being Invested With The Param Vir Chakra By The Then President Of India, Vv Giri, On January 26, 1972

PART III : PVC AWARDEES, 1972-PRESENT

Naib Subedar Bana Singh, PVC

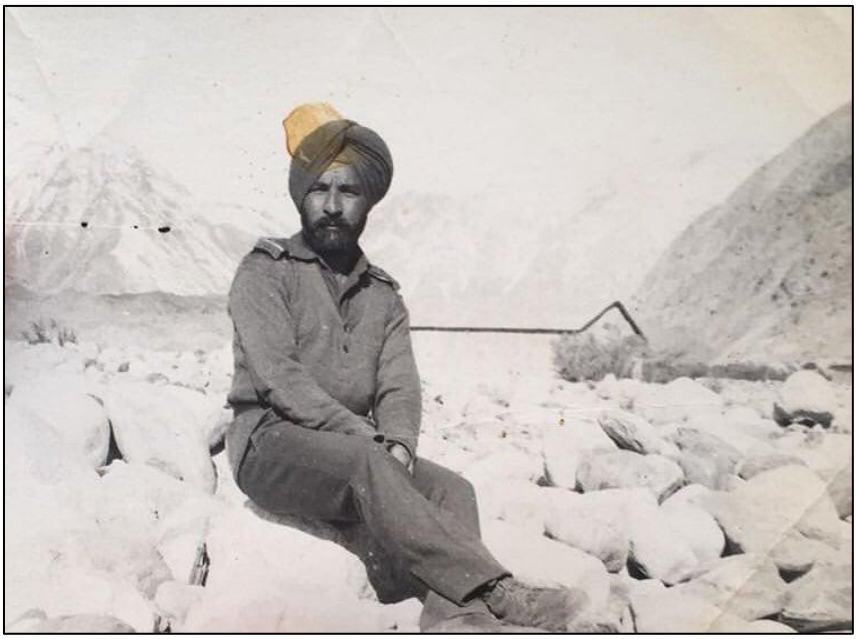
90. **Early Life.** Naib Subedar Bana Singh, one of India's three living Param Vir Chakra awardees, was born on January 6, 1949, in Kadyal, Jammu. Coming from an agricultural and deeply religious family, he developed a strong sense of integrity and discipline from an early age.

91. **Military Career.** Bana Singh joined the Indian Army on January 6, 1969, enrolling in the 8th Battalion, Jammu & Kashmir Light Infantry (8 JAK LI). He underwent specialized training for extreme conditions at the High-Altitude Warfare School in Gulmarg and Sonamarg. Promoted to Naib Subedar on October 16, 1985, he later led a successful team in Operation Rajiv, solidifying his legacy in Indian military history.

Operations Meghdoot and Rajiv

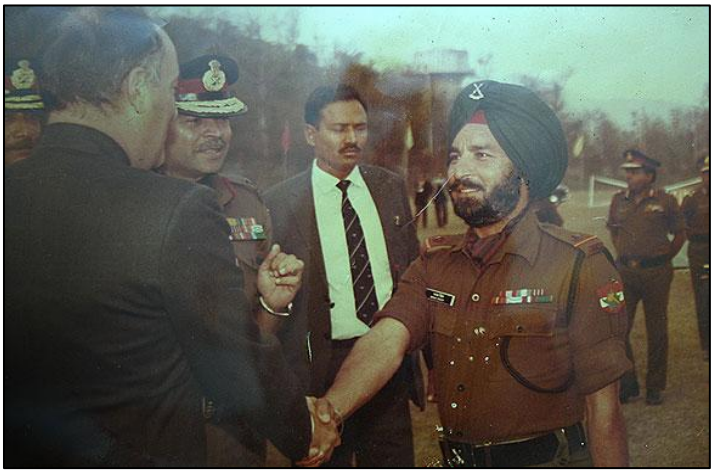
92. In 1984, 8 JAK LI was deployed to Siachen Glacier during Op MEGHDOOT. During the same time the strategically important Siachen area had been infiltrated by the Pakistani forces.

93. In 1987, Pakistan established a military post named Quaid Post in Bilafond La, within Indian territory, to gain strategic advantage. The post, named after Quaid-e-Azam Mohammad Ali Jinnah, provided a commanding view of the Saltoro range and the Siachen Glacier, enabling Pakistani forces to target Indian positions. On 18 April 1987, Pakistani troops fired from Quaid Post onto India's Sonam Post, resulting in the death of two Indian soldiers. In response, India initiated Operation RAJIV to reclaim the peak. Quaid Post was situated on a formidable ice mass at an altitude of 21,153 feet, with steep ice walls offering a strong defensive position and challenging any attempts to ascend.



94. On 23 June 1987, Naib Subedar Bana Singh volunteered for a task force with four others. While their battalion engaged Pakistani soldiers, Singh and his team climbed the steep 457 m ice wall. The weather was extremely hostile and due to extreme cold the weapons of the support group were malfunctioning. Taking advantage of poor visibility, Naib Subedar Singh and his group reached the enemy post, crossing frozen comrades' bodies. Singh divided his team, used grenades, and killed seven Pakistani SSG commandos, with the rest fleeing. He was soon joined by others from his unit and the post was safe in Indian hands. He and his team were successful in capturing the Quaid Post.

95. For his indomitable spirit and exceptional leadership, he was awarded the Param Vir Chakra, and the post which was earlier knows as Quaid post was renamed ‘Bana Top’ in his honour.



Naib Subedar Bana Singh meeting Prime Minister Rajiv Gandhi.

Major Ramaswamy Parameswaran, PVC (Posthumous)

96. Early Life. Major Ramaswamy Parameswaran was born on September 13, 1946, in Mumbai, Maharashtra to Mr. K.S. Ramaswamy and Mrs. Janaki Ramaswamy. He went to school at SIES (South Indian Education Society) High School in Mumbai and then graduated in science from SIES College. In 1981, he married Uma, who was a poet and writer, and they started their married life together.

97. Military Service. He later joined the (OTA) in Chennai and graduated on June 16, 1972. He was commissioned into the 15th Battalion of the Mahar Regiment (15 MAHAR) of the Indian Army. He then joined the 5th Battalion (5 MAHAR) during their mission to fight insurgency in the hills of Mizoram and Tripura. His soldiers affectionately called him "Parry Sahib." Major Parameswaran was specially chosen to serve with the 8 MAHAR, when Op PAWAN was launched. The battalion was one of the first troops to deploy in Sri Lanka in 1987.

Operation Pawan

98. On July 29, 1987, India and Sri Lanka signed the Indo-Sri Lanka Accord, in which India agreed to help fight the LTTE during the Sri Lankan Civil War. According to this agreement, India participated directly in counterinsurgency operations in Sri Lanka against the Liberation Tigers of Tamil Eelam (LTTE) during the Sri Lankan Civil War. On November 24, 1987, Major Parameswaran's battalion got a tip that arms and ammunition were at a house in Katarodai. Captain D.R. Sharma led a 20-man patrol to check it out. They were ambushed and learned the LTTE had more members and control in the area than expected.

99. On November 24, 1987, Major Parmeswaran led a patrol to support Captain Sharma. They reached the area around 0130 hrs on November 25 and began searching at 0530 AM. Finding nothing, they were ambushed by the LTTE while returning and came under heavy fire.

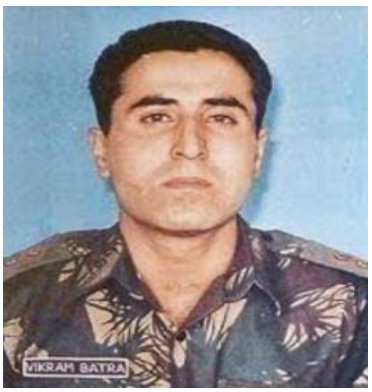
100. Major Ramaswamy Parameswaran ordered Captain D.R. Sharma to keep the enemy occupied while advancing by clearing houses. Major Parameswaran then flanked the militants in the area of the coconut grove and charged at them. Despite the militants using AK-47s, grenades, and heavy machine guns (HMG), he launched a counter-ambush to save his soldiers. During hand-to-hand combat, he was shot in the chest but managed to kill the militant. Gravely wounded, he continued to direct and inspire his troops until his death.

101. By the time reinforcements from the battalion arrived, the militants realized they would be defeated and fled into the jungle. Six enemy combatants were confirmed dead, and the soldiers recovered three AK-47 rifles and two rocket launchers with bombs, successfully clearing the ambush.

Statue Erected In The Memory Of Major Parameswaran At Mahar Regiment Centre

102. For his courage, indomitable fighting spirit and supreme sacrifice, Major Ramaswamy Parameswaran was given the nation's highest gallantry award, 'Param Vir Chakra'. He became the first person from OTA Chennai to receive the prized PVC award, and the only one to receive during OPERATION PAWAN, the IPKF in Sri Lanka.

Captain Vikram Batra, PVC (Posthumous)



103. **Early Life.** Vikram Batra was born on 9 September 1974, in Bandla Gaon, Palampur, Himachal Pradesh, studied at DAV Public School and Kendriya Vidyalaya in Palampur. He attended DAV College in Chandigarh, earning the Best NCC Cadet (Air Wing) award in the North Zone. Clearing the Combined Defence Services examination, he joined the Indian Military Academy, Dehradun in 1994.

104. **Military Career.** Captain Vikram Batra passed the Combined Defence Services Examination and joined the Indian Military Academy, Dehradun, in 1994. Commissioned into the 13 JAK Rifles with the Jessore Company of Manekshaw Battalion, he got posted to Sopore, Baramulla district, J&K. By April 1999, the unit was preparing to move to a peace location, but the Kargil conflict in May 1999 altered their plans. The detection of a large-scale intrusion by Pakistani forces led to the cancellation of their move.

Capt. Vikram Batra inspecting weapons and ammunition captures from Pakistani Soldiers

Operation Vijay

105. In June 1999, during Operation Vijay, Capt. Vikram Batra's unit 13 JAK Rif was deployed in Drass, Kargil. They were tasked with capturing the crucial and heavily defended Point 5140 after the 2 Raj Rif battalion took Tololing Top. The Delta Company, led by Capt. Batra, launched a daring night attack on this peak.

106. Preceded by heavy bombardment by Indian Artillery, the two companies advanced from different directions to surprise the enemy. Delta Company faced a steeper climb. At 17,000 feet, Capt. Batra and his men were pinned down by machine gun fire. Unfazed, they climbed up, threw grenades, and Capt. Batra killed three soldiers in close combat. Despite being injured, he regrouped his men and continued the mission. Reinforcements arrived, causing the militants to flee. Six enemies were confirmed dead, and three AK-47 rifles and two rocket launchers were recovered, successfully clearing the ambush.

107. Capt. Vikram Batra's courage led to the capture of Point 5140. At 0435 hrs on June 20, 1999, he radioed, ***"Chanakya… it's Shershah reporting! We've captured the post! Yeh Dil Maange More!"*** which became the Kargil War's catch-line. The victory paved the way for a string of victories at Point 5100, Point 4700, Junction Peak and 'Three Pimples'.

108. On July 6, 1999, Captain Vikram Batra and 25 men from Delta Company began their mission to capture Point 4875. They planned to reach the ridge, storm the enemy, and occupy the post by dawn on July 7. Despite getting injured in the firefight, Capt. Batra continued the assault. He reached the ledge but was hit by sniper fire in the chest and passed away. His courage and determination inspired his men to continue the mission. He received the Param Vir Chakra posthumously for his immense persistence, leadership, and sense of camaraderie.

Father Of Capt Vikram Batra Receiving Pvc From The President Shri K R Narayanan

Captain Manoj Kumar Pandey, PVC (Posthumous)

109. **Early Life.** Captain Manoj Kumar Pandey was born on June 25, 1975, in Rudha village, Kamlapur tehsil, Sitapur district, Uttar Pradesh. He was the son of Shri Gopi Chand Pandey and Smt Mohini Pandey, with two brothers and a sister. Excelling in academics, he studied at Herald Montessori School and Rani Laxmi Bai School in Lucknow, and later at UP Sainik School, where he developed his dream of joining the Army. Passionate for sports, especially boxing and bodybuilding, he joined the National Defence Academy and graduated in 1996.

110. **Military Career.** Captain Manoj Kumar Pandey joined the National Defence Academy (NDA) and graduated in 1996. He then trained at the Indian Military Academy (IMA) Dehradun, commissioning as a 2nd Lieutenant on June 7, 1997, at nearly 22 years old. Commissioned into the 1/11 Gorkha Rifles Regiment, he served in Kashmir and Siachen. While in Siachen, he received orders to move to the Batalik sector, where the first intrusions by Pakistani forces were detected, leading to a planned retaliatory action.

111. **Khalubar Ridge Op :** During June-July 1999, Captain Manoj Kumar Pandey's unit was deployed in the Batalik sector of Ladakh for "Operation Vijay." Pakistani forces had intruded 4 to 8 kilometres across the LOC in several sectors. The main enemy defences were on the Khalubar-Padma Go Ridgeline, and Captain Pandey's unit 1/11 GR, along with 22 Grenadiers, launched an assault operation in this area.

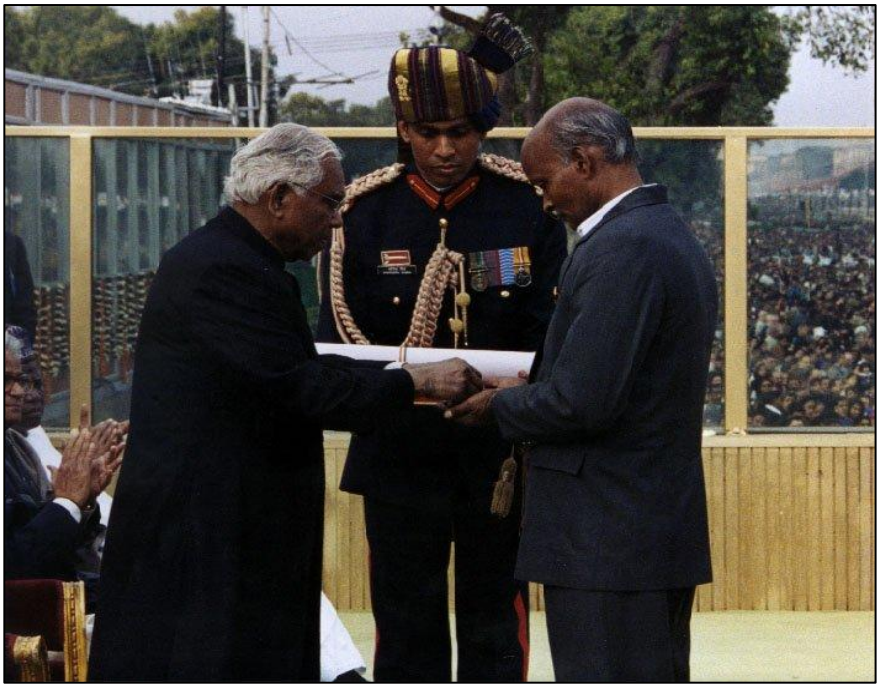
112. The Khalubar-Padma Go Ridge included Pt 4812, Khalubar, Pt 5287, and Pt 5000, and Stangba— key enemy strongholds. Point 5287, at 16,000 feet, was the highest, with Point 4812 nearby. To reclaim lost territory, 1/11 GR was tasked with retaking Khalubar. Captain Manoj Kumar Pandey's 'B' Company, under his command of Platoon No. 5, led this critical operation, targeting the heavily defended ridge to ensure their mission's success.

"If death strikes before I prove my blood, I promise (swear), I will kill death."

– Capt. Manoj Kumar Pandey

113. On the night of July 2/3, 1999, Captain Manoj Kumar Pandey led his troops towards Pahalwan Chowki, located at 19,700 feet, en route to Khalubar. Under heavy enemy fire, Captain Manoj manoeuvred his platoon to an advantageous position. He sent one section to clear the enemy on the right while he led the assault on the left. Fearlessly charging ahead with the battle cry "Jai Mahakali, Aayo Gorkhali," he cleared two enemy bunkers. Despite being hit in the shoulder and legs, Captain Manoj continued leading the assault and destroyed a fourth bunker with a grenade. Tragically, he was shot in the forehead and succumbed to his injuries at the age of 24. Captain Manoj's supreme sacrifice and unparalleled bravery not only inspired his men but also changed the course of the Kargil War, leading to the capture of strategic positions and bolstering the morale of the Indian forces.

114. Capt Manoj Kumar Pandey's supreme sacrifice and heroic leadership were pivotal in evicting the enemy and reclaiming Indian Territory in the Batalik sector. For his extraordinary courage, selflessness, and devotion to duty, he was posthumously awarded India's highest military honor, the Param Vir Chakra. Capt Manoj Kumar Pandey's legacy lives on as a symbol of ultimate sacrifice and patriotism, inspiring generations to serve their nation with unwavering commitment and courage.



***Then* President, Shri K.R. Narayanan, Presenting the Param Vir Chakra to the Father of Captain Manoj Kumar Pandey (Posthumous) at the republic day Parade in 2000**

Grenadier Yogendra Singh Yadav, PVC

115. **Early Life.** Grenadier Yogendra Singh Yadav was born on 10 May 1980 in Aurangabad Ahie, Bulandshahr district, Uttar Pradesh to Karan Singh Yadav, a veteran of the Kumaon Regiment who saw action in the Wars of 1965 and 1971. He studied at a government school in his village.

116. **Military Career.** Following his brother Jitendra who joined the Regiment of Artillery, Yadav enlisted in the 18 Grenadiers on 27 December 1996 aged 16. At the age of 19, during the Kargil War, he was part of an elite group tasked with capturing Tiger Hill. On the night of July 3-4, despite being shot three times, he showed remarkable bravery. He is the youngest to receive the Param Vir Chakra for his bravery during the Kargil War at 19, a record that still stands today.

Capture of Tiger Hill

117. During the Kargil War of 1999, Pakistani forces held at Tiger Hill, the highest peak in the Dras sector of Ladakh, gaining a strategic advantage. From this position, the enemy could dominate the Srinagar-Leh National Highway (NH1A), a vital lifeline for the Indian Army. Recapturing Tiger Hill became a critical objective to disrupt enemy fire and regain control of the Dras sub-sector. After the successful recapture of Tololing, Grenadier Yogendra Singh Yadav's unit was tasked with capturing the "Three Bunkers" on Tiger Hill. The bunkers were situated at the top of a vertical, snow covered, 1000 ft cliff face.

118. As a member of the elite Ghatak Platoon, Grenadier Yogendra Singh Yadav volunteered to lead the mission, facing the daunting challenge of scaling the steep, heavily defended slopes of Tiger Hill. The approach to the top was steep and rocky. His role involved fixing ropes for his team while braving intense enemy fire. Despite losing his commander and two fellow soldiers to enemy attacks, Yogendra Yadav displayed extraordinary courage and determination. Inspite of being hit by multiple bullets, Yadav climbed the remaining 60 feet and reached the top. Wounded multiple times, he pressed on, crawling to the first bunker, engaging in hand-to-hand combat, he killed four enemy soldiers and silenced the automatic fire. His fearless efforts neutralized key posts, motivating his platoon to advance and successfully capture the “Three Bunkers.”

GDR Yogendra Singh Yadav at the Army Hospital, Delhi

119. Yogendra’s bravery and tenacity were instrumental in the success of Operation Tiger Hill, which played a crucial role in turning the tide of the Kargil War. For his unparalleled bravery and devotion to duty, he was awarded the Param Vir Chakra, India’s highest military honor. His actions symbolize the indomitable spirit and resilience of the armed forces, inspiring generations to face challenges with unyielding courage and patriotism. He retired from service as Honorary Captain on 31 December 2021.

Grenadier Yogendra Singh Yadav Receives the Pvc From The President K. R. Narayanan

Rifleman Sanjay Kumar, PVC

120. **Early Life.** Subedar Major Sanjay Kumar, originally from Bilaspur, Himachal Pradesh, was born on 3rd March 1976 to Durga Ram and Bhag Devi. After completing his schooling in Bilaspur, he worked as a cab driver in New Delhi. Despite facing three rejections, he persisted and was eventually selected to join the army.

121. **Military Career.** On 26 June 1996, he joined the Indian Army and was enlisted in 13 Jammu and Kashmir Rifles (JAK RIF). He was awarded the Param Vir Chakra for his actions as a leading scout of the attacking column at Point 4875 in Mushkoh Valley. In February 2022, he was promoted to the rank of Subedar Major.

Capture of Point 4875

122. The capture of Tololing on 13 June 1999 changed the dynamics of the Kargil War. The next objectives were Points 5140 and 4875, which provided dominant viewpoints to National Highway 1 A. The task was assigned to the 13 JAK RIF. Point 4875 had significant features: Whale Back, Flat Top, and Shivling. On 04 July 1999, Rifleman Sanjay Kumar was the leading scout of C Company and played a crucial role in the attack on Point 4875 in Mushkoh valley.

123. On 4 July 1999, Rifleman Sanjay Kumar fearlessly faced enemy fire from a sangar. Disregarding his own safety, he charged at the enemy, engaging in close combat and killing three soldiers. Despite severe injuries, he attacked a second sangar, surprising the enemy and causing them to flee, leaving behind a Universal Machine Gun (UMG). He picked up the UMG and fired at the retreating soldiers. Though heavily bleeding, he refused evacuation and continued his assault. His bravery and resilience inspired his comrades, leading to the successful capture of Flat Top despite the challenging terrain.

Rifleman Sanjay Kumar with ‘C’ company at Kargil

124. A story of sheer bravery and utmost devotion to duty, Rifleman Sanjay Kumar displayed the highest degree of valour in the presence of the enemy that has inspired many. For his conspicuous courage and fearless spirit in the face of the enemy, he was awarded the Param Vir Chakra.

Rifleman Sanjay Kumar receives the PVC from the President K. R. Narayanan

ADDITIONAL HONOURS

A monthly pension is granted by the Indian government to a PVC awardee, his widow, or parents. Alongside, multiple states in India have instituted their own rewards for the awardees representing them (or their families). It has become a custom for all military officials to salute a PVC awardee in ceremonial uniform irrespective of their rank. The National War Memorial in New Delhi features busts of all 21 awardees.

CONCLUSION

125. The Param Vir Chakra (PVC) has consistently applied since 1947, but has been given only 21 times. As India's highest wartime gallantry award, it recognizes exceptional acts of valour, resistance, and sacrifice by armed forces personnel during conflicts. Its gravity and rarity are evident in the fact that a PVC has not been awarded since 1999, making its evidently suitable for exceptional actions during significant conflicts and operations. The awarding of PVC iconises its recipient, bringing him tremendous respect from across ranks besides other social and economic rewards. Only seven PVC awardees have ever survived.

SUMMARY

- The Param Vir Chakra (PVC) is India's highest wartime gallantry award, instituted in 1950 and applied retrospectively from 1947.
- It honours exceptional acts of valour, endurance, skill, or sacrifice during war or conflict by armed forces personnel.
- Only 21 individuals have been awarded the PVC so far, with 14 awarded posthumously and the last PVC being awarded in 1999.
- The PVC has primarily been awarded for actions during major conflicts and distinct operations of strategic importance.
- The term 'Param Vir Chakra' translates from Sanskrit to 'Wheel of the Ultimate Brave', symbolising extraordinary courage.
- The PVC is comparable to awards like the British Victoria Cross and the US Medal of Honour.

ASSESSMENT EXERCISE

Multiple Choice Questions

Q1. When was the Param Vir Chakra officially instituted?

a) 15 August 1947

b) 26 January 1950

c) 2 October 1950

d) 26 November 1949

Q2. What is the Param Vir Chakra equivalent to in the United Kingdom?

a) Victoria Cross

b) Medal of Honour

c) Legion of Honour

d) Distinguished Service Cross

Q3. What was Major Somnath Sharma's last message during the Battle of Badgam?

a) "We will retreat to regroup for reinforcements"

b) "I shall not withdraw an inch but will fight to our last man and our last round"

c) "Victory is certain; hold your positions"

d) "The airfield is secure, mission accomplished"

Q4. What is the name of the island named in honour of Captain Gurbachan Singh Salaria?

a) Salaria Reef

b) Salaria Dweep

c) Singh Island

d) Braveheart Atoll

Q5. Which sector was Lieutenant Manoj Kumar Pandey's unit deployed in during the Kargil War?

a) Dras

b) Batalik

c) Tololing

d) Mushkoh

Q6. What key feature was captured by Rifleman Sanjay Kumar during the Kargil War?

a) Whale Back

b) Tololing Top

c) Tiger Hill

d) Khalubar Ridge

Q7. What was Captain Vikram Batra's famous slogan during the Kargil War?

a) "Victory is ours"

b) "Yeh Dil Maange More"

c) "Jai Hind"

d) "Never Give Up"

Q8. What type of unit was Grenadier Yogendra Singh Yadav a part of?

a) Special Forces

b) Armoured Regiment

c) Ghatak Platoon

d) Artillery Battery

Q9. Which point was Captain Vikram Batra's company tasked to capture on July 6, 1999?

a) Point 5140

b) Point 4700

c) Point 4875

d) Tiger Hill

Q10. How many recipients of the Param Vir Chakra were awarded posthumously?

A) 21

B) 17

C) 14

D) 10

Short Answer Questions

Q1. How did Lieutenant Manoj Kumar Pandey lead his platoon during the Khalubar Ridge operation?

Q2. What was Maj Hoshiar Singh's role during the 1971 Indo-Pak War?

Q3. How did Naib Subedar Bana Singh capture Quaid Post?

Long Answer Questions

Q1. Describe the early life, education, and military career of Maj Hoshiar Singh, focusing on his exceptional bravery and leadership during the 1971 Indo-Pak War that earned him the Param Vir Chakra, India's highest gallantry award.

Q2. What inspired Flying Officer Nirmal Jit Singh Sekhon to show such bravery during the Indo-Pak War of 1971, and how is he remembered today?

Q3. How did Lance Naik Albert Ekka's bravery during the Battle of Gangasagar help the Indian Army in the Indo-Pak War of 1971, and why is his sacrifice important in India’s history?

Q4. Second Lieutenant Arun Khetarpal showed exceptional courage and sacrifice at just 21 years of age, earning the Param Vir Chakra. How can stories like his inspire people to embrace values like bravery and service?

MH VIII (SD/SW)

CHAPTER VIII: CONTRIBUTION OF INDIAN ARMED FORCES IN HADR

Indian Army undertaking flood relief work in Gujarat, August 2024

TEACHING INSTRUCTIONS:

Period(s) : **02**

Type : **Lecture and Discussion**

Year : **SD/SW (Second Year, Third Year)**

Training Aids : **Classroom, computer with OHP, screen, pointer staff, presentation or videos, script or book flagged or lesson plan in file, and chart / poster.**

Time-Plan

- Introduction : 2 mins.
- Part I : Legal and Institutional Framework : 3 mins.
- Part II : Historical Background : 5 mins.
- Part III : Major Domestic Operations since 2014 : 20 mins.
- Part IV : Major Overseas Operations since 2014 : 10 mins.

INTRODUCTION

1. Since India's independence, its armed forces have been vital for the country's disaster and emergency response, remaining the backbone of humanitarian and disaster relief (HADR) operations even after the establishment of the National Disaster Management Agency (NDMA) and National Disaster Response Force (NDRF) in 2005. With advanced equipment and specialist skills, they assist both domestically and internationally during crises. When requested by local, state, or central authorities, they tackle forest fires, airlift NDRF personnel or supplies, aid distressed foreign vessels, and evacuate stranded Indians. In recent years, they have also emerged as guardians of citizens during emergencies abroad.

OVERVIEW

(a)

(b) Part I: Legal and Institutional Framework

(c) Part II : Historical Background

(d) Part III : Major Domestic Operations since 2014

(e) Part IV: Major Overseas Operations since 2014

LEARNING OBJECTIVES

- To gain a broad understanding on what HADR involves.
- To trace the evolution of India's HADR activities since independence.
- To appreciate the role of India's armed forces in its HADR actions within India, as well as its ability for inter-agency coordinate.
- To know about the increasing involvement of the Indian armed forces in rescue, relief, and evacuation operations on foreign soil.

Indian Army hosting the 2024 leg of 'Sanyukt Vimochan', an annual multilateral HADR exercise.

WHAT AND WHY

- In India, "humanitarian assistance" and "disaster relief" mainly involve aiding civilians affected by natural disasters like cyclones, droughts, earthquakes, and floods, excluding conflict-related assistance except in rare instances. The Indian armed forces extensively train for HADR through drills and simulations, excelling in evacuation, rescue, and relief. Using specialised skills and tools, they can repair infrastructure, provide medical and veterinary aid, and reach remote areas. Their capabilities make them vital for India's HADR needs both domestically and abroad, helping save lives and rebuilding communities.

PART I : LEGAL AND INSTITUTIONAL FRAMEWORK

2. For its HADR, the Indian armed forces work through the Ministry of Defence under the 'Aid to Civil Authorities' (ACA) mandate, based on a colonial provision which allowed local authorities to request help from British Indian forces during emergencies. After independence, the ACA was amended in 1970, permitting local authorities to ask for the armed forces' assistance for maintaining essential services and providing urgent assistance during natural disasters. This revised mandate ensures the armed forces can step in when needed for “maintenance of essential services” and “assistance during natural calamities”.

3. The Disaster Management Act, 2005 established a multi-agency approach to disaster relief in India after the 2004 Indian Ocean Tsunami, but it did not define the role of the Indian armed forces, establishing the National Disaster Response Force (NDRF) instead. However, the Chief of Integrated Defence Staff (CISC) is a part of the National Executive Committee of the NDMA. On the ground, the Indian armed forces follow the Defence Services Regulations and the Manual of Indian Military Law for disaster relief. Their approach to humanitarian assistance and disaster relief (HADR) is guided by these regulations and laws.

INDIAN ARMED FORCES AND NDRF

Since its creation, the NDRF has extensively collaborated with India’s armed forces for HADR operations. Their joint efforts have been crucial in responding to cyclones, floods, and earthquakes, ensuring swift evacuation and relief. The armed forces provide logistical and technical support, including airlifting teams and supplies, while NDRF deploys specialized personnel for on-ground rescue and relief. This synergy has been evident in operations to address cyclones, floods, earthquakes, and such natural disasters in India and overseas.

The partnership between the armed forces and the NDRF has also extended to capacity-building initiatives. Joint training exercises have been conducted to enhance disaster preparedness and coordination. These exercises simulate real-life scenarios, enabling both entities to refine their strategies and improve response times. Further, strengthening the NDRF’s capabilities through joint drills and trainings, the armed forces share their expertise in handling complex situations (like chemical and biological emergencies).

In recent years, this cooperation has expanded to include international disaster relief efforts. The Indian armed forces and the NDRF have jointly participated in humanitarian missions, showcasing India's role as a regional first responder. For instance, under Operation Dost in 2023, both entities contributed to rescue and relief operations in Turkey, earning global recognition. This partnership not only makes India's disaster response capabilities holistic, but also reinforces its position as a leader in humanitarian assistance.

An IAF C-17 Globemaster transporting NDRF personnel and relief material to Turkey in 2023

PART II : HISTORICAL BACKGROUND

4. India's armed forces emerged as the primary resort for its government to tackle emergency situations immediately after the country's independence. As Partition triggered waves of mass migrations to and from newly formed Pakistan in 1947, it was the Indian Army that was called in to stop communal clashes; ensure the safety of migrants in transit by train or road; and build relief camps for refugees, wherever possible. The Military Evacuation Organisation set up for the purposes was instrumental in erecting massive refugee camps in Punjab and Delhi.

5. This role enlarged when the Indian Army and Air Force proactively evacuated locals, fed them, and gave them medical aid during the devastating Assam floods of 1950. Soon after, the Indian armed forces began moving in with HADR support whenever local volunteer forces, state agencies, and police authorities could not address an emergency or calamity. This was witnessed when heavy floods struck Uttar Pradesh in 1960, West Bengal in 1969, and multiple eastern states in 1988, or earthquakes crippled Kinnaur (Himachal Pradesh) in 1975, Cachar (Assam) in 1984, Uttarkashi (Uttar Pradesh) in 1991, and Latur (Maharashtra) in 1993.

6. After the devastating 2004 tsunami that claimed over 12,000 lives in India, the Indian Army, Air Force, and Navy conducted HADR operations that included **Operations Sea Waves and Madad**. They evacuated people, provided medical aid, built relief camps, cleared debris, rebuilt infrastructure, and restored power, deploying over 16,500 personnel, vehicles, aircraft, and ships. Their efforts extended to Indonesia and Maldives. In October 2005, the IAF delivered tons of supplies to earthquake-hit Pakistan. By the 2010s, the armed forces remained integral to India's HADR tasks. During the 2013 Uttarakhand floods, **Operation Rahat** became India's largest air evacuation, saving 24,260 lives and lifting 894 tons of supply. That October, after Cyclone Phailin, the IAF rescued 84 people.

INDIAN NAVY'S RESPONSE TO THE 2004 TSUNAMI

Within 12 hours of the 2004 Indian Ocean Tsunami, Indian naval helicopters reached Sri Lanka, and in a day, two naval ships docked in Trincomalee and Galle, while three others headed to Male. Soon, hospital ships were dispatched to Indonesia, which suffered the most. India sent extensive relief to Indonesia, Maldives, Sri Lanka, the Indian coasts (with Operation Madad), and Andaman and Nicobar Islands (through Operation Sea Waves). For these, the Indian Navy deployed 32 ships, 20 helicopters, and seven aircraft. India thus showed its intent as a regional leader in HADR activities.

The experience in 2004 enhanced the Indian Navy's abilities in humanitarian missions significantly amidst frequent natural disasters and urbanizing coastal areas. It commenced initiatives like the Infrastructure for Resilient Island States (IRIS) to enhance disaster-resilient infrastructure in island nations. Appreciated for its coordinated response to the crisis, the Indian Navy thereon expanded partnerships, state agencies, and regional institutions to manage emergencies and cross-border assistance. It also marks a Tsunami Awareness Day yearly.

Indian Navy's HADR intervention in Sri Lanka after the 2004 Indian Ocean Tsunami.

PART III : MAJOR DOMESTIC OPERATIONS SINCE 2014

The major HADR interventions undertaken by the Indian armed forces since 2014 within Indian territory are summarised year-wise as follows:

2014

7. In 2014, major HADR efforts included **Operation Sarayu** in flood-affected Uttar Pradesh and Bihar, **Operation Megh Rahat** following the Jammu and Kashmir floods, and **Operation Lehar** in Cyclone Hudhud-impacted areas of Andhra Pradesh and Odisha. Internationally, the forces showcased their capability during the Male Water Crisis with

Operation Neer, where over 2,400 tons of water were swiftly delivered to the Maldives after a fire at a desalination plant, emphasizing India's commitment to regional support.

8. The Indian Air Force (IAF) played a critical role in HADR missions, particularly in supporting the Indian Army amid the Kashmir Valley floods. The IAF deployed 70 aircraft, rescuing over 96,000 people and airlifting more than 3,500 tons of relief material. Additional efforts during Cyclone Hudhud in Odisha demonstrated the IAF's capacity in disaster relief. Their contributions extended to supporting the 2014 General Elections, and conducting rescue operations along with air maintenance missions for the Indian Army.

9. The Indian Navy's HADR efforts that year notably included providing diving assistance for search and rescue missions. Its key deployments included Marine Commando (MARCOS) teams aiding disaster relief in Jammu and Kashmir; and a 12-member team assisting rescue at a coalfield in Bilaspur; and another team aiding authorities at Himachal Pradesh during the Mandi tragedy. These efforts highlight the Navy's readiness to support civil authorities in tackling emergencies.

OPERATION MEGH RAHAT

In September 2014, the Indian Army launched Operation Megh Rahat to tackle huge floods in Jammu and Kashmir, particularly in Srinagar. The floods caused widespread devastation and paralysed state administration. Despite suffering losses, the Army prioritised rescuing stranded civilians, aided by 30,000 troops, NDRF, and civilians. Helicopters and boats evacuated thousands and lifted essential supplies, as relief camps sheltered 20,000 people. The effort closely involved state authorities, showcasing civil-military cooperation amidst a crisis.

The Indian Army tirelessly provided relief by distributing food, water, medicines, blankets, and establishing medical camps. Notably, the Army ensured minimal casualties. On Army Day 2015, soldiers donated a day's salary, raising Rs. 100 crore for the Prime Minister's Relief Fund. This act reflected their longstanding social responsibility and strong ties to the people of Jammu and Kashmir.

An IAF helicopter involved in flood relief operations at Jammu and Kashmir in 2014

2015

10. Key missions in 2015 include rescuing 23,000 people and distributing over 70 tons of food during the Tamil Nadu floods; **Operation Maitri** to send critical aid after Nepal's devastating earthquake; and **Operation Rahat** to evacuate Indian and foreign nationals from civil war-hit Yemen. The HQ Integrated Defence Staff revised its Standard Operating Procedures (SOPs) that year to centralize disaster relief and improve inter-services coordination in HADR operations.

11. **Operation Toofan** in Lakshadweep and **Exercise Jal Suraksha** in Andaman and Nicobar Islands helped the Indian armed forces prepare for varied HADR scenarios. These exercises involved activities like search and rescue, hospital ship conversion, damage repair, and supply logistics. Further, MARCOS carried out multiple diving operations under **Operation Sadbhavana**, which aimed to build goodwill among local communities in Jammu and Kashmir.

12. India's proactive role in regional disaster management was highlighted during the **Indian Ocean Naval Symposium** (IONS) Working Group Meeting on HADR in Mumbai, which involved naval contingents from six countries. This included a table-top exercise that simulated disaster relief for a cyclone-struck island nation. Besides enhancing regional preparedness, the initiative bolstered India’s stature as a major contributor to international HADR.

Indian Navy conducting flood relief operations at Tamil Nadu in 2015

2016

13. In 2016, the Indian armed forces conducted several joint HADR exercises to enhance disaster preparedness and response, such as **Exercise Jal Rahat** in Guwahati for flooding, **Exercise Prakampana** in Vishakhapatnam simulating a super cyclone, and **Exercise Sahayata** in Bhuj focused on earthquake relief. These drills integrated resources from all three military services, NDRF, and local civil authorities. Additionally, **Exercise Jal**

Suraksha in Port Blair featured critical operations like damage assessment, search and rescue, and converting ships to hospital ships, underscoring India's commitment to multi-stakeholder HADR.

14. Notable HADR missions that year included *INS Sutlej* and *INS Sunayna* delivering relief material to Sri Lanka after Cyclone Roanu in May and **Operation Sankat Mochan** in July, where the IAF evacuated citizens from conflict-ridden South Sudan. Other missions included a medical evacuation from Lakshadweep and providing diving assistance during a bridge collapse in Maharashtra.

15. As part of Confidence-Building Measures (CBMs) with China, two platoon-level joint HADR exercises were conducted in the Western Sector. Further, India co-chaired the ASEAN Defence Ministers' Meeting Plus Expert Working Group cycle on military medicine, focusing on enhancing regional cooperation in HADR. In November, the Indian Army was employed for clearance and rescue activities after a train derailment at Kanpur (Uttar Pradesh). In September, civil and military authorities had jointly conducted **Exercises Prakampana and Sahayata** to prepare for super cyclones and major earthquakes respectively.

Indian citizens being evacuated from South Sudan under Operation Sankat Mochan, 2016

2017

16. In 2017, the Indian Navy rescued six individuals from a missing craft in the Maldives; delivered 777 tons of relief supplies to Bangladesh amid the Rohingya refugee crisis; aided Myanmar after Cyclone Mora; and rescued 33 Bangladeshi fishermen. Its flood relief missions in Jammu and Kashmir, Odisha, Gujarat, and Mumbai were also significant. With Operation Sahayam, it saved 136 fishermen and delivered aid to Lakshadweep. Further, the Navy coordinated international HADR efforts with Sri Lanka, Maldives, Bangladesh, and Myanmar via exercises like Pralay Sahayam, a collaborative HADR drill for major earthquakes.

17. IAF also played a crucial role in HADR operations during 2017. It supported flood relief missions in Gujarat, Rajasthan, Uttar Pradesh, Bihar, and Assam, airlifting over 1,500 individuals and delivering over 680 tons of relief materials. It conducted search and rescue missions, including aiding stranded civilians in Cyclone Vardha-hit Tarasa Island. The IAF participated in Rohingya refugee relief efforts in Bangladesh and Myanmar, airlifting 149 tons of

relief materials. It also addressed emergencies such as forest fires across India, the Amarnath Yatra attack that year, and rescue of snow-blocked foreign nationals from Ladakh.

A rescued fisherman being examined under Operation Sahayam, 2017

OPERATION SAHAYAM

Operation Sahayam was launched by the Southern Naval Command in 2017 following the devastation caused by Cyclone Ockhi in the Arabian Sea and the Lakshadweep Islands. Nine ships and all available aircraft conducted intensive search and rescue operations, with reconnaissance scans of the Maldives for stranded ships. *INS Sujata* undertook deep-sea searches while *INS Subhadra* assisted stranded fishermen and carried drinking water to the distressed. The Indian Navy also replenished over 70,000 liters of fresh water to Kavaratti. The extensive operation covered over a million sq. km. in area, emphasizing India's commitment to ensuring the well-being of its disaster-affected communities irrespective of location. Its outcomes were communicated to state governments to help them address the post-crisis rebuilding effectively.

2018

18. In 2018, the IAF's HADR activities began with a seminar hosted by Western Air Command in May which brought together an array of disaster management authorities and defence bodies. Notably, during the Kerala floods in August, the IAF mobilized 47 aircraft to rescue 4,209 passengers, airlifting over 1,550 tons of relief materials. In September, the annual joint services HADR exercise simulated earthquake scenarios along key axes, and saw participation by the NDRF. The Indian armed forces also assisted in rescuing stranded civilians in Maharashtra's flash floods, showcasing their promptness and efficiency in disaster response.

19. The Indian Navy played a key role in 2018's HADR operations too, responding to over 110 search and rescue requests. It aided in locating victims of a boat capsized in the Godavari River and supported relief during Cyclone Berguitta in Mauritius. In May, *INS*

Airavat took 345 tons of humanitarian aid to Bangladesh. Additionally, the Navy provided significant relief during Cyclone Titli in October, delivering food packets and materials to Odisha and Andhra Pradesh. A heroic effort was demonstrated when Commander Abhilash Tomy was rescued after his vessel became distressed during the Golden Globe Race.

20. A joint HADR mission was conducted by the Indian Army and IAF after forest fires erupted in Tamil Nadu in March. By June, over 1,100 civilians were rescued by the Indian Army and Assam Rifles in flood-hit Manipur and Tripura. In August, over 16,000 people were saved after severe flooding in Kerala through **Operation Madad**, a major tri-services HADR intervention. From September to December, the Navy brought relief materials to cyclone-affected parts of Andhra Pradesh and Tamil Nadu. Multiple HADR interventions by the Indian armed forces followed in December, including rescues of a cyclone-hit oil rig's staff in the Bay of Bengal, trapped coal miners in Meghalaya, and snow-blocked civilians in Sikkim.

OPERATION MADAD

Operation Madad was launched by the Southern Naval Command (SNC) at Kochi in August 2018 to aid Kerala's state administration during severe flooding caused by heavy rains and dam water releases. A diving team equipped with a Gemini inflatable boat was airlifted to Kalpetta that night for flood and landslide rescue operations. Two rescue teams began evacuating 55 stranded individuals from Kalpetta and Panmarum, while another team was airlifted to Kalpetta with electric generators. Three more diving teams were dispatched to Aluva, with nine additional diving teams stationed for support.

Efforts extended further with personnel stationed at the Naval Armament Depot in Aluva to provide immediate assistance. The Naval Hospital, INHS Sanjivani, stood ready for medical aid, while naval personnel at INS Venduruthy prepared to set up community kitchens. Further, naval helicopters were used to transport divers, tools, and relief supplies to affected areas, enhancing ongoing efforts. These coordinated efforts underscored the Navy's comprehensive approach to disaster relief during Kerala's flooding crisis.\

An Indian Navy helicopter participating in Operation Madad in 2018

2019

21. In 2019, the Indian armed forces engaged in international collaborations and exercises to enhance their HADR capabilities on multiple occasions. Delegations from India participated in the ASEAN Defence Ministers Meeting-Plus events on HADR in Hawaii and Kuala Lumpur, culminating in **Exercise Tiger Triumph**, the first India-US joint tri-services HADR exercise. The Indian Navy also hosted the fourth meeting of the **Indian Ocean Naval Symposium** (IONS) Working Group on HADR in Mumbai, with representatives from multiple nations.

22. Domestically, the Indian armed forces undertook significant HADR missions in response to natural calamities. For Cyclone Fani, they coordinated with civil administrations in Tamil Nadu, Odisha, and Andhra Pradesh, deploying ships, helicopters, medical teams, and community kitchens. Flood relief operations included **Operation Varsha Rahat** in Karnataka, Maharashtra, and Goa, where naval teams rescued over 14,000 persons and distributed relief supplies. Heavy rains in Mumbai prompted rescue efforts, including evacuations from Mahalaxmi Express, a busy train, and flooded urban and sub-urban areas of the city.

23. The forces further demonstrated specialized capabilities via focused efforts like those in Jammu and Kashmir for diving assistance. They played pivotal roles in the Godavari River tourist boat tragedy and Cyclone Idai relief in Mozambique. The annual joint HADR exercise of the Indian armed forces in Chennai simulated urban flooding scenarios, enabling inter-agency coordination.

An Indian Army rescue boat being loaded for airlifting by the IAF in 2019

2020

24. In 2020, as the world faced the Covid-19 pandemic, the Indian armed forces conducted several HADR operations abroad. **Operation Vanilla** in Madagascar provided relief to cyclone-affected populations with essential supplies such as food, clothing, and medicines. **Mission Sagar** deployments supported Southern Indian Ocean Region nations, delivering medical kits and humanitarian aid to countries like Maldives, Mauritius, and

Seychelles. Further aid included 270 tons of stores to Kenya and flood-relief efforts in Vietnam and Cambodia. **Operation Samudra Setu** repatriated nearly 4,000 stranded Indians amidst the pandemic from Maldives, Iran, and Sri Lanka aboard Indian Navy ships.

25. In response to unique emergencies, Indian Navy undertook critical missions. Assistance to Mauritius in combating environmental damage from a merchant vessel involved diving operations. Aid to the Philippines included rescuing sailors injured in a fire onboard their naval ship alongside technical repairs at Kochi. For Maldives, Indian naval teams facilitated vessel refits and emergency assistance despite Covid-19 restrictions. Additionally, *INS Sahyadri* coordinated firefighting and salvage efforts for a crude oil tanker stuck near Sri Lanka, showcasing the utility of the Indian Navy's operational expertise for friendly nations in distress.

26. These HADR efforts by the Indian armed forces that year underlined India's commitment to fostering international goodwill. The HADR deployments between Madagascar and Vietnam demonstrated India's ability to mobilize resources swiftly and effectively. The Indian initiatives included the provision of strategic support such as environmental mitigation, medical aid, and logistical assistance. By engaging in HADR-centric bilateral dialogues and technical collaborations that year despite a pandemic, the position of the Indian armed forces as a reliable and responsive partner in matters of humanitarian relief was only strengthened.

The Indian Navy team participating in Operation Vanilla in 2021

2021

27. HADR operations of the Indian armed forces in 2021, as coordinated by HQ Integrated Defence Staff, involved rescuing people, providing medical facilities, and delivering aid during natural calamities such as cyclones, floods, forest fires, and avalanches. Their contributions included swift deployment of helicopters and transport aircraft for fire-fighting, disaster relief and such interventions to mitigate the impact of natural disasters nationwide by extending aid to local authorities.

28. Notable fire-fighting efforts included operations in Manipur, Uttarakhand, and Mizoram, where MI-17 helicopters with Bambi Buckets were deployed. Cyclone relief efforts for Tauktae and Yaas involved the IAF, which transported personnel and relief supplies, rescuing thousands. Major flood relief operations took place in Maharashtra, Madhya Pradesh, Gujarat, Kerala, Uttarakhand, Uttar Pradesh, Andhra Pradesh, and Tamil Nadu. These efforts saw civilians being evacuated, food packets delivered, and medical aid provided.

BAMBI BUCKET OPERATIONS

The IAF employs the Bambi Bucket, a specialized aerial firefighting tool, to combat forest fires across India. This light, collapsible container is suspended beneath helicopters, allowing precise water drops over affected areas. These buckets can hold thousands of liters of water, sourced from nearby lakes or reservoirs, and are released via pilot-controlled valves. For the purpose, IAF usually deploys Mi-17 V5 helicopters equipped with Bambi Buckets, working in closely coordination with local authorities, especially state forest departments. The IAF's fire-fighting efforts are vital for the functions of ground-based fire-fighting crews, especially in challenging terrains.

29. During an avalanche rescue operation at Sumna Post in Joshimath, Indian Army and IAF teams saved 402 personnel, recovered 11 deceased, and provided medical assistance to dozens. For the purpose, two columns of the Indian Army and three ALH helicopters were deployed. Further, in Uttarakhand, the armies of India and the United Kingdom jointly participated that year in **Operation Konkan Shakti**, a bilateral HADR training exercise.

An Indian Army medical team participating in Operation Konkan Shakti, 2021

2022

30. The Indian Army's HADR efforts in 2022 spanned 11 Indian states, involving the deployment of 58 columns. The Army rescued approximately 31,000 civilians through diverse operations. These included flood relief in states such as Assam, Rajasthan, and Karnataka; avalanche rescues in Uttarakhand; and specialized missions like cable car rescues in Jharkhand. Noteworthy among these were the large-scale flood rescues in Assam, where the Indian Army saved nearly 30,000 lives. Further operations included mountain top rescues in Kerala and retrievals from a collapsed suspension bridge in Gujarat.

31. The IAF's HADR endeavours included airlifting civilians and resources during floods, forest fires, and snow avalanches across states like Himachal Pradesh, Assam, and Uttarakhand. Helicopters played a central role, evacuating stranded individuals, including pilgrims stranded on a ropeway in Deoghar. Further, the IAF undertook other operations like transporting cheetahs to Kuno National Park and aiding foreign nationals in distress. Flood relief missions delivered aid in Assam, Meghalaya, and Telangana were also undertaken. That year, the IAF flew over 220 sorties for casualty evacuations.

32. The Indian Navy supported HADR missions under **Mission Sagar**, delivering essential aid to Indian Ocean Region countries such as Mozambique, Seychelles, and Sri Lanka. This aid ranged from food and medical supplies to ambulances and key drugs. Domestically, the Navy executed search and rescue operations, including off Mumbai and Tamil Nadu, and flood relief in Andhra Pradesh and Odisha. Major operations involved medical evacuations for foreign vessels and rescues following the Morbi Bridge's collapse in Gujarat. The Navy's personnel, helicopters, and ships provided crucial support across these scenarios.

IAF RESCUE OPERATION AT DEOGHAR IN 2022

The IAF, in collaboration with the Indian Army, NDRF, and local authorities, successfully completed the rescue of 35 individuals stranded on the Trikut Hills ropeway in Jharkhand's Deoghar district. The IAF utilized Mi-17V5s, a Mi-17, an Advanced Light Helicopter (ALH), and a Cheetah helicopter, flying over 26 hours across two days for the challenging mission owing to the hilly terrain and strong winds. Five Garud Commandos executed daring manoeuvres, rescuing survivors while being winched onto the stranded trolleys of the cable carts.The helicopter crew, with minimal visual references, ensured the evacuation of most survivors. The operation, however, witnessed the tragic loss of two lives, despite the rescue crew's best efforts. The IAF expressed its condolences to the bereaved families and reinforced its commitment to providing support and relief in crisis situations. This operation highlighted the expertise and resilience of the IAF in responding to complex rescue scenarios.

Indian Navy distributing food amongst flood-affected people at Odisha in 2022

2023

33. The Indian Army undertook significant HADR efforts throughout 2023, deploying 107 columns, including Engineer Task Forces, across 13 Indian states. Vital operations included flood relief in Punjab, Himachal Pradesh, and Assam; avalanche rescues in Sikkim; and the evacuation of stranded civilians in Uttar Pradesh. It also responded swiftly to cyclones Biporjoy and Michaung, restoring essential services and rescuing civilians. In total, 8,509 individuals were rescued.

34. The IAF also showcased its agility and resourcefulness in HADR missions worldwide that year. Via **Operation Dost**, it provided extensive earthquake relief to Turkey and Syria, airlifting critical supplies. **Operation Kaveri** saw it evacuate 2,100 Indians from Sudan, which included night rescue missions. Domestically, the IAF responded to snow blockages in Ladakh; forest fires in Goa and Tamil Nadu; and floods in Himachal Pradesh, Sikkim, and Punjab, rescuing thousands and delivering vital resources to affirm its ability to mobilise rapidly for HADR.

35. Further, the Indian Navy excelled in both domestic and international HADR operations in 2023. Operation Kaveri saw evacuation of 1,490 Indians from war-torn Sudan using warships. Domestically, the Navy assisted fire-fighting in Kochi; conducted search and rescue along Tamil Nadu; and salvaged sunken vessels. It also extended aid internationally with **Operation Karuna**, delivering medical supplies and relief to cyclone-hit Myanmar. In a novel endeavour, the Indian Navy assisted Chinese efforts in locating a fishing vessel in distress.

OPERATION DOST

In February 2023, following the devastating earthquake in Turkey and Syria, India launched Operation Dost to provide immediate HADR assistance. The IAF deployed five C-17 aircraft to transport over 250 personnel, including NDRF teams and Indian Army medical units, along with 135 tons of relief material. The Indian Army established a 30-bed field hospital in Iskenderun, Turkey, staffed by 99 personnel and offering advanced medical care with facilities like an operation theatre and ventilators. The IAF also delivered essential supplies to Syria, showcasing India's dynamic yet coordinated response.

The Indian armed forces showcased exceptional efficiency and preparedness during Operation Dost. With specialised equipment and devoted dog squads, they conducted search and rescue missions in Gaziantep, Turkey, saving lives amidst challenging conditions. Meanwhile, the medical team of the Indian Army provided critical care to earthquake victims, treating hundreds of patients daily. Their contributions not only reduced the suffering of locals, but demonstrated India’s reliability for HADR interventions to the Middle East.

IAF involved in relief work at flood-hit Himachal Pradesh in 2023

2024

36. The Indian Army, during 2024, actively conducted humanitarian assistance and disaster relief operations across 14 states. Deploying 83 columns, including an Eco Task Force (ETF), it rescued 29,972 civilians, provided medical aid to about 3,000 individuals, and distributed relief materials benefiting over 13,000 people. Key efforts included rescue and relief missions following major calamities like the Manipur floods in May, Wayanad landslides in Kerala in July, Uttarakhand landslides in July, and Gujarat floods in August.

37. The IAF also conducted significant international and domestic humanitarian operations that year. Globally, its missions included airlifting 40 tons of flood relief aid to Kenya; repatriating the mortal remains of 31 Indians from Kuwait; and aiding Nepal and Southeast Asian countries like Laos, Vietnam, and Myanmar after Typhoon Yagi under **Operation Sadbhav**. Additionally, the IAF performed a medical evacuation of an Indian Army soldier from Israel. Domestically, the IAF responded to forest fires in Tamil Nadu and Uttarakhand, evacuated civilians during floods in Assam and Tripura, and conducted extensive relief operations for Cyclone Remal and floods in Andhra Pradesh and Telangana.

38. Alongside, the Indian Navy made sizeable contributions to international and domestic disaster response. Notable operations include deploying *INS Satpura* to Myanmar with 21.5 tons of essential supplies post-Typhoon Yagi in September, and delivering relief aid to Kenya after Cyclone Hidaya in May. Domestically, naval efforts included search and rescue operations in Karnataka and Andhra Pradesh, relief work following the Wayanad landslides in Kerala, and flood relief in Vijayawada. These missions collectively rescued civilians, provided medical aid, and distributed vital supplies.

Operation Sadbhav

India launched Operation Sadbhav to aid nations affected by Typhoon Yagi. Its relief efforts in the affected parts of northern Vietnam were prominent. A 35-ton consignment, including water purification supplies, blankets, kitchen utensils, and solar lanterns, was airlifted to Vietnam. This effort showcased strong India-Vietnam ties under their Comprehensive Strategic Partnership, while affirming India's commitment to step up as a first responder for HADR interventions even beyond the Indian Ocean Region and extending support to its ASEAN partners.

Indian forces involved in post-cyclone relief work at Myanmar in 2024

VACCINE MAITRI PROGRAM DURING COVID-19

During the globally crippling Covid-19 pandemic, India began sending vaccines overseas in January 2021 within a week of commencing its vaccine program, starting within its neighbourhood to assist Bhutan, Maldives, Bangladesh, and Myanmar. Known as the Vaccine Maitri program, it became one of the largest humanitarian assistance missions undertaken during the pandemic. The Indian armed forces led the management of the logistics for it, helping ship and airlift over 300 million vaccines doses to 101 countries by the pandemic's end. The program also saw the Indian armed forces donate vaccine doses in bulk.

Oxygen tanks for hospitals being loaded on to an IAF aircraft, 2021

PART IV: MAJOR OVERSEAS OPERATIONS SINCE 2014

39. As Maldives faced a water shortage in December 2014, the IN airlifted 374 tons and shipped over 2,000 tons of water with **Operation Neer**. In April 2015, the IAF launched **Operation Maitri** in response to a severe earthquake in Nepal, airlifting over 5,000 civilians and about 780 casualties, including foreign nationals. The following month, *INS Saryu*

represented the IN at the ASEAN Disaster Relief Exercise (**DIREX**) in Malaysia. In August, the IAF lifted over 100 tons of materials for relief to flood-affected stretches of Myanmar. The IN resumed Operation Neer in December, transporting a further 2,400 tons of water to Maldives.

40. In 2017, as IN saved several Bangladeshi fishermen from Cyclone Mora in June, it joined the IAF to fly over 875 tons of relief material to Dhaka to ease the load on Bangladesh's resources from the influx Rohingya refugees in September. By November, similar HADR flights for Rohingyas also reached Myanmar. That month, the IN hosted observers from Bangladesh, Maldives, Myanmar, and Sri Lanka at a key HADR exercise in the Indian Ocean. Under **Operation Samudra Maitri**, medical teams of the Indian Army landed in Indonesia following a Tsunami in October 2018. Two months later, in Mozambique, the IN responded to Cyclone Idai with **Operation Sahayata** to save over 192 lives.

41. In **Operation Vanilla**, *INS Airavat* was dispatched to Madagascar in January 2020 carrying relief supplies after Cyclone Diane. This was followed by a delivery of 600 tons of food to Madagascar as flood relief by the IN. **Mission Sagar II** saw the IN provide 270 tons of relief materials to Djibouti, Eritrea, Sudan, and Kenya in November-December. By January 2021, **Mission Sagar III** was extended to flooded Vietnam and Cambodia. That year, India made HADR agreements with Myanmar, Singapore and its QUAD partners (Australia, Japan, and the US). India hosted **PANEX 21**, an HADR exercise for BIMSTEC states, in December 2021.

The Indian Navy delivering medical supplies to Sri Lanka, 2022

42. By January 2022, the IN provided medical aid to Mozambique, Comoros, Seychelles, and Maldives. In April-May, IN and IAF sent essentials to Sri Lanka during its economic crisis. In February 2023, 300 tons of relief material were sent to Turkey and Syria after an earthquake with **Operation Dost**. In May, IN ships supplied aid to Myanmar during Cyclone Mocha with **Operation Karuna**, and in a unique action, an IN aircraft aided China in locating a sinking vessel. In October, the IAF launched **Operation Ajay** to take relief to Egypt for Palestinian areas. After Cyclone Hidaya in May 2024, IN and IAF brought aid to

Tanzania and Kenya too. By September, under **Operation Sadbhav**, they also supplied 100 tons of relief materials to Myanmar, Laos, and Vietnam.

EVACUATIONS OF INDIAN NATIONALS OVERSEAS

In the last decade, as part of their HADR interventions, the Indian armed forces have been proactive in the evacuation of Indian nationals stranded overseas during crisis situations. One such prominent initiative was **Operation Raahat**, wherein the IAF swiftly rescued 4,600 Indians from war-torn Yemen in 2015. With **Operation Sankat Mochan** in April 2016, the IAF then airlifted dozens of Indian nationals stuck in South Sudan after the outbreak of a civil war. As an early response to the Covid-19 pandemic, the IN initiated **Operation Samudra Setu** to carry 3,992 Indians from Maldives, Sri Lanka, and Iran by July 2020.

Following the takeover of Afghanistan by the Taliban in 2021, the evacuation of Indians under **Operation Dev Shakti** included the IAF. To bail out thousands of Indian nationals stuck after the outbreak of the Russo-Ukrainian War of 2022, India initiated **Operation Ganga**, which involved 14 flights by IAF. After a civil war erupted in Sudan, IAF and IN bailed about 4,000 stranded Indian nationals with **Operation Kaveri** in April 2023. Following the escalation of the Israel-Palestine conflict in 2023, the IAF evacuated over 1,300 Indian citizens and 20 Nepali nationals from Israel under **Operation Ajay** by February 2024.

IAF bringing back Indian nationals from eastern Europe under Operation Ganga, March 2022

CONCLUSION

43. India’s HADR tasks trace back to a pre-independence 'Aid to Civil Authorities' (ACA) mandate. After 1947, India’s armed forces became its chief disaster relief agency. Since 2005, NDRF became primarily responsible for nationwide HADR operations, but it collaborated routinely with the armed forces for drills and operations. The armed forces have historically excelled in tasks such as disaster relief, evacuations, aid delivery, search

and rescue, and forest fire-fighting, using their expertise and equipment to save and revive lives. They also assist the NDRF across crisis-hit regions. In recent years, India's armed forces have actively evacuated distressed people from overseas territories in cases of natural or political crises, reflecting their growing global role.

SUMMARY

- India's HADR activities are rooted in the 'Aid to Civil Authorities' (ACA) mandate given to the military in the pre-independence era.
- Intervening when required by civil authorities, the Indian armed forces become crucial providers of relief immediately after independence.
- With the instituting of the NDMA in 2005, NRDF became the primary responder for HADR actions in India. Yet, its collaboration with India's armed forces for various operations and drills also became routine.
- The Indian Army, Air Force, and Navy have remained instrumental in HADR activities like disaster relief; aid supply; evacuations; search and rescue; and forest fire-fighting, through independent India's history.
- The forces use their advanced expertise and equipment to save and rebuild lives, and assist the NDRF, across crisis-hit parts of India.
- In recent years, the Indian Air Force and Navy have become proactive in evacuating citizens of India and friendly nations from foreign nations facing a natural or political emergency.

ASSESSMENT EXERCISE

Multiple Choice Questions

Q1. What is the primary role of the National Disaster Response Force (NDRF) in disaster relief in India?

a) Conducting International Humanitarian Missions
b) Leading HADR operations abroad
c) Handling domestic disaster relief with Central Armed Police Forces personnel
d) Providing air evacuation services independently

Q2. What type of training does the Indian armed forces primarily rely on for HADR operations?

a) Formal HADR training programs
b) Drills and simulations
c) International workshops
d) Classroom-based education

Q3. What distinguishes the Indian armed forces' role in humanitarian assistance and disaster relief (HADR)?

a) Exclusive focus on conflict-related aid
b) Formal HADR training programs
c) Quick response, logistics capabilities, and specialized skills
d) Limited involvement in international operations

Q4. Which operation marked the Indian Air Force's largest air evacuation, rescuing over 24,000 civilians after flash floods in Uttarakhand?

a) Operation Madad
b) Operation Sea Wave
c) Operation Rahat
d) Operation Phailin

Q5. Which operation was launched by the Indian Armed Forces after the December 2004 tsunami to provide HADR support in India and neighbouring countries?

a) Operation Phailin
b) Operation Sea Wave
c) Operation Rahat
d) Operation Maitri

Q6. During Partition in 1947, what key role did the Indian Army play?

a) Assisting in air evacuations
b) Stopping communal clashes and protecting migrants
c) Conducting drills for disaster preparedness
d) Restoring power and infrastructure

Q7. Which activities are included in the Indian armed forces' HADR operations?

a) Conflict resolution and political negotiations
b) Preservation, evacuation, rescue, and relief

c) Only providing medical care
d) Managing global peace-keeping missions

Q8. Which operation was launched by the IAF to assist after Cyclone Phailin struck Odisha in 2013?

a) Operation Madad
b) Operation Phailin
c) Operation Rahat
d) Operation Sea Wave

Q9. Which Indian Naval Ship (INS) participated in the ASEAN Disaster Relief Exercise (DIREX) in Malaysia in May 2015?

a) INS Saryu
b) INS Vikrant
c) INS Shivalik
d) INS Jalashwa

Q10. In June 2017, which natural disaster prompted the Indian Navy (IN) to save Bangladeshi fishermen?

a) Cyclone Mora
b) Cyclone Idai
c) Tsunami
d) Earthquake

Short Answer Questions

Q1. What mandates and regulations guide the Indian armed forces in providing disaster relief, and what role does the National Disaster Response Force (NDRF) play?

Q2. What roles do the Indian armed forces play in disaster relief, both domestically and internationally?

Q3. What are some notable humanitarian assistance and disaster relief (HADR) operations conducted by the Indian armed forces since 2014?

Long Answer Questions

Q1. What is the relationship between the National Disaster Response Force (NDRF) and the Indian armed forces in disaster relief operations, and how do their roles complement each other in addressing both domestic and international humanitarian assistance and disaster relief (HADR) efforts?

Q2. Examine the roles and responsibilities of the Indian armed forces and the National Disaster Response Force (NDRF) in disaster management. How do these agencies collaborate during large-scale disasters, and what distinguishes the armed forces' capabilities in handling international humanitarian assistance and disaster relief (HADR) operations?

Q3. Discuss the role of the Indian armed forces in providing humanitarian assistance and disaster relief (HADR) since 2014. Highlight key operations and initiatives, their impact during natural disasters and crises, and the significance of collaborations with other nations in building regional and global partnerships for disaster response.

SOCIAL SERVICE & COMMUNITY DEVELOPMENT (SSCD)

8

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SOCIAL SERVICE AND COMMUNITY DEVELOPMENT (SD/SW)

CHAPTER SSCD I : NEED, AIM, OBJECTIVES & AGENCIES, AND CONTRIBUTION OF YOUTH IN THE SOCIETY

"The best way to find yourself is to lose yourself in the service of others."

Mahatma Gandhi

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TEACHING INSTRUCTIONS

Period : **One (01)**
Type : **Lecture and Practice**
Year : **1st Year SD/ SW**
Conducting Officer : **Associate NCC Officer**
Training Aids : **OHP, Screen, Pointer Staff, Presentation, Script or Book Flagged or Lesson Plan in File.**

Time Plan

- Introduction : 05 Mins
- Part I : 05 Mins
- Part II : 10 Mins
- Part III : 05 Mins
- Part IV : 10 Mins
- Conclusion : 05 Mins

INTRODUCTION

1. Social welfare helps people in need, like the poor, the disabled, young, and elderly. Social services support these individuals and groups. Governments, organisations, and individuals provide these services, which are crucial for building stronger communities. Many groups work together to provide social services, including government agencies, NGOs, community leaders, and schools. In India, the National Cadet Corps (NCC) plays a significant role in social service and community development through its Social Service and Community Development (SSCD) program.

LEARNING OBJECTIVES

- Basic understanding of the concept of social service & community
- Analyse the need of SSCD
- Understand the importance of youth in society
- Understand the role of NCC in SSCD

PREVIEW

The lecture will be conducted in the following parts:

(a) Part I : Definition, Objective and Need of Social Service

(b) Part II : Causes and Impact of Social Problems on Society

(c) Part III : Contribution of Youth in Society

(d) Part IV : Role of NCC in SSCD

INTERESTING FACTS

- India has a large volunteer base, an estimated 100 million volunteers, making it one of the largest volunteer bases in the world.
- Mr. Kailash Satyarthi, a Nobel Peace Prize winner, has led campaigns against child labour.
- The Arya Samaj, established in 1875 by Swamy Dayananda Saraswati, actively worked against social evils like the caste system, untouchability, child marriage, and Sati.

PART I : DEFINITION, OBJECTIVE AND NEED OF SOCIAL SERVICE

Definition

2. The term 'Social Service' is defined broadly as the voluntary or professional provision of assistance, support, and care to individuals, groups, or communities in need. It aims to promote their well-being, dignity, and quality of life. It covers a wide range of activities, including charity work, community development, advocacy, counselling, and education. It is guided by principles of empathy, compassion, and social justice and seeks to address social, economic, and environmental challenges.

Objective

3. The objective of social service is to improve the quality of life of individuals, groups, and communities in need, promoting their well-being, dignity, and self-sufficiency, while addressing social, economic, and environmental challenges and fostering social justice and equality.

4. **Concept of Social Service.** Social service refers to the act of providing assistance, support, and care to individuals, groups, or communities in need. It involves a selfless commitment to improving the quality of life for others, often without expecting anything in return. Social service can take many forms, including volunteering, community development, advocacy, and charity work.

5. **Analysing the Need of Social Service.** The need for social service arises from various social, economic, and environmental challenges that affect individuals, groups, and communities, including:-

(a) Poverty and economic inequality.

(b) Social injustice and discrimination.

(c) Health disparities and inadequate healthcare.

(d) Education and literacy gaps.

(e) Environmental degradation and disasters.

(f) Natural calamities and emergencies.

(g) Mental health issues and emotional distress.

(h) Social isolation and loneliness.

(j) Human rights violations.

(k) Community development and empowerment needs.

6. Social service helps address these challenges by providing support, assistance, and care to those in need, promoting their well-being, dignity, and quality of life.

7. **Community Development.** Community development refers to the process of improving the quality of life for individuals and groups within a community. It involves identifying and addressing social, economic, and environmental needs and working collaboratively with community members, organisations, and stakeholder groups to create positive change. Community development can encompass a wide range of activities, such as:-

(a) Building community infrastructure, such as parks, community centres, and healthcare facilities.

(b) Providing education and job training programs to enhance economic opportunities.

(c) Promoting social justice and equality by addressing issues such as poverty, racism, and discrimination.

(d) Fostering community engagement and participation through volunteer opportunities, community events, and public meetings.

(e) Supporting local businesses and entrepreneurship to stimulate economic growth.

8. The ultimate goal of community development is to empower communities to take ownership of their own development and to create a more just, equitable, and sustainable society for all.

9. **Need of Social and Community Participation.**

(a) **Promoting a Sense of Belonging.** Participating in social and community activities promotes a deep sense of belonging among individuals. When people engage with others who share common interests or goals, they feel connected to a larger community or group.

(b) **Building Strong Social Connections.** Social and community participation serves as a ground for building strong social connections. It is through these

interactions that individuals form relationships with neighbours, peers, and fellow community members. This connection provides a foundation for emotional support while also facilitating opportunities for growth, collaboration, and shared moments, leading to a more fulfilling and meaningful life.

(c) **Supporting Diversity.** Participating in community activities helps bridge cultural and social divides. This promotes equality by breaking down barriers and promoting a sense of unity among diverse groups.

(d) **Increasing Personal Well-being.** Participating in social and community activities has a wide impact on personal well-being. It can reduce stress, boost self-esteem, and improve overall mental health. When individuals contribute their time and effort to causes they care about, they derive a sense of purpose and fulfilment.

(e) **Impact on Individuals.** Social and community participation has a wide impact on individuals, hence a wide range of benefits. Psychologically, it provides a sense of belonging and purpose, reducing feelings of isolation and enhancing overall mental well-being.

DID YOU KNOW?

- NCC's social service initiatives promote community engagement and participation, helping to build stronger, more cohesive communities.
- Initiatives such as the Companies Act, 2013, require companies to spend a portion of their profits on corporate social responsibility (CSR) initiatives.

PART II : CAUSES AND IMPACT OF SOCIAL PROBLEMS ON SOCIETY

10. **Evaluating the Causes and Impact of Social Problems on the Well-Being of Society/Community.** This part involves analysing the complex interplay of factors that contribute to these issues. Here's a comprehensive evaluation:-

(a) **Causes of Social Problems.**

- **Poverty and Economic Inequality.** Limited access to resources, education, and job opportunities can lead to poverty, which in turn contributes to various social problems.
- **Regressive Social and Cultural Practices.** Discriminatory attitudes, biases, and cultural norms can perpetuate social problems like racism, chauvinism etc.
- **Lack of Education and Awareness.** Limited knowledge and understanding of social issues can contribute to their persistence and exacerbation.
- **Environmental Factors.** Environmental degradation, climate change, and natural disasters can have devastating impacts on communities and contribute to social problems.

(b) **Impact of Social Problems on Society/Community.**

- **Physical and Mental Health Issues.** Social problems like poverty, violence, and discrimination can lead to physical and mental health issues, including anxiety, depression, and substance abuse.
- **Social Isolation and Fragmentation.** Social problems can lead to social isolation, fragmentation, and erosion of community cohesion.
- **Economic Consequences.** Social problems can have significant economic consequences, including reduced productivity, increased healthcare costs, and decreased economic growth.
- **Perpetuation of Inequality.** Social problems can perpetuate inequality, reinforcing existing power dynamics and limiting opportunities for marginalised groups.

(c) **Evaluation.** Evaluating the causes and impact of social problems on the well-being of society/community requires a comprehensive and moderated approach. It involves:-

- **Identifying the Root Causes.** Understanding the underlying factors that contribute to social problems.
- **Assessing the Impact.** Evaluating the effects of social problems on individuals, communities, and society as a whole.
- **Developing Effective Solutions.** Creating and implementing evidence-based solutions that address the root causes of social problems.
- **Monitoring and Evaluating Progress.** Continuously monitoring and evaluating the effectiveness of solutions and making adjustments as needed.

11. **Types of Social Services**.The various types of social services that can be undertaken are as mentioned under:-

(a) **Health and Medical Services**. Providing medical care, health education, and health promotion to individuals and communities. For example, family welfare, medical care, family planning, and nutrition.

(b) **Education and Literacy Services**. Offering educational programs, literacy training, and vocational training to individuals, especially those from disadvantaged backgrounds.

(c) **Food and Nutrition Services**. Providing food, nutrition counselling, and meal programs to individuals and families in need.

(d) **Housing and Shelter Services**. Offering housing assistance, shelter, and support services to homeless individuals and families. Old age support systems, provision of water and cooking fuel, roads, electricity, and sanitation.

(e) **Counselling and Mental Health Services**. Providing counselling, therapy, and mental health services to individuals, families, and groups, as also social assistance, social security, and care and protection.

(f) **Youth Development Services**. Offering programs and services that promote youth development, including after-school programs, mentorship, employment, and leadership development.

(g) **Disaster Relief and Response Services**. Providing emergency response, relief, and recovery services to individuals and communities affected by disasters.

(h) **Environmental Conservation Services**. Promoting environmental conservation, sustainability, and education to individuals and communities.

(j) **Community Development Services**. Supporting community development initiatives, including community engagement, capacity building, and economic development.

(k) **Advocacy and Support Services**. Providing advocacy, support, and empowerment services to marginalised and vulnerable populations, including women, children, and individuals with disabilities.

(l) **Rehabilitation Services**. Offering rehabilitation services, including physical therapy, occupational therapy, and speech therapy, to individuals with disabilities.

(m) **Family and Child Welfare Services**. Providing services that promote family and child welfare, including child protection, foster care, and adoption services.

(n) **Recreation, Sports and Social Activities**. Recreation, sports, and social activities enrich individuals' well-being. Engaging in leisure pursuits fosters personal growth, social connections, and community cohesion.

PART III : CONTRIBUTION OF YOUTH IN SOCIETY

12. Youth, typically defined as individuals between 15 and 29 years of age, play a vital role in shaping society's present and future. They bring energy, ideas, and innovation, driving progress and change. Youth promote human rights, equality, and sustainability, inspiring others. By participating in education, work, and politics, they boost economic growth and community development. Empowering youth builds leaders, solves global issues, and creates a brighter future.

13. India’s total population is approximately 1.3 billion, with youth constituting around 34%, which is the country’s greatest asset. This demographic advantage presents opportunities for economic growth, social progress, and cultural enrichment. The youth form a significant portion of the labour force, contributing actively to a nation's economy. Their innovative ideas and entrepreneurial spirit lead to the creation of new industries, businesses, and job opportunities. Start-ups, often founded by young individuals, drive economic growth and bring about technological advancements.

Contribution of Youth

14. Youth play a crucial role in social service, contributing in various impactful ways. Here are some ways youth can contribute to social service:-

(a) **Volunteering**. Many young people engage in volunteer work, offering their time and skills to support local charities, non-profits, and community organisations.

(b) **Social Change and Support.** Youth have consistently led social movements, fighting for justice, equality, and human rights. Their courage to challenge norms helps address issues like inequality, corruption, and discrimination. Through campaigns and social media, they raise awareness about climate change, mental health, and social justice.

(c) **Innovative Solutions**. Young individuals bring new ideas and innovative solutions to societal challenges, using technology and creativity. They start businesses, create jobs, and boost economic growth.

(d) **Community Engagement**. Through initiatives like community clean-ups, food drives, and mentorship programs, youth actively participate in improving their neighbourhoods. Some examples are:-

- **Disaster Relief.** Youth participate in rescue operations, fundraising, and rehabilitation efforts.
- **Education.** Young volunteers teach underprivileged children, promoting literacy.
- **Healthcare.** Youth engage in health awareness campaigns, medical volunteering, and healthcare advocacy.
- **Environmental Conservation.** Young individuals participate in eco-friendly initiatives, promoting sustainability.

(e) **Leadership Development.** Many young people take on leadership roles in youth organisations, helping to shape policies and programs that benefit their communities. Youth involvement in politics and governance is essential for a dynamic democracy. As future leaders, they bring fresh perspectives to policymaking and governance. Their active participation in student unions, community organisations, and political parties prepares them to take on leadership roles and address pressing societal issues with innovative solutions.

(f) **Peer Support.** Youth often connect with their peers in ways that foster understanding and support, creating safe spaces for discussions on sensitive issues.

(g) **Fundraising.** They frequently organise and participate in fundraising events to support various causes, demonstrating their commitment to social change.

(h) **Civic Participation.** Youth civic participation is vital for creating a fair and equal society. By engaging in civic activities, young people develop essential skills,

build confidence, and become active contributors to their communities. This participation can take various forms, including volunteering, voting, and advocating for social causes, which allows youth to influence decision-making on important social issues.

15. The agencies/stakeholders involved in the conduct of Social Service and Community Development (SSCD) other than the Youth and the NCC cadets are as mentioned:-

(a) **Government Agencies**. Various government agencies, such as the Ministry of Social Justice and Empowerment, Ministry of Health and Family Welfare, and Ministry of Education, collaborate with the NCC to implement SSCD activities.

(b) **Non-Governmental Organisations (NGOs)**. NGOs, such as the Red Cross, Lions Club, and Rotary Club, partner with the NCC to conduct SSCD activities.

(c) **Community Leaders**. Community leaders, such as village elders and panchayat members, play a crucial role in identifying community needs and mobilising resources for SSCD activities.

(d) **Local Authorities**. Local authorities, such as district administrators, police officials, and healthcare workers, provide support and resources for SSCD activities.

(e) **Educational Institutions**. Educational institutions, such as schools and colleges, participate in SSCD activities and provide resources, such as volunteers and infrastructure.

(f) **Youth Organisations**. Youth organisations, such as Nehru Yuva Kendra Sangathan and the Bharat Scouts and Guides, collaborate with the NCC to conduct SSCD activities.

(g) **Corporate Sector**. The corporate sector, through their corporate social responsibility (CSR) initiatives, provides resources and support for SSCD activities.

PART IV : ROLE OF NCC IN SSCD ACTIVITIES

16. Youth constitute the most creative segment of any society. Their role and contribution are vital to all societies with wide social, cultural, and other demographic diversities. Youth make up about 34% of India's total population, and we cannot ignore their role and contribution to social welfare and nation-building. The NCC cadets come from every corner of India; hence, we must use this huge potential of eager, helpful, energetic, educated, and talented cadets to achieve our aim of imbibing values and skills among the weaker sections of our society, thereby fostering their self-sufficiency and confidence.

Pandit Jawaharlal Nehru, First Prime Minister of India, in one of the social service camp of NCC

Activities by NCC through SSCD

17. NCC plays a major role in the upliftment and improvement of the society either through direct involvement or by spreading awareness among people through campaigns and other programs. NCC contributes to society's development in various ways. NCC cadets, individually or in a group, make significant contribution in this field through their selfless service. NCC cadets play a significant role in spreading awareness about social evils and their prevention. Here are some ways they contribute:-

Nukkad Natak on 'Beti Bachao Beti Padhao'

(a) **Organising Awareness Campaigns.**

- **Rallies and Marches.** NCC cadets participate in rallies and marches to raise awareness about social evils such as dowry, child labour, and domestic violence.
- **Seminars and Workshops.** NCC cadets organise seminars and workshops, including Nukkad Natak, to educate people about social evils and their prevention.
- **Pamphlet and Brochure Distribution**. NCC cadets distribute pamphlets and brochures to spread awareness about social evils and their prevention.

(b) **Community Engagement.**

- **Interacting with Local Communities.** NCC cadets interact with local communities to understand their problems and concerns.
- **Collaborating with NGOs**. NCC cadets collaborate with NGOs and other organisations to amplify their impact.
- **Organising Community Service Projects**. NCC cadets organise community service projects such as cleaning campaigns, tree plantation drives, and blood donation camps.

Blood Donation by Cadets of J&K Dte

(c) **Leadership and Role Modelling.**

- **Setting an Example**. NCC cadets set an example by demonstrating good values and behaviour.

- **Mentoring Younger Cadets**. Senior NCC cadets mentor younger cadets and guide them in their social service activities.
- **Inspiring Others to Join**. NCC cadets inspire others to join them in their social service activities.

18. **Awareness Programs**. NCC cadets also play an important role in spreading awareness among the local populace by conducting various awareness rallies on the following subjects, wherein they convey a message to society by participating in it:-

(a) Female foeticide

(b) Dowry system

(c) Population control

(d) HIV/AIDS

(e) Health and hygiene

(f) Child abuse and trafficking

(g) Drug abuse and trafficking

(h) Promoting rational thinking

19. **Assistance to Civil Administration.**

(a) Render service to people ravaged by floods, cyclones, famine, and earthquakes.

(b) Assist in Traffic control during various events.

DID YOU KNOW?

➢ **Awareness Helps in:-**

- Deeper understanding of the issue, inspiring individuals to take meaningful action and drive positive change.
- Mobilising a larger audience and attracting more volunteers, donors, or advocates.
- Motivating individuals to participate and support a cause they previously had little knowledge of.
- Generating widespread public support and collective action, leading to policy changes or social impact.

20. **Other Activities**.

(a) Assist in health care and blood donation.

(b) Active participation in tree plantation.

(c) Celebrate and observe important national days.

(d) Actively participate in spreading government welfare schemes.

Tree Plantation Drive by NCC Cadets

HIGHER ORDER THINKING SKILLS (HOTS)

- **You notice that a nearby orphanage lacks educational resources. Make a plan to provide educational support to the children, incorporating NCC values and community involvement.**
- **What skills have you developed through NCC social service activities?**

CONCLUSION

21. SSCD activities are a cornerstone of NCC, promoting welfare and well-being through selfless commitment. India faces numerous social problems, including population growth, poverty, unemployment, casteism, communalism, and youth tensions. Community development enhances quality of life by addressing social, economic, and environmental needs through collaborative efforts.

22. By integrating SSCD into its framework, the NCC inspires cadets to become active agents of change. By volunteering, raising awareness, and engaging with communities, NCC cadets can help develop solutions to promote social justice. Empowering youth through SSCD fosters positive change, addressing root causes and mitigating impacts.

NCC's community-focused approach cultivates responsible citizens, equipping them to drive sustainable development and social harmony.

SUMMARY

- SSCD activities undertaken by NCC encompass a wide range of activities aimed at promoting the welfare and well-being of individuals, communities, and society as a whole.
- Community development is a crucial aspect of SSCD, involving the process of improving the quality of life for individuals and groups within a community.
- This is achieved by identifying and addressing social, economic, and environmental needs and working collaboratively with all stakeholders to create positive change.
- India faces numerous social problems, including population growth, casteism, poverty, unemployment, and environmental degradation. These issues disturb the social order and hinder the smooth functioning of social institutions.
- To address these problems, it is essential to identify their causes and understand their impact on society.
- The youth and NCC are key stakeholders in addressing social problems and creating a more equitable and just society.
- By leveraging their collective strengths, they can make a significant impact in addressing social problems, such as poverty, education, healthcare, and environmental conservation.
- They can create positive change, promote social justice, and build a better future for themselves and their communities.
- NCC, as a disciplined youth force, can play a vital role in addressing social problems. It provides a platform to participate in community service projects, social awareness programs, and training and education initiatives.

ASSESSMENT EXERCISE

Multiple Choice Questions

Q1. Selfless work done for the good of one's community, society, and nation is called:-

(a) Upliftment of Poverty (b) Leadership

(c) Social Service (d) None of the above

Q2. The activity of blood donation contributes to saving someone's life:-

(a) True (b) False

(c) Not true at all (d) None of the above

Q3. Poor literacy rate is one of the major problems of Indian Society:-

(a) True (b) False

(c) Not true at all (d) None of the above

Q4. The types of social service are:-

(a) Education (b) Social assistance

(c) Both (a) and (b) (d) None of the above

Q5. What does NGO stand for?

(a) Named Government Organisation

(b) Non-Government Organisation

(c) Not Governed Organisation

(d) None of the above

Q6. Providing emergency response, relief, and recovery services to individuals and communities affected by disasters is a social service undertaken by the NCC cadets:-

(a) False (b) True

(c) May be True (d) None of the above

Q7. Which of the following is NOT a role in the conduct of social service activities?

(a) Tree Plantation (b) Statue Cleaning

(c) Crime Prevention (d) Awareness Programs

Q8. What is the importance of social awareness in promoting social service and community development?

(a) It promotes economic growth.

(b) It addresses social problems and promotes community development.

(c) It provides charity to the poor.

(d) It raises awareness about social issues.

Q9. What is the role of the National Cadet Corps (NCC) in promoting social service and community development?

(a) To provide military training

(b) To promote social service and community development among youth

(c) To provide charity to the poor

(d) To promote political awareness

Q10. Which of the following is a social problem addressed in the SSCD module?

(a) Poverty (b) Illiteracy

(c) Unemployment (d) All of the above

Q11. Who are the key stakeholders in addressing social problems and promoting SSCD?

(a) Government (b) NGOs

(c) Youth and NCC (d) All of the above

Q12. When a particular social phenomenon disturbs the social order and hinders the smooth working of social institutions, it comes to be identified as a:-

(a) Community Development (b) Community Organisation

(c) Social Problem (d) None of the above

Q13. Which of the following is a role in the conduct of social service activities?

(a) Tree Plantation (b) Statue Cleaning

(c) Awareness Programs (d) All of the above

Q14. The objective of social service is to improve the quality of life of individuals, groups, and communities in need, promoting their well-being, dignity, self-sufficiency, and:-

(a) Quality of life of individuals (b) Quality of life of communities

(c) Both (a) & (b) (d) Only (b)

Q15. What is the full form of SSCD?

(a) Social Service and Community Development

(b) Social Status and Community Development

(c) Social Service Causing Development

(d) Social Support and Cultural Development

Short Answer Questions

Q1. What do you mean by SSCD?

Q2. Write a short note on any one social problem.

Q3. How does an NCC cadet assist the civil administration during disaster management?

Q4. Define social service.

Q5. Name any one method to conduct social service.

Long Answer Questions

Q1. What all SSCD activities are taken by the NCC cadets?

Q2. What do you understand by the term social welfare? Why is it important?

Q3. What do you understand by community development?

Q4. Highlight the contribution of NCC in the social services field.

Q5. How, as a Senior under Officer (SUO), will you plan for an awareness program?

SOCIAL SERVICE AND COMMUNITY DEVELOPMENT (SD/SW)

CHAPTER SSCD II : SSCD ACTIVITIES

"Every road, path, office, home, hut, stream, and particle of air around us can and must be kept clean."

Former President, Dr. Pranab Mukherjee

TEACHING INSTRUCTIONS

Period : **Three (03)**

Type : **Lecture**

Year : **1st Year (01), 2nd Year (01), 3rd Year (01) SD/SW**

Conducting Officer : **Associate NCC Officer**

Training Aids : **Script or Lesson Plan; OHP, Screen, Pointer Staff, Presentation, Board, and Markers/Chalk.**

Time Plan

- Introduction : 05 Mins (1st Year)
- Part I : 35 Mins
- Part II : 20 Mins (2nd Year)
- Part III : 20 Mins
- Part IV : 35 Mins (3rd Year)
- Conclusion : 05 Mins

INTRODUCTION

1. Indian government has launched several initiatives to uplift the population, including Swachh Bharat Mission, which aims to make India open defecation-free by constructing over 100 million household toilets, resulting in significant health improvements, economic benefits, and environmental conservation. Certain other government initiatives include Puneet Sagar Abhiyan, a nationwide campaign to clean seashores, rivers, and other water bodies of plastic waste; and Mission Indradhanush, focusing on immunising children and pregnant women against seven vaccine-preventable diseases. Our government has also launched several transformative schemes to boost economic growth, digitalisation, and social welfare. Aadhaar provides a unique identity to residents, while the BHIM App enables seamless digital transactions. Start-Up India and Make in India initiatives foster entrepreneurship and manufacturing, respectively. Skill India aims to upskill youth, enhancing employability. MUDRA Bank offers financial assistance to micro and small enterprises. These schemes have collectively impacted millions of citizens.

LEARNING OBJECTIVES

- Basic understanding of concept of Swachh Bharat Abhiyan
- Know about Puneet Sagar Abhiyan
- Know about Mission Indradhanush
- Knowing about government schemes benifiting the citizens

PREVIEW

The lecture will be conducted in the following parts:

(a) Part I : Swachh Bharat Abhiyan

(b) Part II : Puneet Sagar Abhiyan

(c) Part III : Mission Indradhanush

(d) Part IV : Other Government Schemes

INTERESTING FACTS

- Around 110 million+ household toilets have been built since 2nd October 2019.
- More than 5 lakh villages have been made ODF, i.e., Open Defecation Free, under the Swachh Bharat campaign.
- Social workers face challenges but find fulfilment.

PART I : SWACHH BHARAT ABHIYAN

2. **What is Swachh Bharat Abhiyan.** With an aim to make India clean, this Abhiyan was launched by Prime Minister Narendra Modi on the 2nd of October, 2014, at Rajghat, New Delhi. The objective was to provide sanitation facilities to every family, including toilets, solid and liquid waste disposal systems, village cleanliness, and safe and adequate drinking water.

3. **Objectives of Swachh Bharat Abhiyan**. The campaign of Swachh Bharat launched by the government of India is aimed at accomplishing various goals and fulfilling the vision and mission of "Clean India" by the 2nd of October 2019, which was the 150th birth anniversary of the great leader Mahatma Gandhi. Following are some important objectives of the Swachh Bharat Abhiyan:-

(a) To eradicate the system of open defecation in India.

(b) To convert the insanitary toilets into pour-flush toilets.

(c) To remove the system of manual scavenging.

(d) To raise awareness of healthy sanitation practices by bringing about behavioural changes in people.

(e) To link people with the programs of sanitation and public health in order to generate public awareness.

(f) To build up the urban local bodies strong in order to design, execute, and operate all systems related to cleanliness.

(g) To completely start the scientific processing, disposals reuse and recycling the municipal solid waste.

(h) To provide the required environment for the private sector to participate in the capital expenditure for all the operations and maintenance costs related to the clean campaign.

DID YOU KNOW?

- The 'Clean India Movement' campaign is the biggest step taken ever as a cleanliness drive to date. On the day of the campaign launch, around 3 million government employees, including students from schools and colleges, participated in the event to make it popular and make the common public aware of it.
- This event was organised at Rajghat on the October 2, 2014, in the presence of 1500 people. This event was flagged off by PM Modi.
- On the same day, President Pranab Mukherjee fluffed off a"Swachh Bharat Run" at Rashtrapati Bhawan.

4. **Focus Areas.** The campaign focuses on:-

(a) Construction of toilets and sanitation facilities

(b) Solid waste management and disposal

(c) Cleaning of public spaces and infrastructure

(d) Promotion of hygiene and sanitation practices

(e) Community engagement and awareness campaigns

"A clean environment is essential for human health and well-being"

"Cleanliness is next to godliness"

5. **Impact of Swachh Bharat Abhiyan.** Swachh Bharat Abhiyan has made significant progress, with the following:-

(a) Over 10 crore toilets have been constructed nationwide.

(b) Over 5 lakh villages have been declared open defecation free.

(c) There has been a significant improvement in solid waste management.

(d) Increased access to sanitation and hygiene facilities exists.

(e) Enhanced awareness and behavioural change regarding cleanliness and hygiene.

6. Overall, Swachh Bharat Abhiyan has been a significant step towards promoting cleanliness and hygiene in India. While challenges remain, the mission has made notable progress in improving sanitation and hygiene across the country.

PART II : PUNEET SAGAR ABHIYAN

Puneet Sagar Abhiyan

7. Puneet Sagar Abhiyan is a cleanliness drive initiative aimed at cleaning up the country's beaches, coastal areas, and inland water bodies. NCC and the United Nations Environment Programme (UNEP) signed a Memorandum of Understanding (MoU) in New Delhi on September 22, 2022, to tackle the issue of plastic pollution and achieve the universal goal of cleaning of water bodies through 'Puneet Sagar Abhiyan' and 'Tide Turners Plastic Challenge program'. The MoU was signed between DG NCC and UNEP representatives in the presence of Raksha Mantri, Raksha Rajya Mantri, Defence Secretary, and other senior officials of the Ministry of Defence and UNEP representatives. The program focuses on:-

(a) Promoting cleanliness and environmental awareness

(b) Engaging citizens, especially youth, in cleanliness drives

(c) Collaborating with government agencies, NGOs, and local communities

(d) Conducting regular clean-up operations and awareness campaigns

8. **Salient Aspects of Puneet Sagar Abhiyan.**

(a) On December 1, 2021, the NCC launched 'Puneet Sagar Abhiyan,' initially for one month, to clean seashores of plastic and other waste material and increase awareness about the importance of keeping our seas free from plastic waste.

(b) It aims to propagate the message of importance of 'clean seashores/beaches' amongst the local population and future generations.

(c) It was subsequently extended as a pan-India, round-the-year campaign to cover rivers and other water bodies as well.

(d) The NCC mobilised its cadets to collect plastics and other waste materials. The campaign gained tremendous momentum, acceptance, and participation following its launch.

(e) Different ministries and organisations have extended their support to the NCC's noble cause.

(f) Since the launch of 'Puneet Sagar Abhiyan,' over 100 tonnes of plastic waste have been collected from nearly 1,900 locations by more than 12 lakh NCC cadets, alumni, and volunteers, impacting 1.5 crore people. Of the approximately 100 tonnes of collected plastic waste, more than 60 tonnes have been handed over for recycling.

(g) Following the growing support and success of the campaign, the UNEP, through their 'Tide Turners Plastic Challenge Program, decided to join hands with NCC, with the aim of leveraging the youth organisation's strengths.

(h) The UN body has the mandate and knowledge base for addressing various issues relating to the environment, including plastic pollution, and has a program for engaging youth.

(j) The aim of the MoU between DG NCC and UNEP is to synergise and collate efforts towards engaging youth for promoting clean water bodies.

9. **Objectives**. The objectives of the Puneet Sagar Abhiyan are as mentioned:-

(a) Clean India's coastline and inland water bodies.

(b) Reduce plastic pollution and promote sustainable practices.

(c) Encourage citizens to take responsibility for the environment conservation.

(d) Support the Swachh Bharat Abhiyan and other government initiatives.

10. **Activities**. The activities included in the Puneet Sagar Abhiyan are:-

(a) Beach cleanups and coastal area cleaning.

(b) Inland water body cleaning (rivers, lakes, and ponds).

(c) Awareness campaigns and educational programs.

(d) Community engagement and volunteer participation.

11. **Impact of Puneet Sagar Abhiyan**.

(a) Significant reduction in marine pollution.

(b) Increased awareness among citizens about the importance of cleanliness and conservation of the marine environment.

(c) Encouraged community participation in cleaning up the coastline and water bodies.

(d) Fostered a sense of responsibility among citizens to protect the marine environment.

12. Overall, Puneet Sagar Abhiyan is an initiative that aims to promote cleanliness and conservation of the marine environment and to encourage community participation in protecting the country's coastline and water bodies.

PILLARS OF INDIA'S CLIMATE CHANGE RESOLVE

- India will take its non-fossil energy capacity to 500 GW by 2030.
- India will meet 50 percent of its energy requirements from renewable energy by 2030.
- India will reduce the total projected carbon emissions by one billion tonnes from now till 2030.
- By 2030, India will reduce the carbon intensity of its economy by more than 45 percent.
- By 2070 India will achieve the target of Net Zero.

HIGHER ORDER THINKING SKILLS (HOTS)

- **You are a member of a team tasked with implementing the Puneet Sagar Abhiyan in your village to rejuvenate and conserve water bodies. However, you notice that the local community is hesitant to participate due to a lack of awareness about its benefits. What would you do to raise awareness and encourage community participation?**

PART III : MISSION INDRADHANUSH

13. With an aim to strengthen and improve upon the immunisation program, the Indian government, as a part of its health mission, launched Mission Indradhanush in 2014. This scheme aimed to achieve full immunisation coverage for all children and pregnant women at a rapid pace.

14. The immunisation program in India was introduced in 1978 as the 'Expanded Programme of Immunisation' (EPI) by the Ministry of Health and Family Welfare, Government of India. In 1985, the program was modified as the 'Universal Immunisation Program' (UIP) under the National Health Mission (NHM) since 2005. Despite being operational for many years, UIP has been able to fully immunise only 65% of children in the first year of their lives.

15. **Mission Indradhanush** is a health mission of the Government of India. It was launched by Union Health Minister J. P. Nadda on 25 December 2014. The scheme sought to drive towards 90% full immunisation coverage of India and sustain the same by the year 2022. Nationally, people are getting vaccinated against eight diseases that can be prevented with vaccines: Diphtheria, Whooping cough, Tetanus, Polio, Measles, Hepatitis B, Tuberculosis (BCG), and Meningitis and Pneumonia caused by Haemophilus influenza type B. In some states and districts, people are also getting vaccinated against rotavirus diarrhoea and Japanese encephalitis.

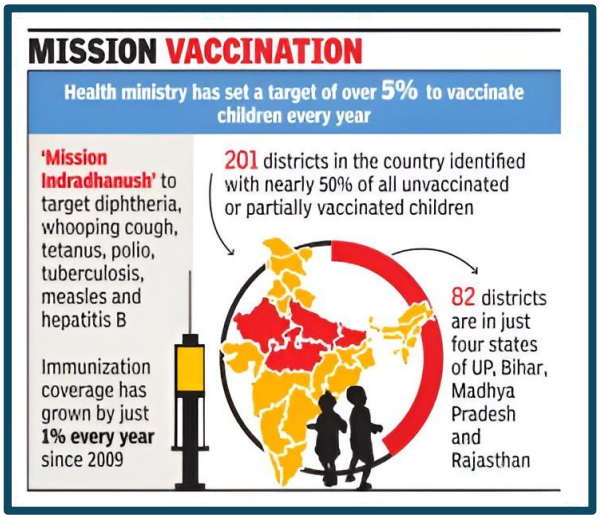
16. **Objectives of Mission Indradhanush**. The objectives of Mission Indradhanush are as mentioned under:-

(a) To strengthen and re-energise the immunisation program.

(b) To achieve full immunisation coverage for all children and pregnant women.

(c) To focus on urban and rural areas with low immunisation coverage.

(d) To provide immunisation services to all unvaccinated and partially vaccinated children and pregnant women.



17. **Key Components of Mission Indradhanush**.

(a) **Immunisation Drives**. Conducting immunisation drives in select districts and cities with low immunisation coverage.

(b) **Micro-planning**. Preparing micro-plans for each district and city to ensure that all unvaccinated and partially vaccinated children and pregnant women are covered.

(c) **Mobilisation**. Mobilising frontline workers, such as ASHAs and Anganwadi workers, to promote immunisation and provide immunisation services.

(d) **Monitoring and Evaluation**. Regularly monitoring and evaluating the progress of the mission to identify areas for improvement.

18. **Impact of Mission Indradhanush**.

(a) **Increased Immunisation Coverage**. Mission Indradhanush has resulted in a significant increase in immunisation coverage, with over 3.5 crore children and 90 lakh pregnant women immunised.

(b) **Reduction in Vaccine-Preventable Diseases**. The mission has led to a reduction in vaccine-preventable diseases, such as measles, rubella, and diphtheria.

(c) **Improved Health Outcomes**. Mission Indradhanush has contributed to improved health outcomes, including a reduction in infant mortality rates and an increase in life expectancy.

19. Overall, Mission Indradhanush has been a successful initiative in strengthening and re-energising the immunisation program in India and has made significant contributions to improving health outcomes and reducing vaccine-preventable diseases.

20. **Intensified Mission Indradhanush (IMI).** Intensified Mission Indradhanush (IMI) is a government initiative aimed at boosting immunisation coverage in low-performing districts. It was launched in 2017 as an extension of the Mission Indradhanush program.

HIGHER ORDER THINKING SKILLS (HOTS)

- **Mission Indradhanush aims to immunise all children under the age of 2 years against eight vaccine-preventable diseases. However, some parents in rural areas are hesitant to get their children vaccinated due to misconceptions about vaccines. What methods would you suggest to your teacher to address these misconceptions and increase vaccine uptake in rural areas?**

PART IV : OTHER GOVERNMENT SCHEMES

21. The Indian government has launched several initiatives to promote digital transformation, economic growth, and skill development. **Digital India Initiatives** include Aadhaar, a unique identity program that has enabled the government to save approximately INR 90,000 crore by eliminating duplicate and fake identities. The BHIM app, a digital payment platform, has facilitated cashless transactions, while the DigiDhan initiative has promoted digital payments and a cashless economy.

22. **Economic Growth Initiatives** include Make in India, which aims to promote manufacturing and entrepreneurship in the country. The Startup India initiative provides funding and support to startups, while the Standup India initiative promotes entrepreneurship among women and SC/ST communities.

23. **Skill Development Initiatives** include Skill India, which aims to train over 40 crore people in different skills by 2022. The Pradhan Mantri Kaushal Vikas Yojana (PMKVY) provides skill training and certification to youth, while the National Skill Development Mission promotes skill development and entrepreneurship. A few of these government initiatives are as discussed under.

Documents Needed for Making Aadhaar
(Not to be asked in exams, only for info)
You need to submit the following documents for the Aadhaar Card application.

Type of Proof	Supporting Documents
Identity proof	Voter ID, PAN card, ration card, passport, driving license, etc.
Address proof	Ration card, bank passbook, Utility bills, Insurance documents, arms license, etc.
Birth proof	Birth certificate, PAN card, passport, marksheet issued by college and university. SSC certificate, etc.
Relationship proof	PDS card, pension card, passport, MNREGA job card, birth certificate, etc.

Aadhaar

24. Aadhaar Card is a document that acts as a proof of identity and address proof for residents of India.

25. The Unique Identification Authority of India (UIDAI) is a government agency responsible for issuing a unique 12-digit identification number to Indian residents. This number serves as proof of identity and address, valid across the country. The Aadhaar card, issued by the UIDAI, contains verified demographic and biometric data of resident Indian citizens. Aadhaar isn't meant to replace existing IDs like PAN cards, passports, or driving licenses. However, it can be used as a single, universal identification document. Banks, financial institutions, and telecom companies can also use Aadhaar for Know-Your-Customer (KYC) verification and profile management. The initiative, launched in 2009, aims to provide a digital identity to every citizen, promoting inclusivity, efficiency, and transparency in public services.

26. **Key Features of Aadhaar**.

(a) **Uniqueness**. Through demographic and biometric deduplication, Aadhaar verifies an individual's identity by cross-checking their information with existing records in the UIDAI database.

(b) **Portability**. Aadhaar enables nationwide portability, allowing authentication from anywhere online. This facilitates seamless mobility for millions of Indians who migrate within the country.

(c) **Random Number**. Aadhaar numbers are randomly generated and do not contain any intelligent or sensitive information. The enrolment process requires minimal demographic and biometric data, excluding details like caste, religion, income, and health.

(d) **Scalable Technology Architecture**. The UID architecture is open, scalable, and centrally managed. It enables online authentication from anywhere in the country, with the capacity to handle 100 million authentications daily.

(e) **Open-Source Technologies**. Open-source architecture precludes dependence on specific computer hardware, specific storage, specific OS, specific database vendor, or any specific vendor technologies to scale.

27. **Benefits of Aadhaar**.

(a) **Simplified Governance**. Aadhaar enables efficient delivery of public services, such as subsidies, pensions, and scholarships.

(b) **Financial Inclusion**. Aadhaar promotes financial inclusion by providing citizens with a unique identity, enabling them to access banking services.

(c) **Transparency and Accountability**. Aadhaar reduces corruption and leakages in public services, ensuring that benefits reach the intended beneficiaries.

28. **E-Aadhaar.**

(a) The digital version of an Aadhaar Card is called an e-Aadhaar Card. A downloadable duplicate of this card is available on the UIDAI website in PDF format. To access it, simply enter your Aadhaar password to initiate the download.

(b) The e-Aadhaar is equally valid as the original printed Aadhaar card. Additionally, there is also an mAadhaar version designed for mobile devices.

29. In conclusion, Aadhaar has revolutionised the way citizens interact with the government, promoting transparency, efficiency, and inclusivity. As a unique digital identity, Aadhaar has empowered citizens, especially the marginalised, to access various public services and benefits.

HIGHER ORDER THINKING SKILLS (HOTS)

- **You are a member of a school committee tasked with creating awareness about Aadhaar among students and parents. What methods would you use to educate them about its benefits and importance?**

BHIM Application

30. The **BHIM** (**Bharat Interface for Money**) Application (App) is a mobile payment app launched by the Indian government on December 30, 2016. It was developed by the National Payments Corporation of India (NPCI); BHIM enables users to make cashless transactions directly through their banks using the Unified Payments Interface (UPI). The app supports all UPI-enabled Indian banks, allowing instant money transfers between over 170 banks. It is compatible with all mobile devices.

31. **Operation.** BHIM enables users to send and receive money using UPI addresses, QR codes, or account numbers. Unlike mobile wallets, BHIM doesn't store money; instead, it facilitates instant bank-to-bank transfers. Transactions are available 24/7, including weekends and holidays. Additionally, BHIM supports digital payments through Aadhaar authentication. To expand its reach, BHIM will be integrated with the Open Network for Digital Commerce (ONDC), aiming to compete with dominant players like PhonePe and Google Pay.

INTERESTING FACTS (BHIM APP)

- One digital payment application for all bank accounts.
- Money remains in your bank account, so you earn interest.
- No charges from using the BHIM application infrastructure, minimal Unified Payment Interface (UPI) charges from banks for making transactions.
- Simple, secure, and light.
- The BHIM framework *99# works without the internet.
- Transaction from ₹ 1/- to ₹ 40,000/-
- Daily transaction limit of ₹ 1,00,000/-

Make in India

32. **Make in India** is a government initiative aimed at promoting India as a manufacturing hub. It encourages companies to design, make, and assemble products in India, offering incentives for investments in manufacturing. The initiative focuses on creating a business-friendly environment, modern infrastructure, and opening up new sectors to foreign investment. Targeting 25 key sectors, Make in India seeks to generate jobs, enhance skills, and establish India as a global export hub for design and manufacturing.

33. **Objectives.** The program was launched in September 2014 with the following objectives:-

(a) Boost manufacturing sector growth by 12-14% annually.

(b) Create 100 million new jobs in manufacturing sector by 2022.

(c) Increase manufacturing's share of GDP to 25% by 2022 (later revised to 20% by 2025).

(d) Develop skills among urban poor and rural migrants for inclusive growth.

(e) Enhance domestic value addition and technological depth in manufacturing.

(f) Achieve environmentally sustainable growth.

(g) Strengthen the global competitiveness of India's manufacturing sector.

34. **Four Pillars of the Make in India Initiative.**

(a) **New Processes**. The government is implementing various reforms to create possibilities for getting Foreign Direct Investment (FDI) and foster business partnerships.

(b) **New Infrastructure**. Infrastructure is integral to the growth of any industry. Developing industrial corridors and smart cities with cutting-edge technology and high-speed communication is crucial for its growth.

(c) **New Sectors**. 'Make in India' has identified 25 key sectors to promote, providing detailed information through an interactive web portal.

(d) **New Mindset**. The government in India has always been seen as a regulator and not a facilitator. This initiative intends to change the mindset by bringing a paradigm shift in the way the government interacts with various industries.

35. **Advantages Accrued**. India has emerged as a global industrial hub and a top investment destination, thanks to significant initiatives, policy changes, and reforms. Key advantages include:-

(a) **Rapid Economic Growth**. India’s economy is amongst the fastest-growing ones in the world.

(b) **Demographic Advantage**. With 356 million persons and 10 to 24-year-olds, the largest youth population is being addressed.

(c) **Favourable Policies**. Major FDI policy reforms have been made in the sectors, such as defence, pensions, construction development, pharmaceuticals, broadcasting, and civil aviation.

36. **Supporting Schemes of Make in India.** Several schemes were launched to support the Make in India programme:-

(a) **Skill India.** The mission seeks to equip 10 million Indians each year with skills across diverse sectors. Upskilling the nation's large workforce is essential to the success of the ‘Make in India’ initiative, especially considering that only 2% of India's population currently receives formal skill training.

(b) **Startup India**. The main idea behind this program is to build an ecosystem that promotes the growth of startups, driving sustainable economic growth, and creating large-scale employment.

(c) **Digital India.** This aims to transform India into a knowledge-based and digitally empowered economy.

(d) **Pradhan Mantri Jan Dhan Yojana (PMJDY).** The mission envisions promoting financial inclusion by providing affordable access to essential financial

services, including banking savings and deposit accounts, remittances, credit, insurance, and pensions.

(e) **Smart Cities. The** Smart Cities mission aims to create 100 smart cities with the aim to transform and rejuvenate Indian cities.

(f) **Swachh Bharat Abhiyan.** This is a mission aimed at making India cleaner and promoting basic sanitation and hygiene.

(g) **Sagarmala.** This scheme aims at developing ports and promoting port-led development in the country.

(j) **International Solar Alliance (ISA).** The ISA is a coalition of 121 nations, primarily located in the sunny regions between the Tropic of Cancer and the Tropic of Capricorn. This Indian-led initiative focuses on advancing research and development in solar technologies and shaping related policies.

(k) **AGNII.** AGNII, or Accelerating Growth of New India's Innovation, was launched to push the innovation ecosystem in the country by connecting people and assisting in commercialising innovations.

(l) **AMRUT.** AMRUT is the Atal Mission for Rejuvenation and Urban Transformation. It aims to build basic public amenities and make 500 cities in India more liveable and inclusive.

Startup India

37. **Definition.** A startup refers to an entity registered in India for no more than ten years, with an annual turnover not exceeding ₹25 crore in any financial year. It focuses on the innovation, development, deployment, or commercialisation of new products and services, driven by technology and intellectual property.

38. It is a flagship initiative launched on 16 January 2016 by the Government of India to promote startup culture and build a robust ecosystem for innovation and entrepreneurship. Some key highlights of the Startup India initiative include:-

(a) There are over 1,30,000 startups recognised by the government of India as of January 2024.

(b) 50% of the startups are based in Tier 2 and Tier 3 cities.

(c) These startups are spread over 669 districts from 36 states and union territories of India.

(d) 57 regulations have been simplified for startups.

(e) The Startup India portal serves as a virtual incubation platform, enabling stakeholders in the startup ecosystem to connect, access resources, and utilise tools and templates that support them throughout their journey.

39. The government, through this initiative, aims to empower start-ups to grow through modernisation and design. The main features of Start-up India campaign are as follows:-

(a) Single Window Clearance even with the help of a mobile application.

(b) 10,000 crore INR of funds.

(c) 80% reduction in patent registration fee.

(d) Modified and friendlier bankruptcy code to ensure a 90-day exit window.

(e) Eliminating red tape.

(f) Self-certification compliance.

(g) Encourage entrepreneurship.

Skill India

40. The Skill India Mission, launched in 2015, is a government initiative that encompasses various skilling schemes and programs. Its primary aim is to equip the country's youth with the necessary skill sets to enhance their employability in relevant sectors and boost overall productivity.

41. **Skill India Objectives**. The chief objective of the Skill India Mission was to provide **market-relevant skills training** to more than 40 crore young people in the country by the year 2026. It aims at:-

(a) **Talent Development**. Creating opportunities and fostering an environment for the growth and development of youth talent.

(b) **Sectoral Development**. Revitalising traditional skill sectors that have been under development for years while identifying and prioritising new sectors for skill enhancement.

42. **Features of Skill India.** There are many features to the Skill India Mission that make it different from the previous skill

DID YOU KNOW?

following factors.:-

- **Demographic Advantage**. In contrast to most leading economies around the globe facing the challenge of an ageing population, India, with its demographic dividend, has the potential to meet global workforce demands. However, this requires equipping the population with employable skills.
- Skill training is only 10% in India, which is very small compared to other countries – Germany (75%), Japan (80%), and South Korea (96%).
- **Sectoral Mobilisation**. With advancements in mechanisation boosting agricultural productivity, the sector will require fewer workers.

development missions. The key features are:-

(a) **Youth Employability and Entrepreneurship**. The focus is on improving the employability of the youth so that they get employment and also enhance entrepreneurship among them.

(b) **Comprehensive Training**. The mission offers training, guidance, and support for all traditional types of employment like weavers, cobblers, carpenters, welders, masons, blacksmiths, nurses, etc.

(c) **Focus on Emerging Sectors**. New domains will also be emphasised, such as real estate, transportation, construction, gems, textiles, banking, jewellery designing, tourism, and other sectors where the level of skill is inadequate.

(d) **Rural Skill Development**. An important feature is the creation of a new hallmark, 'Rural India Skill.'

(e) Training programs align with global benchmarks to enable Indian youth to secure employment both domestically and internationally.

(f) Development of targeted training modules for specific age groups in areas such as communication, language, positive thinking, behavioural skills, management, and life skills.

MUDRA Bank

43. The **Micro Units Development and Refinance Agency Bank** (or **MUDRA Bank,** launched by Prime Minister Narendra Modi on April 8, 2015, is a public sector financial institution in India that provides low-cost loans to microfinance institutions and non-banking financial institutions, which in turn offer credit to Micro, Small, and Medium Enterprises (MSMEs).

44. The Pradhan Mantri MUDRA Yojana scheme established MUDRA banks to cater to small entrepreneurs. The bank prioritises responsible lending, ensuring clients avoid indebtedness.

DID YOU KNOW?

- Who is eligible to borrow from MUDRA bank?
  - Small manufacturing unit
  - Shopkeepers
  - Fruit and vegetable vendors
  - Artisans

45. Initially, MUDRA was set up as a Small Industries Development Bank of India (SIDBI) subsidiary with ₹1000 crore authorised capital. To enhance its functioning, additional capital is expected. MUDRA's role is to develop and refinance microenterprises, supporting finance institutions that lend to small businesses in manufacturing, trading, and services. It partners with banks, MFIs, and other lenders to provide microfinance support to the micro-enterprise sector nationwide.

46. **The bank will classify its clients into three categories, and the maximum permissible loan sums will be based on the category as mentioned**:-

(a) *Shishu*. Allowed loans up to INR 50,000 (US$600)

(b) *Kishor*. Allowed loans up to INR 5 lakh (US$6,000)

(c) *Tarun*. Allowed loans up to INR10 lakh (US$12,000)

47. The **Government has decided to provide additional funds of INR 1 trillion (US$12 billion) to the market and will be allocated as mentioned**:-

(a) 40% for *Shishu*

(b) 35% for *Kishor*

(c) 25% for *Tarun*

INTERESTING FACTS

- **Digilocker**. The Ministry of Electronics and Information Technology has developed this application to have access to documents stored in the cloud.
- **UMANG**. The Ministry of Electronics and Information Technology, along with the National e-Governance Division, has come up with the new-age digital governance called the Umang App. This app provides all the necessary services, from local to central, compiled in one app.
- **MyGov App**. This app to stay up to date with the recent happenings in Indian politics. It accepts the direct involvement of citizens to comment on the government's initiatives and policies.

HIGHER ORDER THINKING SKILLS (HOTS)

- **You are the leader of your school's Ecological Club. Design and propose a 6-month action plan to implement Swachh Bharat Abhiyan in your school and neighbourhood. Your plan should include:-**
  - **Aims and objectives**
  - **Strategies for waste management and segregation**
- **How do you think Mission Indradhanush will help reduce illnesses and deaths among children and pregnant women in India in the long run?**

CONCLUSION

48. NCC cadets are key drivers of India's cleanliness and environmental sustainability initiatives, particularly through the Swachh Bharat Mission and Puneet Sagar Abhiyan. These initiatives have made significant strides, constructing millions of toilets, enhancing

waste management, and promoting sanitation awareness. NCC cadets also mobilise communities to clean India's coastline and water bodies, fostering environmental responsibility and community ownership.

49. The Indian government's initiatives, such as Mission Indradhanush, Aadhaar, Skill India, and Startup India, promote economic growth, financial inclusion, skill development, and entrepreneurship. These programs enhance governance, citizen engagement, and sustainable development. Despite implementation challenges, the government's commitment to transforming India into a digitally empowered nation is evident. NCC cadets' awareness and participation in these initiatives contribute significantly to societal well-being.

SUMMARY

- Swachh Bharat Abhiyan (SBA), launched by the Government of India in 2014, is a nationwide initiative aimed at promoting cleanliness and hygiene throughout the country.
- Puneet Sagar Abhiyan is a cleanliness drive initiative launched by NCC in 2021. The mission aims to clean up the country's coastline, rivers, and water bodies and to promote awareness about the importance of cleanliness and conservation of the marine environment.
- Mission Indradhanush has been instrumental in improving immunisation coverage across the country, particularly in hard-to-reach areas. It seeks to drive towards 90% full immunisation coverage in India.
- AADHAAR has provided a unique digital identity to over 1.2 billion residents, facilitating access to various public services and benefits.
- The BHIM App has promoted digital payments and financial inclusion, while Make in India has encouraged manufacturing and entrepreneurship in India.
- Skill India has focused on developing a skilled workforce. Startup India has provided a platform for entrepreneurs to launch and grow their businesses.
- Mudra Bank has provided access to credit for micro, small, and medium enterprises (MSMEs), facilitating their growth and development.

ASSESSMENT EXERCISE

Multiple Choice Questions

Q1. One of the impacts of the Puneet Sagar Abhiyan is a significant reduction in marine pollution:-

(a) True (b) False

(c) May be True (d) None of the above

Q2. The Prime Minister had nominated the names of how many famous personalities from business industries, sports, and Bollywood to drive the Clean India campaign:-

(a) Seven (b) Eight

(c) Eighteen (d) Nine

Q3. Puneet Sagar Abhiyan is a cleanliness drive initiative aimed at cleaning up the country's beaches, coastal areas, and inland water bodies:-

(a) True (b) False

(c) Not true at all (d) None of the above

Q4. The Swachh Bharat Abhiyan was launched by Prime Minister Narendra Modi on which date at Rajghat, New Delhi?

(a) 02nd October 2004 (b) 02nd October 2019

(c) 02nd October 2014 (d) None of the above

Q5. What does UNEP stand for:-

(a) United Nations Environment Programme

(b) United National Environment Podcast

(c) United Nations Ecological Programme

(d) United Nations Educational Programme

Q6. Immunisation Programme in India was introduced in which year:-

(a) 1978 (b) 1988.

(c) 2008. (d) 1989.

Q7. The objectives of the government scheme are:-

(a) To conduct exams for the students.

(b) Formulate a sports promotion plan.

(c) Both (a) & (b).

(d) To improve the quality of life.

Q8. For recruitment of soldiers below the officer rank in the armed forces, the scheme launched by the government is called:-

(a) Agniveer Scheme. (b) Beti Padao Beti Bacho Scheme.

(c) Agnipath Scheme. (d) Jan Dhan Yojna.

Q9. The purpose of the BHIM app is:-

(a) Providing loans to weaker sections

(b) Safe payments

(c) Social Service and Central Development

(d) None of the above

Q10. Which immunisation plan was launched in 2014, aiming at maximum immunisation in India?

(a) Ayushman Bharat

(b) Mission Immunisation program

(c) Mission Indradhanush

(d) Khelo India

Q11. The Startup India initiative was launched on:-

(a) January 16, 2019 (b) January 26, 2016

(c) January 16, 2016 (d) January 26, 2019

Q12. An initiative by the Government of India to create and encourage companies to develop, manufacture, and assemble products in India and incentivise dedicated investments into manufacturing is:-

(a) Aadhaar Scheme (b) BHIM App

(c) Make in India scheme (d) None of the Above

Q13. UPI stands for:-

(a) Unified Portal Interest (b) Universal Payment Interface

(c) United Payment Interface (d) Unified Payment Interface

Q14. Which year saw the launch of the Skill India Mission?

(a) 1995 (b) 2005

(c) 2015 (d) 2024

Q15. This aims to transform India into a knowledge-based and digitally empowered economy:-

(a) Digital India

(b) MUDRA Bank

(c) Skill India

(d) None of the above

Short Answer Questions

Q1. Write a short note on Intensified Mission Indradhanush.

Q2. Write a short note on Skill India.

Q3. Write a short note on MUDRA Bank.

Q4. Write a short note on Swachh Bharat Abhiyan.

Q5. In which year was Puneet Sagar Abhiyan launched?

Long Answer Questions

Q1. What are the features of Skill India?

Q2. What do you understand by Make in India?

Q3. What do you understand about My Startup in India?

Q4. What do you understand by immunisation program? What motivated the launch of Mission Indradhanush?

Q5. How is Aadhaar a Unique Identity of a Citizen of India? Explain.

SOCIAL SERVICE AND COMMUNITY DEVELOPMENT (SD/SW)

CHAPTER SSCD III : GENDER SENSITIVITY, CHILD PROTECTION, AND RTI & RTE

"Equality is the soul of liberty; there is, in fact, no liberty without it."

TEACHING INSTRUCTIONS

Period : **Three (03)**
Type : **Lecture**
Year : **2nd Year (01) & 3rd Year (02) SD/ SW**
Conducting Officer : **Associate NCC Officer**
Training Aids : **Script or Lesson Plan; Charts on Gender Sensitivity, Child Protection, and the POCSO Act, Videos; Pamphlets; and Plays**

Time Plan

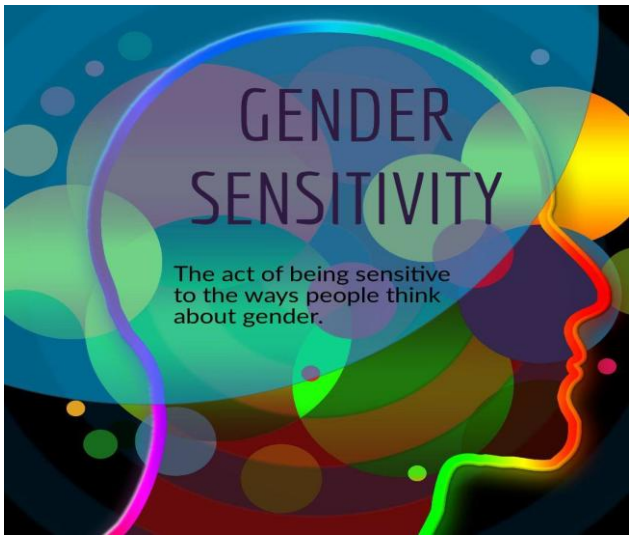
- Introduction : 05 Min (2nd Year)
- Part I : 35 Min
- Part II : 40 Min (3rd Year)
- Part III : 35 Min (3rd Year)
- Conclusion : 05 Min

INTRODUCTION

1. **Gender sensitisation** is the process of making people aware of gender equality or the lack of it and the need to eliminate gender discrimination. It involves understanding and challenging the existing gender roles, stereotypes, and biases that are prevalent in society.

2. Child abuse constitutes all forms of physical and/or emotional ill-treatment, sexual abuse, neglect or negligent treatment, or commercial or other exploitation, resulting in actual or potential harm to the child's health, survival, development, or dignity. Child protection constitutes safety from all forms child abuse. **POCSO Act,** enacted in 2012, is a step taken towards strengthening norms of child protection in India.

3. The **RTI Act** empowers citizens to obtain information from public authorities, ensuring transparent governance. The **RTE Act** guarantees free, compulsory education for all children aged 6–14, promoting equal opportunities.



LEARNING OBJECTIVES

- Understanding of gender sensitivity and measures to ensure gender equality
- Understanding the Child Protection Framework and POCSO act
- Understanding the provisions and special features of RTI & RTE

PREVIEW

The lecture will be conducted in the following parts:

(a) Part I : Gender Sensitivity

(b) Part II: Child Protection and POCSO Act

(c) Part III : RTI and RTE

DID YOU KNOW?

- POCSO ACT is a gender-neutral act.
- Not reporting abuse by the custodians is an offence.
- POCSO investigations must finish within three months, and trials within a year, to ensure speedy justice.

PART I : GENDER SENSITIVITY

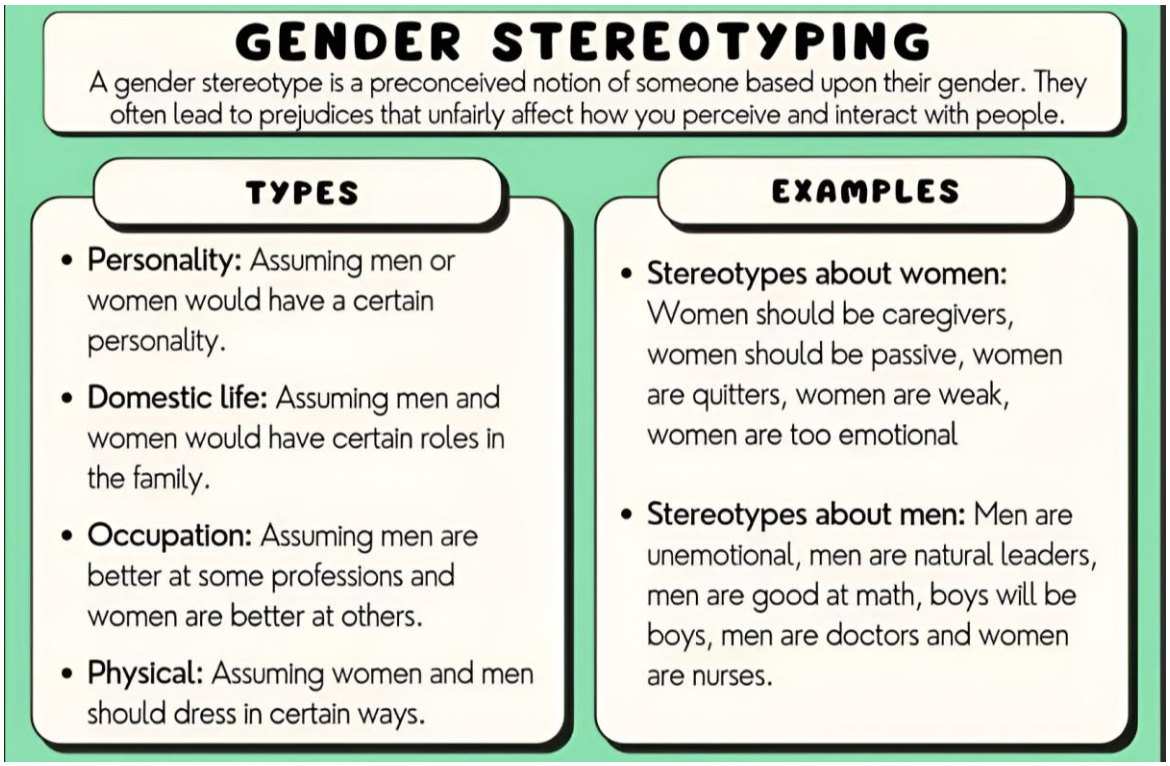
4. **Gender sensitivity** refers to the awareness and understanding of the differences in the experiences, needs, and perspectives of individuals based on their gender. It involves recognising how gender can influence social dynamics, opportunities, and treatment in various contexts, including workplaces, education, and communities. By developing gender sensitivity, individuals and organisations can contribute to a more equitable society that values and respects the diversity of gender identities and experiences. Here are some key aspects to understand the existence of various genders and develop empathy towards them:-

(a) **Awareness of Gender Differences.** It is important to understand that societal norms, roles, and expectations can lead to different experiences for men, women, and gender-diverse individuals.

(b) **Recognising Inequalities.** Identifying systemic inequalities and discrimination that affect individuals based on their gender, such as wage gaps, access to education, and representation in leadership roles.

(c) **Empathy and Respect.** Cultivating empathy for individuals of all gender identities, acknowledging their unique challenges and perspectives, and treating everyone with respect.

(d) **Inclusive Language.** Using language that is respectful and inclusive of all gender identities, such as using gender-neutral terms.



(e) **Promoting Equal Opportunities**. Advocating for policies and practices that ensure equal access to opportunities, resources, and decision-making processes for all genders.

(f) **Challenging Stereotypes**. Questioning and dismantling gender stereotypes and norms that limit individuals based on their gender identity.

(g) **Creating a Supportive Environment**. Fostering spaces where individuals feel safe and empowered to express their gender identity without fear of discrimination or bias.

(h) **Education and Training.** Engaging in ongoing education and training on gender issues to enhance understanding and promote sensitivity within organisations and communities.

5. **Promoting equality for all children** involves creating environments where children are treated fairly and with respect, regardless of their background, gender, abilities, or identity. We can create environments where all children are treated fairly and with respect, promoting a foundation of equality that will benefit them throughout their lives.

6. **Respecting all genders is essential** for fostering inclusivity and understanding. By embracing these principles, we can contribute to a more respectful and inclusive society for everyone.

Meaning of Gender Stereotypes

7. Gender stereotypes are general ideas about how people of a certain gender should act. They reflect in-built biases based on the social norms of that society. These stereotypes are often inaccurate and continue to exist even when there is evidence against them.

8. **How Gender Stereotypes Develop.** The main causes of gender stereotypes are due to:-

(a) **Subconscious Biases**. Often, we aren’t even aware that we have them or how they influence our behaviour.

(b) **Social Conditioning and Internalised Stereotypes**. Gender roles, norms, and expectations are learnt by watching others in our society, including our families, our teachers, and our classmates.

9. Gender intersects with various other identities, creating unique experiences for individuals. Understanding these overlaps gives a deeper insight into identity and shows how unique everyone's experiences are. Here are some key aspects:-

(a) **Race and Ethnicity**. Gender experiences can differ significantly across racial and ethnic groups, influencing cultural expectations and societal treatment. For example, women of colour may face racism and sexism.

(b) **Class**. Socioeconomic status can influence gender experiences by affecting access to resources, opportunities, and healthcare. For example, marginalised groups may face additional barriers based on class.

(c) **Ability**. Gender and disability intersect, affecting how individuals experience both societal expectations and discrimination. Disabled individuals may face unique challenges in expressing their gender identity.

10. **Enabling an Environment for Holding one's Gender Identity with Pride**. Creating an inclusive environment involves using various strategies so that organisations and communities can make everyone feel proud to express their gender identity. This leads to a more diverse and welcoming atmosphere:-

(a) **Education and Awareness.**

- **Training Programs**. Implement training sessions on gender diversity and inclusivity for all employees or members of an organisation.
- **Workshops and Seminars**. Host events that highlight the experiences and contributions of diverse gender identities, promoting understanding and empathy.

(b) **Inclusive Policies.**

- **Non-Discrimination Policies**. Establish clear policies that protect individuals from discrimination based on gender identity and expression.
- **Supportive Practices**. Develop practices that accommodate various gender identities, such as gender-neutral bathrooms and options for pronouns in official documents.

(c) **Visible Representation.**

- **Diverse Leadership**. Promote diversity in leadership roles, ensuring representation of various gender identities in decision-making positions.
- **Role Models**. Highlight successful individuals from diverse gender backgrounds to inspire others and normalise diverse identities in different fields.

(d) **Safe Spaces.**

- **Support Groups**. Create support networks or affinity groups where individuals can connect, share experiences, and advocate for their rights.
- **Open Dialogue**. Encourage open conversations about gender identity, allowing individuals to express themselves without fear of judgement or retaliation.

(e) **Feedback Mechanisms.**

- **Anonymous Surveys**. Implement regular surveys to assess the inclusivity of the environment and gather feedback on areas for improvement.
- **Open Channels for Communication**. Establish channels for individuals to report concerns or suggest improvements regarding gender inclusivity.

PART II : CHILD PROTECTION AND THE POCSO ACT

11. The Protection of Children from Sexual Offences Act (POCSO) was enacted in June 2012 to deal with the matter of sexual offences against children. POCSO not only gives out punishments for offences and sets out a system for support for victims but also has improved mechanisms for catching wrongdoers.

12. **Salient Features of the POCSO Act.**

(a) **Comprehensive Definition of Child Sexual Abuse**.

- The Act defines various forms of sexual abuse against children.
- It covers both boys and girls under the age of 18 years, ensuring gender-neutral protection.

(b) **Stringent Punishments**.

- The Act prescribes severe penalties for different forms of abuse, ranging from rigorous imprisonment to the death penalty in extreme cases.
- It includes provisions for fines and mandatory compensation to the victim.

(c) **Child-Friendly Procedures**.

- The Act mandates child-friendly processes for reporting, recording evidence, and trial to minimise trauma for the child.
- Special courts are designated to handle POCSO cases, ensuring a speedy and sensitive trial process.

(d) **Mandatory Reporting**.

- The Act makes it mandatory for any person aware of an offence under the POCSO Act to report it to the authorities.

- Failure to report such offences can result in upto 6 months' imprisonment or a fine.

(e) **Protection of Identity**.

- The Act includes provisions to protect the identity of the child victim, ensuring confidentiality throughout the legal process.
- It prohibits media from disclosing the identity of the victim.

(f) **Medical Examination**.

- The Act requires that the medical examination of a child victim be conducted in the presence of a parent or another person whom the child trusts.
- In cases involving girl children, a woman doctor must conduct the examination.

(g) **Special Courts and Public Prosecutors**.

- Special courts are established to handle POCSO cases exclusively.
- The Act appoints Special Public Prosecutors to handle cases.

(h) **Care and Protection**.

- The Act ensures the provision of care and protection to child victims during the legal process.
- It includes guidelines for the rehabilitation of victims and their reintegration into society.

(j) **Preventive Measures**.

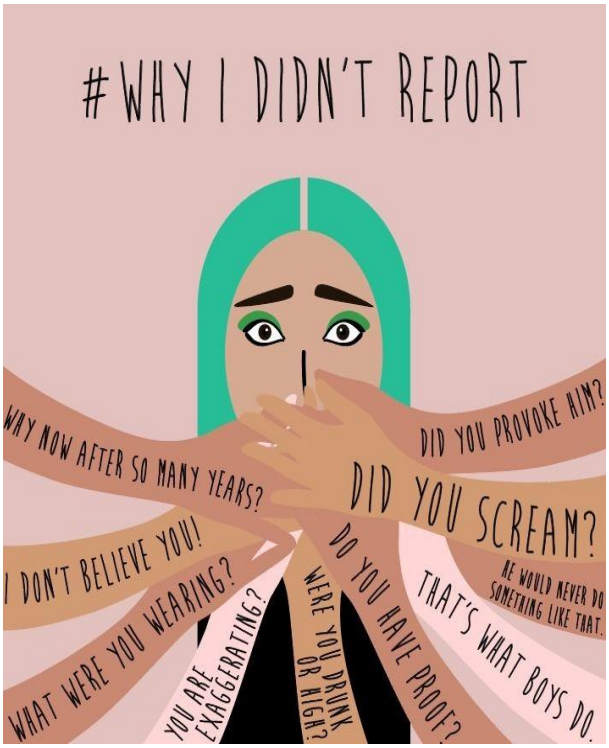
- The Act promotes awareness and educational programs to prevent child sexual abuse.
- It encourages the involvement of schools, institutions, and communities in creating a safe environment for children.

(k) **Burden of Proof**.

- In POCSO cases, the burden of proof is shifted to the accused, meaning they must prove their innocence.
- This provision aims to make it easier for victims to get justice.

13. **General Principles of POCSO Act**. **(For Info only, Not to be Asked in Exam)**

The Protection of Children from Sexual Offences Act, 2012 (POCSO Act) came into effect on 19 June 2012, and it mentions 12 key principles that are to be followed by anyone, including the state governments, the Child Welfare Committee, the police, the special courts, NGOs, or any other professional present during the trial and assisting the child during the trial. These include:-



(a) **Right to Life and Survival.** A child must be shielded from any kind of physical, psychological, mental, and emotional abuse and neglect.

(b) **Best Interests of the Child.** The primary consideration must be the harmonious development of the child.

(c) **Right to be Treated with Dignity and Compassion.** Child victims should be treated in a caring and sensitive manner throughout the justice process.

(d) **Right to be Protected from Discrimination.** The justice process must be transparent and just, irrespective of the child's cultural, religious, linguistic, or social orientation.

(e) **Right to Special Preventive Measures.** This right acknowledges that abused children are at a higher risk of repeated abuse; thus, preventive measures and training must be given to them for self-protection.

(f) **Right to be Informed.** The child victim or witness must be well informed of the legal proceedings.

(g) **Right to be Heard and to Express Views and Concerns.** Every child has the right to be heard in respect of matters affecting them.

(h) **Right to Effective Assistance.** Financial, legal, counselling, health, social and educational services, physical and psychological recovery services, and other services necessary for the child's healing must be provided.

(j) **Right to Privacy. The child's privacy and identity must be protected at all stages of the pre-trial and trial process** as per Sec-2023 of **POCSO**, which prohibits media from disclosing identity.

(k) **Right to be Protected from Hardship during the Justice Process.** Secondary victimisation or hardships for a child during the justice procedure must be minimised.

(l) **Right to Safety.** A child victim must be protected before, during, and after the justice process.

(m) **Right to Compensation.** The child victim may be awarded compensation for his/her relief and rehabilitation.

14. **Importance of the POCSO Act**. The Act is crucial in creating a safer environment for children, promoting accountability, and ensuring that society collectively works towards protecting its most vulnerable members. It is vital for the following reasons, and it is equally important that the children and their parents be made aware of its provisions:-

(a) **Legal Framework**. It provides a robust legal framework specifically aimed at protecting children from sexual abuse and exploitation.

(b) **Prevention and Reporting**. The Act emphasises prevention strategies and mandates the reporting of offences.

(c) **Child-Centric Approach**. It prioritises the needs and rights of children during legal proceedings, ensuring that their voices are heard and that they are treated with dignity and respect. The child's privacy and identity must be protected at all stages of the pre-trial and trial process.

(d) **Specialised Courts**. The establishment of special courts for hearing cases under this Act helps expedite trials.

(e) **Awareness and Education**. The POCSO Act encourages awareness programs and education regarding child safety.

(f) **Support Systems**. It facilitates the creation of support systems for victims, including medical care and counselling, which are essential for their recovery.

HIGHER ORDER THINKING SKILLS (HOTS)

- **How, in your opinion, can gender roles and stereotypes influence the perceptions and behaviour of adolescents?**
- **Explain the effectiveness of current child protection laws in India in preventing child labour and ensuring the welfare of children.**
- **Discuss the significance of the Protection of Children from Sexual Offences (POCSO) Act, 2012, in safeguarding children's rights. Suggest ways to improve its implementation.**

PART III : RTE

RTE

15. **Right to Education(RTE).** The RTE Act 2009, commonly known as the Right to Education Act, is regarded as a remarkable step in the direction of guaranteeing free and mandatory education for all children aged 6 to 14 years. Enacted to bring into effect Article 21A of the Constitution of India, it ensures that no child till completion of elementary education is denied admission, expelled, or required to pass a board examination.

Savitribai Phule is widely recognised as a pioneer in women's education and is considered the first female teacher in India

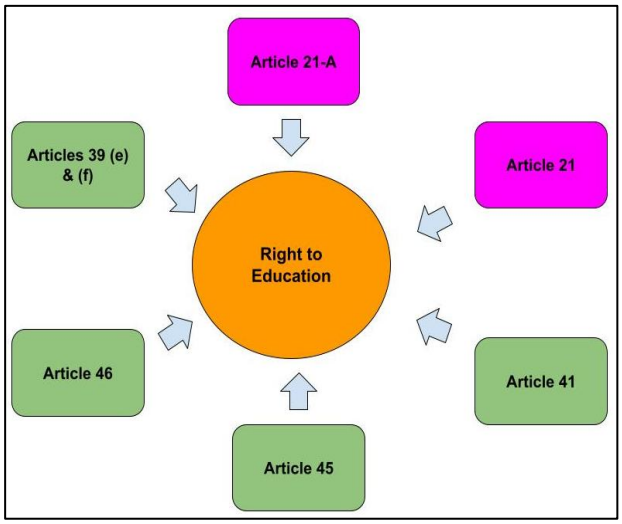
Key Provisions of the RTE Act

16. The RTE Act, 2009, outlines several key provisions to ensure the right to education, as under:-

(a) **Free and Compulsory Education**. The Act ensures that no child is required to pay any fee or charge that might stop a child from pursuing and finishing elementary education. RTE ensures free and mandatory education for children aged 6 to 14 years.

(b) **Standards and Quality**. The RTE Act directs minimum yardsticks for school infrastructure, teacher qualifications, and pupil-teacher ratio. It aims to guarantee a favorable learning atmosphere and better the overall quality of education.

(c) **Education Inclusiveness**. The Act stresses upon the incorporation of marginalized groups, to include children with disabilities (in alignment with RPwD act 2016), making sure that every child has access to education without discrimination.



(d) **School Management Committees (SMCs)**. For ensuring accountability, the Act directs that all schools should have SMCs

(e) **Prohibition of Screening and Capitation Fees**. Charging of capitation fees and screening procedures for children for admission are prohibited by the Act.

(f) **Continuous and Comprehensive Evaluation (CCE)**. To promote continuous and comprehensive evaluation methods, the Act lays down comprehensive way for students assessment, moving away from traditional exami nation system.

17. **Impact and Success of RTE.** Enhanced rates of enrolment is one of the notable achievement of the Act, especially among children from marginalized communities. This can be summarised as under:-

(a) **Enhanced Rates Enrolment.** Since, the enactment of the RTE Act, there has been a significant enhancement in rates of enrolment all over the country. Thus, indicating that almost all children in the entitled age group are now registered in schools, thereby reducing the number children who are out of school.

(b) **Infrastructure Enhancement.** The RTE Act clearly states norms and standards for infrastructure in schools, to include classrooms adequacy, boys and girls having separate toilets, safe drinking water, and grounds to play.

(c) **Availability and Quality of Teachers.** It lays down the minimum qualification for teaching staff and stresses upon qualified teachers importance.

(d) **Education Inclusivity.** The most important achievement of the RTE Act is its emphasis on inclusive education. It has reserved 25% for children from Economically Weaker Sections (EWS) and Disadvantaged Groups (DG) in private schools.

(e) **Dropout Rate Reduction.** Due to inclusion of midday meal schemes and some other incentives, and provision of free education has significantly reduced the dropout rates.

(f) **Policy Framework and Implementation.** To achieve comprehensive elementary education the Act has clearly laid down strong policy framework. Due to the RTE Act, education is viewed as a right, not a privilege having legal support.

(g) **Participation of Community.** Creation of School Management Committees (SMCs), involving teachers, parents, and local authorities stimulates community participation.

(h) **Gender Equality Promotion.** Due to promotion of gender equality in education by the RTE Act, enrolment strength of girls in schools has enhanced.

(j) **Assistance for Children with Disabilities.** The necessary support and accommodations has been ensured for children with disabilities due to inclusive mandate of the Act.

(k) **Influence on Rural and Tribal Areas.** The RTE Act has had a significantly impacted rural and tribal areas with creation of new schools, combined with mobile and substitute schooling choice, thereby bringing education within reach for children in remote areas.

HIGHER ORDER THINKING SKILLS (HOTS)

- **Discuss the significance of inclusive education under the RTE Act. How does the Act address the needs of differently-abled children?**
- **As Policy Innovators, design a digital tool or campaign that helps ordinary people use RTI to protect children's right to education.**

CONCLUSION

18. Gender sensitivity is critical for fabricating an all-encompassing and even-handed society. Acknowledging and showing consideration for gender differences helps in encouraging mutual respect and compassion. It encourages awareness about gender biases and confronts the typecasts, leading to a more knowledgeable and compassionate community.

19. The POCSO Act of 2012 was a landmark legislation which spelt out the punishments for transgression against children and laid out the process for support of victims and better methods for catching offenders. While the Act is very effective in itself, due sensitivity and ensuring enabling conditions for victims will help meeting its intent in full measure.

20. The RTE Act has played a crucial role in universal education in India. Its enactment has ensured that every child has access to standard quality education.

SUMMARY

- The process of teaching of gender sensitivity and encouragement of behavior through raising awareness of gender equality concerns is known as gender sensitivity.
- Gender stereotypes are basically ideas as to how certain gender people should behave or should be. They reflect ingrained biases based on the social norms of that society.
- Personality traits, domestic behaviours, occupations and physical appearance are certain basic types of gender stereotypes.
- All types of physical/emotional ill-treatment, sexual abuse, neglect/negligent treatment or other exploitation, resulting in real or possible harm to the child's health, survival, development or dignity constitutes child abuse.
- The POCSO (Protection of Children from Sexual Offences) Act came into effect on 19 June 2012. The Act refers to twelve main principles which are to be followed by the authorities such as state governments, child welfare committees, police, Special Courts, NGOs or any other professional in attendance during the trial and helping the child during the trial.
- The Act includes child friendly procedures for reporting, recording of evidence, investigation and trial of offences.
- The Right to Education (RTE) Act, make sure free and compulsory education for children aged 6 to 14 years. The Act has laid down that private school reserve 25% seats for economically weaker section's children.
- The Act is working towards overcoming educational inequalities, enhancing school infrastructure, and ensuring qualified teachers.

ASSESSMENT EXERCISE

Multiple Choice Questions

Q1. Gender sensitivity helps to:-

(a) Promote gender stereotypes

(b) Foster an inclusive and equal environment

(c) Ignore gender differences

(d) Segregate by gender

Q2. In a gender-sensitive classroom, teachers:-

(a) Assign tasks based on traditional gender roles

(b) Encourage participation from all genders equally

(c) Focus only on male students

(d) Neglect gender discussions

Q3. Gender-sensitive language in communication means:-

(a) Using gender-neutral terms

(b) Using male-centric language

(c) Ignoring gender identity

(d) Promoting gender-specific words

Q4. Implementing gender sensitivity in the workplace requires:-

(a) Establishing clear policies for equality

(b) Maintaining traditional gender roles

(c) Segregating tasks by gender

(d) Prioritizing one gender over another

Q5. A gender-sensitive approach to healthcare involves:-

(a) Providing care based on stereotypes

(b) Addressing the specific health needs of all genders

(c) Focusing only on male health issues

(d) Ignoring gender differences in health

Q6. The POCSO Act stands for:-

(a) Protection of Children from Sexual Offences Act

(b) Prevention of Child Sexual Offences Act

(c) Protection and Care of Sexual Offences Act

(d) Prevention of Child Safety Ordinance Act

Q7. Which is not a key feature of the POCSO Act?

(a) Child-friendly procedures

(b) Mandatory reporting of sexual offences

(c) Allowing for the use of child testimonies as evidence

(d) Lenient punishment for offenders

Q8. Who is mandated to report child sexual abuse under POCSO Act?

(a) Only parents

(b) Any person who has knowledge of the abuse

(c) Only teachers

(d) Only healthcare professionals

Q9. Punishment for penetrative sexual assault is dealt by which section of POCSO Act?

(a) Section 4 (b) Section 6

(c) Section 10 (d) Section 12

Q10. The POCSO Act was enacted in:-

(a) 2010 (b) 2012

(c) 2014 (d) 2016

Q11. How do the RTE Acts collectively empower citizens?

(a) By promoting trade and commerce

(b) By increasing government control

(c) By ensuring access to education

(d) By regulating media and entertainment

Q12. Which of the following challenges is commonly faced in the implementation of both RTE Acts?

(a) High cost of implementation

(b) Lack of public awareness and bureaucratic resistance

(c) Limited applicability to rural areas

(d) Over-reliance on technology

Q13. What common goal do the RTE Acts share in fostering a democratic society?

(a) Encouraging censorship

(b) Promoting civic engagement and accountability

(c) Reducing the literacy rate

(d) Increasing economic disparity

Q14. What impact have the RTE Acts had on marginalized communities in India?

(a) Limited access to resources

(b) Increased exclusion from educational opportunities

(c) Enhanced empowerment and inclusion

(d) Decreased participation in democratic processes

Q15. Primary focus of both RTE Acts is best described by?

(a) Economic development

(b) National security

(c) Citizen empowerment through information and education

(d) Technological advancement

Short Answer Questions

Q1. The main goal of gender sensitivity training?

Q2. How does promoting gender sensitivity contribute to equality in society?

Q3. How does the POCSO Act ensure child-friendly procedures during the trial?

Q5. Describe School Management Committees (SMCs), and its role under the RTE Act?

Long Answer Questions

Q1 Analyze the challenges and barriers to achieving gender sensitivity in educational institutions?

Q2. Discuss the context and need for the implementation of POCSO Act.

Q3. Examine the role of education and awareness in the effective implementation of the POCSO Act?

Q5. Examine the key provisions of the Right to Education (RTE) Act, 2009. How do these provisions aim to ensure equitable access to quality education for all children in India?

SOCIAL SERVICE AND COMMUNITY DEVELOPMENT (SD/SW)

CHAPTER SSCD IV : SOCIAL EVILS AND DRUG ABUSE

"The world will not be destroyed by those who do evil, but by those who watch them without doing anything."

TEACHING INSTRUCTIONS

Period : **Two (02)**

Type : **Lecture**

Year : **2nd Year & 3rd Year SD/SW**

Conducting Officer : **Associate NCC Officer**

Training Aids : **Script or Lesson Plan; Social Evils and Drug Abuse, Videos and Pamphlets**

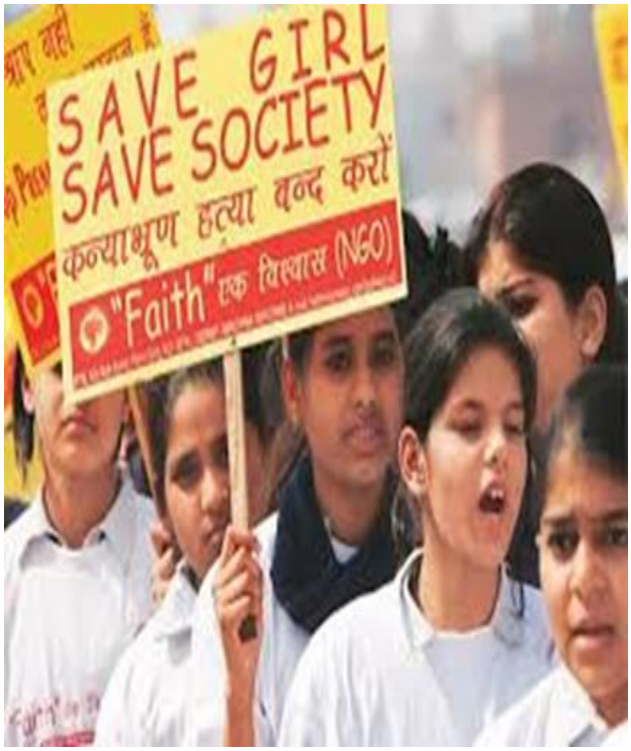
Time Plan

- Introduction : 05 Min (2nd Year)
- Part I : 35 Min
- Part II : 35 Min (3rd Year)
- Conclusion : 05 Min

INTRODUCTION

1. **Social evils** are deeply ingrained issues that negatively impact society, often perpetuating injustice and inequality. These issues frequently stem from societal injustice, cultural norms, and social practices that lead to exploitation and suffering, such as economic exploitation, discrimination, dowry, female foeticide, and corruption. Seriously, they resonate in individual lives and societal structures.

2. Drug abuse and drug trafficking are critical global issues with severe consequences for individuals and societies. **Drug abuse** involves the harmful and excessive use of substances, leading to addiction, physical and mental health problems, and social and economic difficulties. **Drug trafficking**, on the other hand, is the illegal production, distribution, and sale of drugs.



LEARNING OBJECTIVES

- Basic understanding of social evils, their causes, and means to overcome.
- Understanding drug abuse, its effects, and the laws against it.
- Drug trafficking and ways to curb it.

PREVIEW

The lecture will be conducted in the following parts:

(a) Part I : Social Evils

(b) Part II: Drug Abuse

PART I : SOCIAL EVILS

3. **Social Evils.** Social evils involve complex issues and are pervasive wrongdoings and harmful practices that negatively impact society. Addressing these social evils requires concerted efforts from the government, civil society, and communities to promote equality, justice, and social awareness. India grapples with several significant social evils that affect its society and development:-

(a) **Caste Discrimination**. The caste system leads to discrimination, social exclusion, and violence against marginalised communities, particularly Dalits and Adivasis.

(b) **Gender Inequality**. Persistent issues such as dowry, female foeticide/infanticide, and gender-based violence hinder women's rights and empowerment.

(c) **Child Labor**. Many children are forced into labour, depriving them of education and exposing them to exploitation and abuse.

(d) **Untouchability**. Despite being illegal, practices related to untouchability continue, affecting the dignity and rights of certain communities.

(e) **Corruption**. Widespread corruption undermines governance and public trust, affecting economic development and social justice.

(f) **Poverty**. High levels of poverty contribute to various social problems, including lack of access to education, healthcare, and basic necessities.

(g) **Substance Abuse**. Alcoholism and drug addiction are prevalent, leading to health issues, family breakdowns, and increased crime rates.

(h) **Superstitions and Blind Beliefs**. These can lead to harmful practices, such as witch hunts, and a reluctance to seek medical treatment.

(j) **Religious Intolerance**. Communal tensions and violence between different religious groups affect social harmony and peace.

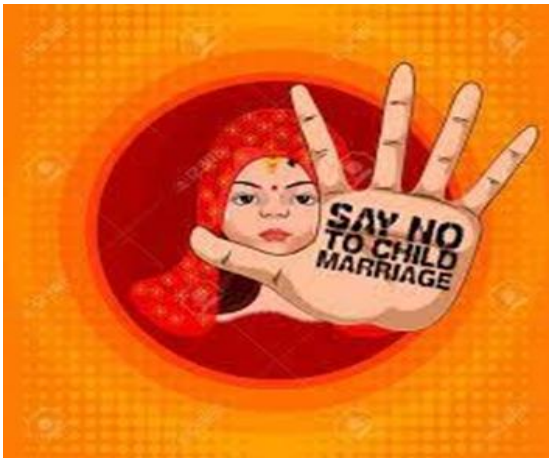
(k) **Environmental Degradation**. Poor environmental practices lead to health problems and threaten the livelihoods of vulnerable populations.

(l) **Female Foeticide**. Sex-selective abortion due to preference for male child, even before they are born, due to desire for a boy child, as sons are seen as the main source of income and help at old age.

(m) **Dowry**. In India, Dowry has led to significant social issues and controversies, including domestic violence against women.

4. **Causes of Social Evils**. The social evils faced by society in India stem from a complex interplay of historical, cultural, economic, and political factors. Addressing these root causes requires multifaceted approaches, including education, policy reforms, and community engagement to foster a more equitable and just society. Here are some of the primary causes:-

(a) **Historical Legacy**. The caste system has deep historical roots, contributing to entrenched discrimination and presumed social hierarchies that persist today.



(b) **Economic Disparities**. Widespread poverty and unequal access to resources lead to exploitation and perpetuate cycles of disadvantage, such as child labour.

(c) **Lack of Education**. Low literacy rates and inadequate education systems contribute to ignorance about rights, health, and social issues, making communities more vulnerable to exploitation.

(d) **Cultural Norms**. Traditional beliefs and practices, such as dowry and gender roles, reinforce gender inequality and can perpetuate harmful customs.

(e) **Corruption**. Corruption at various levels of government and society undermines law enforcement and social justice, allowing social evils to persist without accountability.

(f) **Patriarchal Structures**. Societal norms that prioritise male dominance contribute to gender discrimination and violence against women, limiting their opportunities and freedoms.

(g) **Religious Intolerance**. Historical divisions contribute to occasional communal tensions and a lack of social cohesion.

(h) **Superstitions**. Deep-seated superstitions and blind beliefs can lead to harmful practices and discourage rational thinking or medical intervention.

(j) **Urbanisation**. Rapid urbanisation without adequate infrastructure can lead to increased crime, substance abuse, and exploitation in densely populated areas.

(k) **Media Influence**. Sometimes, sensationalised media portrayals of issues can perpetuate stereotypes and social evils, rather than promoting awareness and education.

5. **Means to Overcome Social Evils**. Overcoming social evils in India requires a multi-pronged approach involving government, civil society, and community efforts. By combining

education, legal reforms, community involvement, and economic empowerment, India can make significant strides towards overcoming social evils and fostering a more equitable society. Here are some effective means to address these issues:-

(a) **Education and Awareness**.

- Promote education at all levels to raise awareness about rights, health, and social issues through schemes such as *Beti Bachao Beti Padhao* etc.
- Implement programs to educate communities about gender equality, child rights, and the dangers of superstitions.

(b) **Legal Reforms**.

- Strengthen and enforce laws against discrimination, domestic violence, child labour, and other social evils.
- Establish special courts for faster justice in cases related to social evils.

(c) **Community Engagement**.

- Involve local communities in awareness campaigns and decision-making processes to address specific social issues.
- Foster community-led initiatives that promote social justice and equality.

(d) **Economic Empowerment**.

- Create job opportunities and skill development programs, especially for marginalised groups and women.
- Provide financial support and microfinance options to uplift economically disadvantaged families. Stand-Up India Scheme is one such government initiative.

(e) **Promote Gender Equality**.

- Implement programs that empower women, including education, healthcare access, and legal support.
- Challenge patriarchal norms through awareness campaigns and community dialogues.

(f) **Strengthen Support Systems**.

- Establish support networks for victims of violence, discrimination, and abuse, including counselling and rehabilitation services.
- Promote helplines and resources for reporting and addressing social evils.

(g) **Media and Communication**.

- Use media campaigns to raise awareness about social evils and promote positive narratives.

- Encourage responsible media coverage that avoids sensationalism and stereotypes.

(h) **Religious and Cultural Dialogue**.

- Foster interfaith dialogue to promote tolerance and understanding among different religious communities.
- Challenge harmful cultural practices through community engagement and education.

(j) **Health Initiatives**.

- Implement health programs that address issues like substance abuse and mental health.
- Provide access to healthcare and support services for vulnerable populations.

(k) **Policy Implementation and Monitoring**.

- Ensure that existing policies and programs aimed at combating social evils are effectively implemented and monitored.
- Encourage civil society organisations to play a role in holding authorities accountable.

COMMON SOCIAL EVILS

- **Dowry System**. The practice of demanding or giving dowry during marriage.
- **Child Labour**. The practice of employing children in hazardous or exploitative work.
- **Domestic Violence**. Physical, emotional, or sexual abuse of a family member or partner.
- **Racism and Casteism**. Discrimination based on race, caste, or ethnicity.
- **Corruption**. Abuse of power or position for personal gain.
- **Drug Abuse**. The misuse of drugs or substances that can harm individuals and society.
- **Commercial sexual exploitation and Human Trafficking**. The exploitation of individuals for sex or labour.

SOCIAL EVILS & MEANS TO ADDRESS

PREVENTION STRATEGIES

- **Education and Awareness**. Educating people about the negative consequences of social evils and promoting awareness about their prevention.
- **Legislation and Policy**. Implementing and enforcing laws and policies that prohibit social evils and protect victims.
- **Community Engagement**. Encouraging community participation and involvement in preventing social evils.
- **Counselling and Support**. Providing counselling and support services to victims of social evils.
- **Economic Empowerment**. Empowering individuals and communities economically to reduce their vulnerability to social evils.
- **Media and Advocacy**. Using media and advocacy to raise awareness and promote prevention of social evils.
- **Collaboration and Partnerships**. Collaborating with government agencies, NGOs, and community organisations to prevent social evils.

6. **Strong Value System for Responsible Citizens.** A strong value system and responsible citizenship are fundamental in addressing social evils. Here is how they contribute towards eradicating/fighting social evils:-

(a) **Ethical Principles**. Upholding values like honesty, integrity, and fairness helps combat corruption and exploitation.

(b) **Empathy and Compassion**. Understanding and caring for others' well-being can reduce discrimination and social exclusion.

(c) **Respect for Diversity**. Valuing different cultures, beliefs, and backgrounds fosters inclusivity and reduces prejudices.

(d) **Commitment to Justice**. A strong sense of justice drives individuals to fight against injustices and support equitable policies.

(e) **Participation.** Engaging in community activities and civic duties, such as voting and volunteering, strengthens democratic processes and community resilience.

(f) **Advocacy and Activism**. Speaking out against social evils and supporting movements that aim to address them lead to significant societal changes.

(g) **Environment Stewardship**. Taking responsibility for one's environmental impact helps combat environmental degradation.

(h) **Support for Victims**. Offering support to those affected by social evils, whether through direct assistance or advocacy, helps in their recovery and empowerment.

HIGHER ORDER THINKING SKILLS (HOTS)

- **You have gone to visit your Dada-Dadi in a rural area. You come across a 12-year-old girl named Rani, who works in a nearby factory for 10 hours a day. Rani tells you that she works to support her family, as her parents are unable to find employment. What would you do?**

PART II : DRUG ABUSE

7. **"Drug abuse"** refers to the harmful or hazardous use of substances, including alcohol and illicit drugs. It causes addiction, health issues, and social problems, affecting individuals and communities. It has immense implications for the economy, burdening it with additional health care requirements, a decline in productivity, and the implementation of rules and regulations. "**Drug trafficking"** entails the illegal production, distribution, and sale of drugs. It is a major criminal activity that fuels violence, corruption, and instability in

many regions. Traffickers often exploit vulnerable populations, using coercion and violence to maintain control.

8. **Salient Features of Drug Abuse.** Various salient aspects are:-

(a) **Health Impact**. Drug abuse can lead to severe physical and mental health issues, including addiction, overdose, and long-term health problems such as liver damage, heart disease, and mental disorders.

(b) **Social Consequences**. It often results in strained relationships, social isolation, and difficulties in maintaining employment or education.

(c) **Economic Burden**. The cost of healthcare, lost productivity, and law enforcement related to drug abuse is substantial.

(d) **Criminal Activity**. Drug abuse is frequently linked to criminal behaviour, both as a cause and a consequence, including theft, violence, and other illegal activities that support the addiction.

9. **Raising Awareness.** Raising awareness about drug abuse is crucial for combating drug abuse and supporting those affected. Awareness campaigns and community programs play a vital role in educating people about the dangers of drug abuse and trafficking and help reduce stigma. These programs include:-

(a) **Events**. Organising events such as National Drug and Alcohol Facts Week (NDAFW) can help spread awareness. These events can include workshops, seminars, and interactive activities to engage the community.

(b) **Support and Recovery**. Highlighting the importance of support systems and recovery options is vital. Celebrating National Recovery Month in September can help increase understanding and support for those in recovery.

(c) **Local Initiatives**. Communities can host rallies, walks, and sports competitions to raise awareness and funds for addiction treatment programs.

(d) **Partnerships**. Collaborating with local schools, businesses, and organizations can strengthen efforts to educate and support the community.

(e) **Education**. Informing the public about the dangers and consequences of drug use is essential. This can be done through community outreach programs, school-based education, and public service announcements.

HIGHER ORDER THINKING SKILLS (HOTS)

- **How do historical and cultural factors contribute to the persistence of social evils such as caste discrimination and gender inequality in India?**
- **Evaluate the impact of drug abuse on the physical, mental, and social well-being of adolescents. Discuss the role of family, peers, and community in both contributing to and preventing drug abuse.**
- **Discuss the relationship between social evils such as poverty and unemployment.**
- **Assess the effectiveness of policies and programs aimed at combating drug abuse among teenagers. What improvements would you suggest to make these initiatives more effective?**

CONCLUSION

10. Social evils undermine the foundation of societies, hindering progress and perpetuating injustice. Eradicating these deeply rooted issues demands a united front, with government, communities, and individuals working collaboratively. Initiatives addressing poverty, inequality, corruption, discrimination, and crime, etc., must be implemented holistically, fostering inclusive and social justice. By dismantling the structural barriers that sustain these evils, societies can pave the way for a brighter future.

11. Drug abuse causes addiction, health problems, and social issues, while drug trafficking increases crime and violence. Solving these problems needs a well-rounded approach, including education, prevention, treatment, and strict law enforcement. Cadets need to understand that drug abuse and drug trafficking are major global issues with serious impacts on individuals and society.

SUMMARY

- Social evils are pervasive injustices and harmful practices that undermine societal well-being.
- Key issues include poverty, dowry, inequality, and family breakdown, which contribute to crime, violence, and substance abuse.
- The decline of community values, increased individualism, and consumerism exacerbate these problems.
- Additionally, issues like child exploitation, and lack of shared values such as tolerance and compassion further fragment society.
- Addressing these evils requires collective effort and a focus on both structural and behavioural solutions to foster a more inclusive and equitable society.
- Drug abuse and drug trafficking are significant global issues.
- Drug abuse involves the misuse of substances like opioids, methamphetamine, and cocaine, leading to severe health and social problems.
- Drug trafficking is the illegal trade of these substances, often controlled by organised crime networks. This illicit trade fuels violence, corruption, and addiction, impacting communities worldwide.
- Efforts to combat these issues include law enforcement actions, international cooperation, and public health initiatives aimed at prevention, treatment, and rehabilitation.

ASSESSMENT EXERCISE

Multiple Choice Questions

Q1. Which practice, considered a social evil, involves the demand for property or valuable security from the bride's family?

(a) Dowry System (b) Child Marriage

(c) Gender Discrimination (d) Domestic Violence

Q2. Which social evil is associated with the subjugation and exploitation of women?

(a) Gender Inequality (b) Alcoholism

(c) Cybercrime (d) Pollution

Q3. Which is not considered a social evil?

(a) Human Trafficking

(b) Child Labour

(c) Environmental Conservation

(d) Female Foeticide

Q4. The Prohibition of Child Marriage Act, 2006, deals with:-

(a) Child Labour (b) Child Marriage

(c) Domestic Violence (d) Human Trafficking

Q5. What is the primary effect of drug abuse on the body?

(a) Improved Concentration

(b) Addiction and Health Degradation

(c) Increased Physical Strength

(d) Enhanced Creativity

Q6. Which of the following substances is commonly abused for its euphoric effects?

(a) Caffeine (b) Aspirin

(d) Alcohol (c) Paracetamol

Q7. What is the role of rehabilitation centres in combating drug abuse?

(a) Providing Legal Assistance

(b) Offering Medical and Psychological Support

(c) Promoting Entertainment Activities

(d) Conducting a Political Campaign

Q8. Which law in our country deals with drug abuse and its control?

(a) The Prohibition of Child Marriage Act

(b) The Narcotic Drugs and Psychotropic Substances Act

(c) The Dowry Prohibition Act

(d) The Protection of Women from Domestic Violence Act

Q9. Which of the following is a major reason for drug abuse among teenagers?

(a) Academic Success (b) Peer Pressure

(c) Financial Stability (d) Physical Health

Q10. What is a common consequence of long-term drug abuse?

(a) Improved Social Relationships

(b) Stable Employment

(c) Chronic Health Issues

(d) Better Mental Health

Q11. Which of the following is a synthetic drug often abused for its hallucinogenic effects?

(a) LSD (b) Penicillin

(c) Ibuprofen (d) Insulin

Q12. What is the primary goal of anti-drug campaigns?

(a) Increasing Drug Availability

(b) Encouraging Drug Use

(c) Preventing Drug Abuse and Educating the Public

(d) Promoting Drug-Related Business

Q13. Which Indian organisation is responsible for drug control and enforcement?

(a) Central Bureau of Investigation (CBI)

(b) Narcotics Control Bureau (NCB)

(c) Reserve Bank of India (RBI)

(d) Indian Space Research Organisation (ISRO)

Q14. Which of the following measures can help prevent drug abuse?

(a) Increased Availability of Drugs

(b) Strengthening Family Supposrt Systems

(c) Reducing Education Programs

(d) Legalising All Drugs

Q15. Which of the following measures can help prevent drug abuse?

(a) Increased Availability of Drugs

(b) Strengthening Family Support Systems

(c) Reducing Education Programs

(d) Legalising All Drugs

Short Answer Questions

Q1. List out major health impacts of drug abuse to individuals.

Q2. What is the effect of drug trafficking on local communities and economies?

Q3. Describe the role of international organisations in combating drug trafficking.

Q4. What measures can be taken to combat human trafficking and in support of its victims?

Q5. How does child labour impact children's development and future opportunities?

Long Answer Questions

Q1. What are the root causes of child labour, and what measures are in place to eradicate it?

Q2. Analyse the impacts of human trafficking on individuals and society.

Q3. Examine the role of education and community programs in preventing drug abuse.

Q4. Evaluate the impact of drug abuse on youth and adolescents.

Q5. Explore the relationship between drug trafficking and organised crime.

SOCIAL SERVICE AND COMMUNITY DEVELOPMENT (SD/SW)

CHAPTER SSCD V : FUNDAMENTAL RIGHTS AND DUTIES OF GOOD CITIZENS

"The test of good citizenship is loyalty to country."

TEACHING INSTRUCTIONS

Period : **One (01)**
Type : **Lecture**
Year : **1st Year SD/ SW**
Conducting Officer : **Associate NCC Officer**
Training Aids : **Script or Lesson Plan; OHP, Screen, Pointer Staff, Presentation, Board and Markers, Posters on Fundamental Rights and Duties**

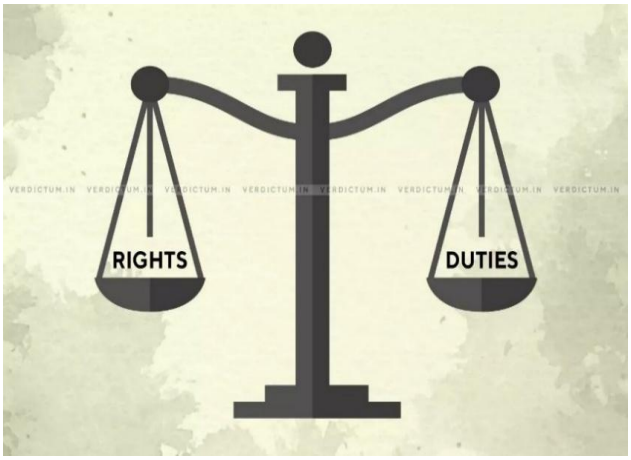
Time Plan

- Introduction : 05 Mins
- Part I : 10 Mins
- Part II : 05 Mins
- Part III : 15 Mins
- Conclusion : 05 Mins

INTRODUCTION

1. The Constitution of India establishes a single citizenship for the entire country. Any individual who, at the commencement of the Constitution on January 26, 1950, was domiciled within India and either born in India, had at least one parent born in India, or had resided in the country for a minimum of five years, was recognised as an Indian citizen. In a democratic nation, the responsibilities of a good citizen are diverse, encompassing both the exercise of fundamental rights and the conscientious fulfilment of essential duties.

2. A responsible citizen adheres to the laws of the nation and upholds its values. They exercise their fundamental rights and fulfil their duties, such as voting, paying taxes, and contributing to the fight against corruption. To be a good and responsible citizen, one should actively participate in addressing societal challenges, such as maintaining environmental cleanliness, supporting charitable causes, conserving electricity, water, and natural resources, and safeguarding public property.



LEARNING OBJECTIVES

- Basic understanding of fundamental rights, fundamental duties, and directive principles of the state
- Knowing our national symbols
- Understanding the need to become a good citizen

PREVIEW

The lecture will be conducted in the following parts:

(a) Part I : Knowing Our Fundamental Rights, Duties and Directive Principles

(b) Part II : Our National Symbols

(c) Part III : What Makes a Good Citizen

INTERESTING FACTS

- Any changes to fundamental rights require a constitutional amendment that should be passed by both the Houses of Parliament with special majority.
- Fundamental rights are enforceable through the courts of law. However, fundamental duties are not legally enforceable but serve as moral obligations.

PART I : KNOWING OUR FUNDAMENTAL RIGHTS, DUTIES AND DIRECTIVE PRINCIPLES

Fundamental Rights

3. The **Fundamental Rights in India**, outlined in Part III (Articles 12-35) of the Constitution, ensure civil liberties that allow all citizens to live in peace and harmony. These rights are called "fundamental" because they are crucial for the overall development—material, intellectual, moral, and spiritual—and are safeguarded by the Constitution, the supreme law of the land. Articles 32 and 226 give the Supreme Court and High Courts the power to issue writs to force the state to protect these rights if they are violated. This is especially true for the Fundamental Rights. These rights provide a legal framework for personal freedom and equality and are essential to the functioning of a democracy, enabling citizens to live with dignity and liberty. These include:-

(a) **Right to Equality (Articles 14-18)**. The Right to Equality, enshrined in Articles 14-18 of the Indian Constitution, is a fundamental right that guarantees equal treatment before the law to all citizens. This right ensures that every individual is treated with dignity and respect, regardless of their background, social status, or circumstances.

(b) **Right to Freedom (Articles 19-22)**. The Right to Freedom, enshrined in Articles 19-22 of the Indian Constitution, is a fundamental right that guarantees individual liberty and freedom. This right ensures that citizens have the freedom to express their thoughts, beliefs, and opinions without fear of persecution or retribution. Additionally it includes freedom of speech & expression, assembly, association, movement, residence, and profession.

(c) **Right against Exploitation (Articles 23-24)**. The Right against Exploitation, enshrined in Articles 23-24 of the Indian Constitution, is a fundamental right that protects citizens from exploitation and abuse. This right ensures that no person can be forced into labour or exploited for personal gain. It prohibits begging, bonded labour, and human trafficking.

(d) **Right to Freedom of Religion (Articles 25-28)**. The Right to Freedom of Religion, enshrined in Articles 25-28 of the Indian Constitution, is a fundamental right that guarantees citizens the freedom to practice, profess, and propagate their faith.

(e) **Cultural and Educational Rights (Articles 29-30)**. The Indian Constitution guarantees protection of minorities' right to conserve culture & establish educational Institutions.

(f) **Right to Constitutional Remedies (Article 32)**. This allows citizens to approach the judiciary to enforce their fundamental rights.

Fundamental Duties

4. While citizens enjoy various rights, they are also entrusted with fundamental duties. These duties remind citizens of their responsibilities towards the nation, society, and fellow citizens. The fundamental duties outlined in Article 51A of the Indian Constitution include:-

(a) Respect the Constitution, national flag, and anthem.

(b) Cherish the heritage of the country and preserve its composite culture.

(c) Uphold and protect the sovereignty, unity, and integrity of India.

(d) Defend the nation and render service when required.

(e) Promote harmony and the spirit of common brotherhood.

(f) Protect the environment, including forests, lakes, rivers, and wildlife.

(g) Develop scientific temper and a sense of inquiry.

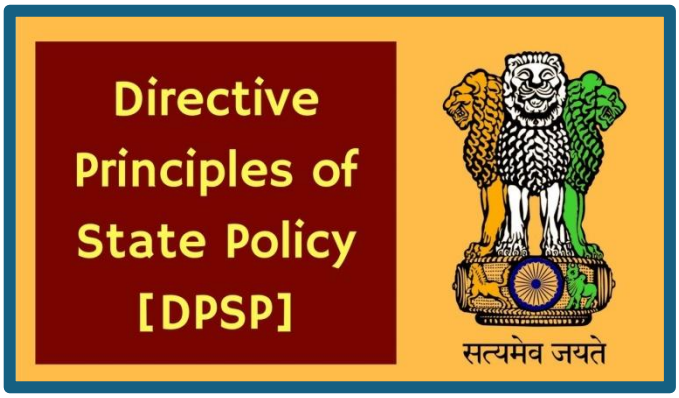
(h) Strive for excellence in all spheres of individual and collective activity.

(j) Safeguard public property and Abjure violence

(k) Value and preserve the rich heritage of India's composite culture.

(l) Provide education to children between 6 and 14 years of age.

Directive Principles of State Policy



5. The Directive Principles of State Policy (DPSP), enshrined in Part IV of the Indian Constitution, guide the government in making policies that aim for the welfare of the people. Although not legally enforceable, they reflect the ideals of social and economic democracy. Some important principles include:-

(a) Promoting the welfare of the people by securing a social order based on justice.

(b) Ensuring equal opportunities for all citizens to lead a healthy and dignified life.

(c) Providing free and compulsory education for children up to the age of 14. 86th constitutional Amendment (2002) made education a fundamental right (Art 21A)

(d) Promoting international peace and fostering friendly relations with other countries

(e) Encouraging participation in governance at the grassroots level through Panchayati Raj institutions.

(f) These principles, together with the fundamental duties, create a balance between the rights of citizens and their obligations to society, reinforcing the foundation of a democratic nation.

HIGHER ORDER THINKING SKILLS (HOTS)

- **Imagine if the Right to Equality did not exist in India. How would it impact different sections of society?**

PART II : OUR NATIONAL SYMBOLS

6. **National Symbols and Their Significance**. National symbols are a source of pride and unity, representing the identity and sovereignty of the nation. Respect for these symbols is a duty for every citizen, especially those in uniform, who serve as role models. They have been explained hereunder:-

(a) **National Flag (Tiranga)**. The tricolour, with saffron at the top, white in the middle and green at the bottom, symbolises courage, peace and growth, respectively. The Ashoka Chakra in the centre represents justice and righteousness. Citizens are expected to honour the flag by hoisting it properly, not letting it touch the ground, and following the Flag Code of India.

(b) **National Anthem (Jana Gana Mana)**. The anthem, penned by Shri Rabindranath Tagore, reflects India's unity in diversity. The playing time of the full version of the National Anthem is 52 seconds. Every citizen is expected to stand in respect when the anthem is played, symbolising allegiance to the nation. Bharat Sarkar has issued orders related to the National Anthem as mentioned within the photograph, which is an important read to understand all the rulings that need to be followed in letter and spirit, including the correct pronunciation of the words' Punjab-**Sindhu**-Gujarat-Maratha'.

https://www.mha.gov.in/sites/default/files/AnthemEnglish_140316.pdf **(Authority for Reference only, not to be asked in exams)**

(c) **National Song (Vande Mataram)**. Written by Shri Bankim Chandra Chatterjee, it evokes the spirit of patriotism and love for the motherland. Though not obligatory, citizens are encouraged to sing it with pride. National symbols represent the collective identity of India and respecting them is an expression of one's loyalty to the nation.

INTERESTING FACTS

- National Fruit – Mughal emperor Akbar planted 100,000 mango trees in Darbhanga, Bihar, at a place now known as Lakhi Bagh.
- National River – Ganga is the longest river in India, flowing over 2,510 km of mountains, valleys, and plains.

(d) **National Emblem.** The state emblem of Lion Capital of Emperor Ashoka at Sarnath, preserved in the Sarnath museum near Varanasi, was adopted in December 1947 as the National Emblem of India.

Some Other National Symbols of India

PART III : WHAT MAKES A GOOD CITIZEN

7. A good and law-abiding citizen is someone who actively contributes to the betterment of their country and adheres to the laws and regulations of their society. Good citizens respect legal rules, fulfil their civic duties, and typically engage positively within the community. It must be an endeavour of an NCC cadet that they should contribute to being a good Indian citizen and help others to follow them as a role model.

8. **Nation First & Loyalty to the Nation**. For a citizen, especially a cadet or military personnel, nation first is not just a motto but a way of life. Loyalty to the nation involves:-

(a) Defending the country's

sovereignty at all times, even in the face of personal sacrifice.

(b) Upholding the law and order and ensuring the security of the state.

(c) Protecting national interests in all spheres, whether economic, cultural, or social. As representatives of national pride, cadets in uniform are expected to lead by example, displaying the highest standards of discipline and patriotism in their daily lives.

9. **Saying No to Corruption**. Corruption undermines democracy and weakens national integrity. A good citizen must:-

(a) Refrain from giving or accepting bribes.

(b) Report corruption and unethical practices when encountered.

(c) Promote transparency and accountability, especially in public offices and governance.

(d) By refusing to engage in corrupt practices, citizens contribute to a cleaner and more efficient system of governance. For cadets and military personnel, standing against corruption is particularly important, as their conduct must be exemplary.

10. **Earning by Fair Means**. Earning by fair means involves acquiring wealth and resources through honest, ethical, and legal ways. This principle encompasses:-

(a) **Hard work and Dedication**. Achieving success through effort and perseverance.

(b) **Transparency and Accountability**. Clearly disclosing sources of income and being answerable for actions.

(c) **Fair Business Practices**. Engaging in legitimate trade, avoiding exploitation, and fraud.

(d) **Respect for Laws and Regulations**. Complying with tax laws, labour laws, and environmental regulations.

(e) **Ethical Decision-Making**. Prioritising integrity over personal gain.

11. **Giving Back to Society.** It involves contributing to the well-being of communities, promoting social welfare, and preserving the environment. It involves philanthropy, volunteerism, Corporate Social Responsibility, mentorship, and environmental sustainability. These efforts promote community well-being, social welfare, and conservation. By embracing these principles, individuals and organisations foster social responsibility, driving positive change and sustainable development for future generations.

12. **Paying Taxes**. Paying taxes is not just a legal obligation but a civic duty. Taxes are essential for:-

(a) Funding national development projects, including infrastructure, education, healthcare, and defence.

(b) Supporting social welfare programs that benefit the less privileged sections of society.

(c) Ensuring the smooth functioning of public services, including law enforcement and disaster management. Good citizens understand the importance of contributing their fair share to the nation's treasury. By paying taxes honestly and on time, they help build a stronger, more prosperous country.

13. **Promote Harmony and Spirit of Common Brotherhood**. India is a country of diverse cultures, languages, and religions. Tolerance and living in harmony with others are essential for maintaining the nation's unity. A good citizen must:-

(a) Respect the beliefs and practices of others while upholding their own values.

(b) Promote interfaith dialogue and understanding to reduce communal tensions.

(c) Support initiatives that encourage inclusivity, especially in areas prone to social conflicts. Tolerance is the cornerstone of a peaceful society, and cadets, who come from various backgrounds, are in an ideal position to demonstrate unity and mutual respect.

14. Tolerance and living in harmony are vital for India's progress. By embracing diversity and promoting understanding, citizens ensure national unity and social cohesion. NCC cadets, as ambassadors of unity, play a pivotal role in sustaining India's rich cultural tapestry.

15. **Law-Abiding Citizens.** Adhering to the rules and regulations established by lawmakers helps ensure safety, security, peace, and harmony within the community. A law-abiding citizen is a responsible individual who actively contributes to social progress and upholds fairness and peace in society. They respect legal authority, participate in civic duties, and contribute to the community in positive ways. Key traits of law-abiding citizens include:-

(a) **Compliance with Laws**. They adhere to local, state, and central laws, avoiding actions that would be considered criminal.

(b) **Civic Engagement**. They often participate in community activities, such as voting, attending town hall meetings, or volunteering.

(c) **Respect for Authority**. They generally respect law enforcement and judicial systems, believing in their roles to maintain order and justice.

(d) **Moral Responsibility**. Many feel a sense of moral duty to contribute to the well-being of their community and to uphold social norms.

(e) **Conflict Resolution**. They tend to resolve disputes through legal and peaceful means rather than resorting to violence or illegal actions.

16. **NCC Cadets as Role Models**. Cadets in uniform are expected to be the embodiment of discipline, courage, and patriotism. Their role extends beyond the military; they serve as role models for the broader citizenry. As the future leaders, they must:-

(a) Demonstrate respect for the law, national symbols, and democratic values.

(b) Inspire others to follow their example of integrity, loyalty, and public service.

(c) Engage in community service, promoting education, health, and environmental protection. Encourage fellow citizens to embrace their responsibilities and contribute to nation-building. By practicing these values, cadets can inspire the younger generation to be active, responsible, and patriotic citizens.

17. **Guiding Principles for Cadets towards Nation Building** . NCC is an organisation that aims to instil value system in its cadets is as per the following guiding principles:-

(a) **Patriotic Commitment**. Encouraging cadets to contribute to the nation's development and well-being.

(b) **Respect for Diversity**. Fostering a sense of national unity and social cohesion by appreciating differences in religion, language, culture, and lifestyle.

(c) **Constitutional Values**. Developing a commitment to learn about and abide by the norms and values enshrined in the Indian Constitution.

(d) **Impartiality and Justice**. Understanding the importance of fair and unbiased decision-making.

(e) **Community Development**. Encouraging participation in community development and social programs.

(f) **Healthy Lifestyle**. Promoting a lifestyle free from substance abuse and unhealthy habits.

(g) **Social Responsibility**. Cultivating sensitivity towards the needs of disadvantaged fellow citizens.

(h) **Self-Awareness**. Inculcating habits of restraint and self-awareness.

(j) **Moral Values**. Instilling values like honesty, truthfulness, self-sacrifice, perseverance, and hard work.

(k) **Respect for Knowledge**. Fostering respect for knowledge, wisdom, and the power of ideas.

18. NCC cadets exemplify exceptional role models, embodying discipline, leadership, and community service. They demonstrate core values of discipline, integrity, leadership, patriotism, and social responsibility. Confident communication, teamwork, problem-solving, emotional intelligence, and physical fitness define their character. As role models, NCC cadets inspire younger generations, promote community engagement, and foster national unity.

19. Through community service, NCC cadets address pressing issues like education, health, and environmental sustainability. Their leadership skills and teamwork encourage

peers to participate in social initiatives. Cadets' dedication to national service and disaster relief efforts showcases their patriotism.

20. NCC cadets' positive influence extends beyond their communities. They promote cultural exchange, understanding, and harmony. Embodying NCC values, cadets set high standards, inspiring others to follow. Their exemplary conduct earns respect, fostering a culture of responsibility and civic engagement. By embracing these values, NCC cadets become catalysts for positive change, shaping a brighter future for themselves and society. Ultimately, NCC cadets emerge as responsible citizens, leaders, and change-makers, driving India's growth and development.

HIGHER ORDER THINKING SKILLS (HOTS)

- **If you see someone taking money that they shouldn't be taking, what would you do? How can corruption be set right?**
- **Your teacher has tasked you with writing an article in reference to rules to follow while playing the National Anthem. What important aspects should you cover?**

CONCLUSION

21. India's foundation is built on fundamental rights and duties, directive principles, and national symbols that promote unity and patriotism. National symbols like the National Flag, emblem, anthem, and song evoke feelings of national pride and devotion. The National Flag's tricolour represents India's cultural heritage and struggle for independence, while the Ashoka Emblem symbolises courage, strength, and wisdom.

22. To be a good citizen, one must demonstrate loyalty, adhere to the law, reject corruption, and contribute to society. Tolerance and harmony are essential qualities, emphasising social justice, equality, and individual dignity. By embracing these values, citizens build a just, equitable, and harmonious society. Cadets in Uniform serve as role models, demonstrating respect for the nation and inspiring others to adopt desired values.

SUMMARY

- A responsible citizen abides by all the laws and orders of the country. They are entitled to exercise all the fundamental rights and duties, such as casting a vote, paying government taxes, and protecting the country from corruption.
- The Fundamental Rights in India enshrined in part III (Articles 12–35) of the Constitution of India guarantee civil liberties such that all Indians can lead their lives in peace and harmony as citizens of India.
- While citizens enjoy various rights, they are also entrusted with Fundamental duties. These duties remind citizens of their responsibilities towards the nation, society, and fellow citizens.
- The Directive Principles of State Policy (DPSP), enshrined in Part IV of the Indian Constitution, guide the government in making policies that aim for the welfare of the people.
- National symbols are a source of pride and unity, representing the identity and sovereignty of the nation.
- A good citizen is an individual who actively contributes to the improvement of their country. It must be an endeavour of an NCC cadet that they should contribute to being a good Indian citizen and help others to follow them as a role model.
- In today's fast-paced world, where personal interests can overshadow the greater good, it is crucial to reaffirm the significance of responsible citizenship. By adopting values like loyalty, respect for the law, and social accountability, individuals can play a vital role in shaping a more just, equitable, and cohesive community.
- Cadets in uniform are expected to embody the values of discipline, integrity, and patriotism, serving as role models for citizens, particularly the younger generation. As representatives of NCC, they are entrusted with upholding the highest standards of behaviour, conduct, and community service.

ASSESSMENT EXERCISE

Multiple Choice Questions

Q1. The National Anthem was written by:-

(a) Bankim Chandra Chattopadhya

(b) Rabindra Nath Tagore

(c) Mahatma Gandhi

(d) Vinoba Bhave

Q2. In which year was the peacock recognised as the national bird of India?

(a) 1963 (b) 1947

(c) 1971 (d) None of the above

Q3. Defend the nation and render service when required is a:-

(a) Fundamental Right (b) Directive Principle

(c) Fundamental Duty (d) None of the above

Q4. Cadets in uniform are expected to be the embodiment of discipline, courage, and patriotism:-

(a) True (b) False

(c) Both (a) and (b) (d) None of the above

Q5. The _____, enshrined in Part IV of the Indian Constitution, guide the government in making policies that aim for the welfare of the people:-

(a) Fundamental Rights

(b) Fundamental Duties

(c) Directive Principles of State Policy

(d) None of the above

Q6. The symbol of the Indian Rupee was accepted by the Government of India on:-

(a) 15th July 1950 (b) 15th August 1947

(c) 26th January 2014 (d) 15th July 2010

Q7. The Directive Principles of State Policy (DPSP) states providing free and compulsory education for children up to the age of:-

(a) 18 years (b) 06 years

(c) 14 Years (d) None of the above

Q8. A good and law-abiding citizen always respects legal rules and fulfils their civic duties:-

(a) True (b) False

(c) May be True (d) None of the above

Q9. The tricolour has _____ colour on the top of the flag:-

(a) Saffron **(b) Green**

(c) White (d) Blue

Q10. _____ and living in _____ with others is essential for maintaining the nation's unity:-

(a) Truth, honesty (b) Harmony, peace

(c) Corruption, bribery (d) Tolerance, harmony

Q11. What is the significance of Fundamental Duties?

(a) They are enforceable by law

(b) They are moral obligations

(c) They promote national unity

(d) They protect citizens' rights

Q12. Who is responsible for implementing Directive Principles?

(a) Government

(b) Courts

(c) Parliament

(d) All of the above

Q13. How can citizens promote good governance?

(a) By participating in elections

(b) By paying taxes

(c) By reporting corruption

(d) All of the above

Q14. Which Fundamental Right ensures equal pay for equal work?

(a) The Right to Equality

(b) The Right to Freedom of Speech and Expression

(c) The Right to Life and Liberty

(d) The Right to Education

Q15. Which Fundamental Duty promotes national integration?

(a) The Right to Equality

(b) The Right to Freedom of Speech and Expression

(c) The Right to Life and Liberty

(d) To value and preserve the rich heritage of our composite culture

Short Answer Questions

Q1. What are the National Anthem and National Song?

Q2. Write a short note on 'Right to Freedom of Religion.'

Q3. How does paying of taxes help a country?

Q4. What do you mean by a Good Citizen?

Q5. What is the importance of a National Symbol to a Nation?

Long Answer Questions

Q1. What do you understand by Fundamental Duties?

Q2. Write a brief on Directive Principles of the state policy.

Q3. What are the benefits of being a law-abiding citizen?

Q4. Write in short on the following.

(a) National Emblem.

(b) National Animal.

(c) National River.

(d) National Game.

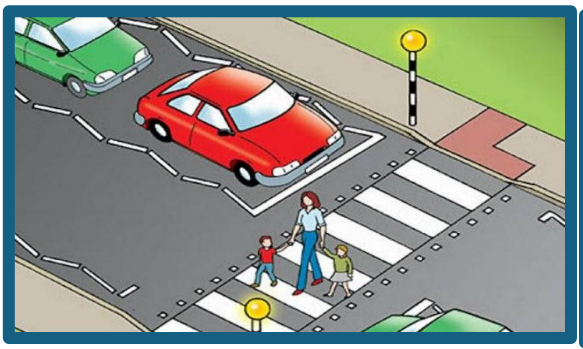
(e) National Flower.

Q5. What are the Guiding Principles for NCC Cadet towards Nation-Building?

SOCIAL SERVICE AND COMMUNITY DEVELOPMENT (SD/SW)

CHAPTER SSCD VI : ROAD, RAIL, AND AIR SAFETY

"Better Late than Never!"



TEACHING INSTRUCTIONS

Period : **One (01)**

Type : **Lecture**

Year : **2nd Year SD/SW**

Conducting Officer : **Associate NCC Officer**

Training Aids : **Script or Lesson Plan; OHP, Screen, Pointer Staff, Presentation, Board and Markers; Charts on Road, Rail & Air Safety**

Time Plan

- Introduction : 05 Min
- Part I : 20 Min
- Part II : 10 Min
- Conclusion : 05 Min

INTRODUCTION

1. Road, rail, and air accidents are man-made tragedies that result in significant human suffering. These accidents carry a significant cost in terms of lost lives, injuries, and economic impact. Road networks are designed to improve connectivity and services, but accidents often occur due to factors like excessive traffic, traffic rule violations, speeding, drunk driving, and inadequate maintenance of vehicles and roads. Rail accidents, such as derailments, are often caused by human error, sabotage, natural events like landslides on hilly tracks, or fires. These accidents lead to numerous fatalities and extensive damage, costing Indian Railways a substantial amount each year. Air accidents, which may stem from technical failures, fires, poor take-offs and landings, adverse weather conditions, hijackings, or bombings, can often be prevented with timely precautions.

LEARNING OBJECTIVES

- Basic understanding of road/rail & air safety various dos & don'ts
- Spreading consciousness on road, rail & air safety

PREVIEW

The lecture will be conducted in the following parts:

(a) Part I : Understanding the importance of Road, Rail & Air Safety

(b) Part II : Raising Awareness

DID YOU KNOW?

- Major Reasons for Traffic collisions in India are:-
  - Over-Speeding & Drunken Driving
  - Use of Mobile Phones While Driving
  - Driving on the Wrong Side Against Opposing Traffic
  - Non-use of Helmets

PART I : UNDERSTANDING THE IMPORTANCE OF ROAD, RAIL & AIR SAFETY

2. Global Road safety Report 2023 ranks India very high when it comes to the number of accidents on the road. However, in recent years, improvement has been seen in this area. With the rapid increase in the number of vehicles on the road, the traffic conditions are under a lot of pressure. Therefore, road/rail and air safety is one of the most serious public health issues in our country. It has an impact on everyone, whether one drives a vehicle, walks or rides a bicycle, or travels in a train or by air.

Road Travel

3. Road transport is the most cost-effective mode of transportation in India, both for freight and passengers, keeping in view its level of penetration in populated areas. Exposure to adverse traffic environments is high in India because of the unprecedented rate of motorisation and growing urbanisation fuelled by a high rate of economic growth. As a result, incidents of road accidents, traffic injuries, and fatalities have remained high.

4. Every year, over 1,68,000 people die in road accidents on Indian highways. This means that 460 people die every day, or 20 people every hour.

5. According to the Transport Research Wing, which came out with the Road Accident Report of 2019, road accidents can have multiple causes:-

(a) **Over speeding.** The major cause of road accidents in these recent years is over-speeding. It is also responsible for the most number of deaths and injuries in road accidents. Hence, drive safe and within speed limits even when you are getting delayed.

(b) **Driving without a Valid License.** Driving without a valid license accounts for a major cause of accidents. A license is not just a document; it needs to be treated as something earned after having met all requirements of driving, including knowledge of all road signs.

(c) **Driving on the Wrong Side**. India follows Left-Hand traffic (LHT) system, where vehicles keep to the left. Driving on the **opposite or wrong side**, **against oncoming traffic,** just to save a few seconds or a small amount of fuel, is a menace which is a major cause of accidents.

(d) **Drunken Driving**. It accounts for about 2.7% of the total accidents. Blood Alcohol Concentration (BAC) limit in India is 0.03%, above which accident risks rise significantly. Always call a cab or arrange for a designated driver whenever you are at any event where alcohol is served. Never drink and drive yourself, or pillion-ride with anyone, who has consumed alcohol.

(e) **Use of Mobile Phone.** This accounts for 2.3% of accidents. Using a mobile phone while driving distracts you. Hence, you should pull up to the curb and answer

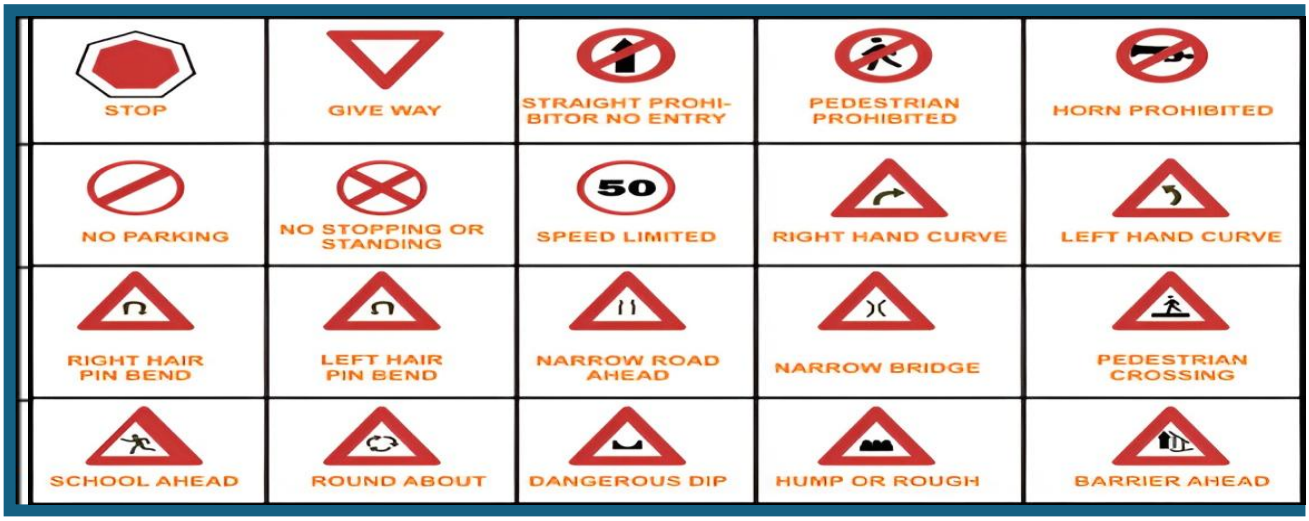
calls instead of driving and speaking into the phone. Never take your eyes off the road, and do not attempt to text while driving.

(f) **Jumping Red Lights.** This is the cause of 1.0% of road accidents in India. While this indicates vast compliance with the traffic rules, it is still a major cause of road accidents. Therefore, do not jump the signals, as it may cause disasters.

(g) **Type of Area (Residential, Commercial, Institutional).** It is odd to know that most of the accidents took place in open areas and not congested or residential areas. Hence, stricter observance of traffic rules in open areas such as highways is a must. Certain dos and don'ts become essential to follow to keep oneself safe.

6. Understanding Road Safety refers to the measures that must be adopted by everyone while using roads. These safety methods are meant for reducing the risk of accidents and injuries or casualties on the road. These rules must be followed by all users of roads, including pedestrians, cyclists, motorists, and bus and truck drivers. Safety methods also relate to the construction and layout of roads as well as traffic regulation systems. Hence, road safety involves:-

(a) The design of roads and highways.
(b) Laws pertaining to traffic and vehicles.
(c) Systems of traffic safety and control.
(d) Driver education.
(e) School students' education.
(f) Mass education.
(g) Traffic regulation and road safety signs.
(h) Vehicle design.
(j) Motor vehicle safety inspection and maintenance.



IMPORTANT ROAD SIGNS
(For Information only, Not to be asked in Exam)

7. **Dos for Citizens Regarding Road Safety.**

(a) Obey traffic rules.

(b) Conduct or attend road safety seminars.

(c) Educate the general public on traffic rules.

(d) Wear helmets and seat belts.

(e) Give pedestrians the right-of-way in crosswalks (zebra crossings).

8. **Don'ts for Citizens Regarding Road Safety**.

(a) **Do not drive on wrong side of the road or on the wrong way, especially in the main lane of the opposite side.**

(b) Do not drink and drive.

(c) Do not over-speed.

(d) Do not cross the road during the red signal.

(e) Do not use mobile phones while driving.

(f) Do not engage in other activities during driving.

(g) Do not cross the solid white line marking the road shoulder.

Do not Drive on Wrong Side of the Road

9. **Safety Aspects to be Followed by Cadets During Movement by Road.** Many lives are lost in road accidents. As cadets, it is essential to place emphasis on safety during movement by road. Whether travelling individually or in groups, adhering to safety protocols can significantly minimise risks and ensure a secure journey. Road safety is mostly about driving safe and following rules. Certain key safety aspects to be kept in mind are:-

(a) **Wear Seatbelts**. Make sure to always fasten seatbelts securely.

(b) **Follow Traffic Rules**. Obey traffic signals, speed limits, and pedestrian crossings.

(c) **Avoid Distractions**. Refrain from using mobile phones or engaging in conversations while driving. Also refrain from listening to loud plugged music, as this increases the chances of road accidents.

(d) **Use Authorised Transport**. Use only authorised and registered vehicles for transportation.

(e) **Mindful Driving**. It is often observed that young people, in their exuberance, engage in racing, rash driving, and stunt driving, which is unwarranted. A 'safety first' mindset can significantly help reduce road accidents. While driving, it is essential to

maintain a safe distance between vehicles to allow for better reaction time. Additionally, one must avoid driving when unwell.

(f) **Rules & Regulations**. One must follow all rules & regulations. **Whatever the urgency, never drive on wrong side against the flow of traffic, especially in its overtaking lane.** Always drive with a valid driving license. Doing Third Party Insurance is mandatory, so renew it timely.

(g) **Other important aspects**. Some other important aspects that must be borne in mind are not to drive in bad and inclement weather, and if unavoidable, the use of fog lights is a must; not to drive on the wrong side of the road in order to save time and distance, as this may cause the accident victim to lose a limb or life.

Rail Safety

10. Indian Railways is among the largest railway networks globally, with millions of passengers depending on it daily for transportation. Train accident records indicate that derailments and incidents at railway crossings are the leading causes of accidents. Until recently, many railway crossings were unregulated, with a large number of accidents being caused by human error.

11. **Primary Reasons Behind Railway Accidents.** Railway accidents pose significant threats to human life and infrastructure worldwide. Primary factors contributing to these tragic events are:-

(a) **Infrastructure Defects.** The railway infrastructure, which includes tracks, bridges, overhead wires, and rolling stock, is often defective due to poor maintenance, ageing, vandalism, sabotage, or natural disasters, as under:-

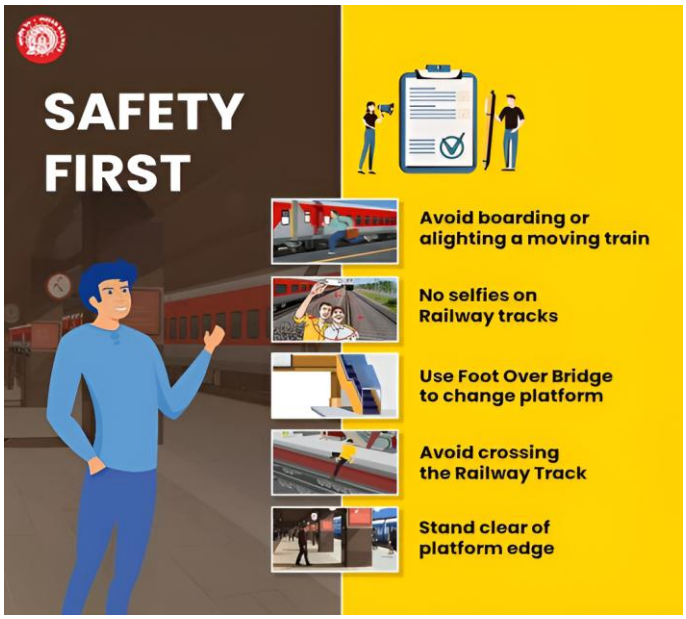
- Much of the infrastructure was built in the 19th and 20th centuries and has not been upgraded to meet the growing demand and modern standards.
- The railway system also suffers from a lack of funds, corruption, and inefficiency, which hamper its development and maintenance.
- Moreover, many routes are operating at over 100% capacity, which increases the risk of accidents due to congestion and overloading.

(b) **Human Errors.** The railway staff, who are responsible for operating, maintaining, and managing the trains and tracks, are prone to human errors due to fatigue, negligence, corruption, or disregard for safety rules and procedures, as under:-

- Human errors can result in incorrect signalling, miscommunication, over-speeding, or overlooking defects or hazards.
- The railway staff also lacks adequate training and communication skills, which affect their performance and coordination.

(c) **Signalling Failures.** The signalling system, which controls the movement and direction of trains on the tracks, can fail due to technical glitches, power outages, or human errors, as under:-

- Signalling failures can lead to trains running on the wrong track, colliding with other trains or stationary objects, or overshooting sta tions.
- For example, the recent train accident in Odisha was reportedly caused by a change in electronic interlocking that was not communicated properly to the drivers.



(d) **Unmanned Level Crossings (UMLCs).** UMLCs are places where railway tracks cross without any barriers or signals to regulate traffic:-

- UMLCs pose a high risk of accidents as vehicles or pedestrians may not notice the approaching train or may try to cross the track when the train is near. In 2018-19, UMLCs accounted for 16% of all train accidents in India.
- The railways have eliminated all the UMLCs on broad gauge routes, but there are still many Manned Level Crossings (MLCs) that pose a risk of accidents.

12. **Dos for Citizens Regarding Rail Safety.**

(a) Carry your own Identification Card while travelling.

(b) Always use overbridge to cross the track.

(c) Stop vehicles when the gate is closed at the crossing.

(d) Pull the chain only in an emergency if required to stop the train.

(e) Report to the railway police regarding unidentified objects or suspected persons.

13. **Don’ts for Citizens regarding Rail Safety**.

(a) Do not be careless while crossing train tracks.

(b) Do not try to get in/get down while the train is moving.

(c) Do not ignore the signal at the railway crossing.

(d) Do not sit on the footsteps/footboard while travelling.

(e) Do not use fire while travelling.

(f) Do not consume alcohol during journey.

(g) Do not accept any eatables from unknown persons.

(h) Do not quarrel with railway staff and fellow passengers.

(j) Do not travel on the footboards of a moving train.

(k) Do not bunch up to present a large target at railway platforms.

14. **Safety Aspects to be Followed by Cadets During Movement by Rail.** NCC cadets often have to undertake a journey for undergoing various camps such as Ek Bharat Sreshtha Bharat, National Integration camps, Army attachment camps, Republic Day Camps and others. Therefore, a cadet must prioritise safety when travelling by rail. Certain key safety aspects are:-

(a) **Planned Journey**. A planned execution of a journey obviates many mishaps. The planned journey always includes moving on a confirmed reservation, preferably moving in a group. Always obey the instructions of the Permanent Instructor (PI) staff and the Associate NCC Officers (ANOs) accompanying you on the trip.

(b) **Proper Identification.** Always carry your Identity Card and travel in NCC attire, preferably in the NCC tracksuit; this will enable the cadet to have an easier identification.

(c) **Packing and Carriage of Luggage.** A cadet must make an endeavour not to carry any major valuables with them to prevent any untoward incidents.

(d) **Follow Railway Rules**. Adhere to railway regulations and instructions from railway staff.

(e) **Be cautious on Platforms**. Watch your step on platforms and avoid standing near the edge.

(f) **Use authorised Railway Stations**. Use only authorised railway stations for boarding and alighting.

(g) **Keep Valuables Secure**. Keep luggage and personal belongings secure and within sight.

(h) **Be Prepared for Emergencies**. Know the location of emergency exits and first aid facilities. Always keep the contact numbers of your family members accessible to you/others in case of any emergency.

(j) **Travel Insurance**. One should always opt for travel/accident insurance while booking one's tickets. Substantial compensation is provided for accident victims. For example, IRCTC travel insurance provides coverage of up to ₹10 lakhs.

15. **Air Safety. Aviation safety** is the study and practice of managing risks in aviation. This includes preventing aviation accidents and incidents through research, educating air travel personnel, passengers, and the general public, as well as the design of aircraft and aviation infrastructure. The aviation industry is subject to significant regulation and oversight. Aviation security is focused on protecting air travellers, aircraft, and infrastructure from intentional harm or disruption, rather than unintentional mishaps. Air travel mishaps can occur for a variety of reasons, often involving a combination of factors, as given below:-

(a) **Human Error.** Mistakes made by pilots, air traffic controllers, or ground crew can lead to accidents. This includes miscommunication, misjudgement, or failure to follow procedures.

(b) **Mechanical Failures.** Technical malfunctions or failures in aircraft systems, such as engines, navigation, or control systems, can result in emergencies or crashes.

(c) **Weather Conditions.** Severe weather, including storms, turbulence, fog, and icing, can pose significant risks to flight safety and operations.

(d) **Poor Maintenance.** Inadequate maintenance or failure to adhere to safety protocols can lead to mechanical issues that compromise flight safety.

(e) **Runway Conditions.** Slippery or damaged runways can affect take-off and landing, increasing the risk of accidents during these critical phases of flight.

(f) **Bird Strikes.** Collisions with birds during take-off or landing can damage aircraft and, in rare cases, lead to crashes.

(g) **Unlawful Interference.** Deliberate acts of sabotage, including bombings or hijackings, pose significant risks to air travel safety.

(h) **Pilot Fatigue.** Long hours and insufficient rest can lead to pilot fatigue, impairing decision-making and performance.

(j) **Inadequate Training.** Insufficient training for pilots and crew on emergency procedures, equipment handling, or new technologies can contribute to mishaps.

(k) **Security Breaches.** Failures in airport security measures can allow prohibited items on board, increasing the risk of incidents during flight.

(l) **Air Traffic Control Issues.** Mismanagement or errors in air traffic control can lead to collisions, near misses, or runway incursions.

16. **Dos for Citizens regarding Air Travel.**

(a) **Do Arrive Early**. Arrive at the airport well ahead of your flight (typically 3-4 hours for international flight & 2-3 hours for domestic flights).

(b) **Do Check Baggage Policies**. Familiarise yourself with your airline's baggage allowances and fees to avoid surprises.

(c) **Do Keep Important Documents Handy**. Have your passport, boarding pass, and any required visas accessible.

(d) **Do Follow Security Procedures**. Comply with security screening protocols, removing items as instructed.

(e) **Do Wear Comfortable Clothing**. Dress in layers and wear comfortable shoes for a long flight.

(f) **Do Respect Cabin Crew Instructions**. Follow instructions from the flight attendants for safety and comfort.

(g) **Do Keep Valuables Close**. Store important items like electronics and jewellery in your carry-on.

(h) **Do Consider Travel Insurance**. Look into travel insurance for added protection against unexpected events.

(j) **Do Practice Good Hygiene**. Use hand sanitiser frequently and avoid touching your face.

17. **Don'ts for Citizens Regarding Air Travel.**

(a) **Don’t Arrive Last Minute**. Avoid rushing, which can lead to missed flights or stress.

(b) **Don’t Overpack**. Stick to the essentials and avoid exceeding baggage limits.

(c) **Don’t Ignore Security Guidelines**. Don’t bring prohibited items in your carry-on or checked baggage.

(d) **Don’t Disrupt Others**. Be mindful of your noise levels and avoid using loud devices.

(e) **Don’t Remove Your Seatbelt Until Instructed**. Keep your seatbelt fastened while seated, especially during turbulence.

(f) **Don’t Engage in Disruptive Behaviour**. Avoid arguments or disrespectful behaviour towards crew and other passengers.

(g) **Don’t Forget to Charge Devices**. Ensure your electronic devices are fully charged before flying.

(h) **Don’t Leave Valuables Unattended**. Always monitor your possessions.

(j) **Don’t Ignore Health Protocols**. Follow any health guidelines provided by the airline or authorities.

(k) **Don't Panic in Emergencies**. Stay calm and follow crew instructions if an emergency arises.

18. **Safety Aspects to be Followed by Cadets during Movement by Air.** When cadets are moving by air, safety is of utmost importance. Here are the key safety aspects that ensure their well-being during air travel:-

(a) **Before Boarding a Flight.** It is essential that cadets carry their tickets, valid identification cards, and emergency contact numbers with them. A cadet must ensure fitness to fly. They must pack the luggage as per dimensions and baggage-carrying instructions.

(b) **In the Flight.** While undertaking a journey, the cadet must:-

- **Follow Airline Instructions**. Adhere to airline rules and instructions from cabin crew.
- **Use Seatbelts**. Wear seatbelts at all times when seated.
- **Keep Electronic Devices on Flight Mode**. Switch electronic devices to flight mode during take-off, landing, and when instructed by cabin crew.
- **Be aware of Emergency Exits**. Take note of emergency exit locations and follow evacuation procedures in case of an emergency.

(c) **After completion of a flight Journey.** A cadet, after completion of their air travel, must check and collect the luggage before leaving the airport.

19. By following the above-mentioned safety measures, the journey can be conducted smoothly, ensuring cadets' safety and well-being throughout the travel.

PART II : RAISING AWARENESS

20. Transportation safety requires collective responsibility and awareness. Educating individuals about potential hazards, safety protocols, and emergency preparedness is crucial. Public awareness campaigns, integrating safety education into school curricula, and community engagement are effective strategies. The key areas of focus include:-

(a) Adherence to safety guidelines and regulations

(b) Risk management and mitigation strategies

(c) Emergency preparedness and first aid training

(d) Responsible behaviour, such as avoiding distractions and wearing seatbelts.

21. Spreading consciousness about transportation safety yields profound benefits that transform individual behaviours and societal norms. By promoting awareness, five pivotal advantages emerge as mentioned below:-

(a) Reduced accident rates.

(b) Increased passenger awareness.

(c) Improved emergency response.

(d) Enhanced infrastructure.

(e) Culturally ingrained safety mindset.

22. Public awareness campaigns can be launched through various media channels, highlighting the importance of safe driving practices, such as:-

(a) Wearing seatbelts.

(b) Avoiding distractions while driving, and

(c) Following traffic rules.

(d) Wrong side driving is a severe menace in our country which causes many accidents. Right education and stringent enforcement of laws on this aspect are a must to avoid any mishap.

(e) Vehicles not to be driven without obtaining the driver's license.

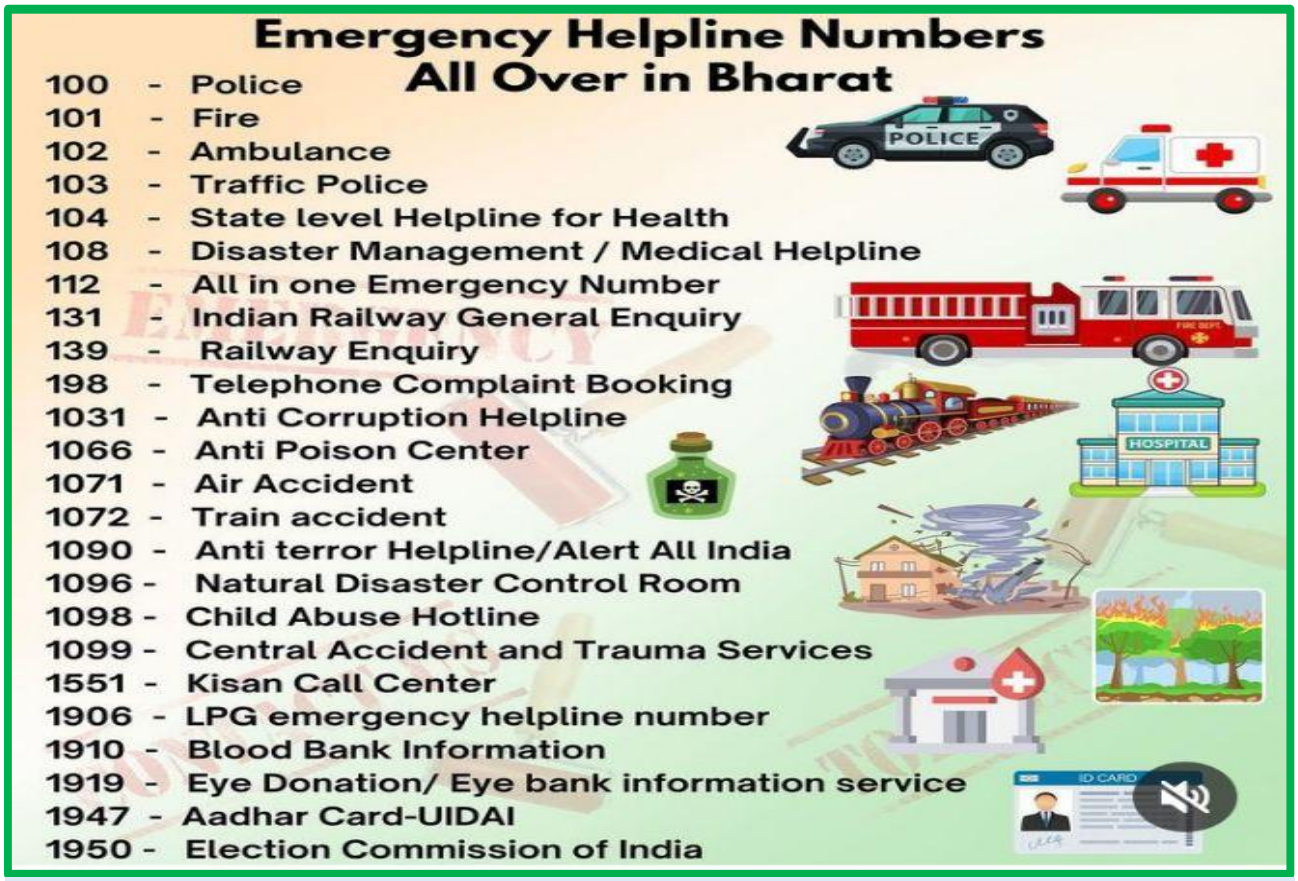
(f) Educational programs can be conducted in schools and colleges, teaching students about road safety and responsible driving habits.

(g) Enforcement of safety protocols, such as strict penalties for traffic violations and regular vehicle checks, can also help prevent accidents, ultimately saving countless lives and promoting a culture of safety.

23. Governments, organisations, and individuals must unite to promote transportation safety. By fostering a culture of responsibility, we ensure safer journeys. Public awareness campaigns can be launched through various media channels, highlighting the importance of safe travel practices. Educational programs can be conducted in schools and communities, teaching people about safety and responsible travel habits. Enforcement of safety protocols, such as regular maintenance checks, strict penalties for safety violations, and crowd control measures, can also help prevent accidents, ultimately saving lives and promoting a culture of safety.

HIGHER ORDER THINKING SKILLS (HOTS)

- **As a graduation student and an NCC cadet, what will you recommend to your teacher for different ways to make our roads safer? Compare and discuss the effectiveness of methods like enforcing traffic rules, creating public awareness, and improving road infrastructure.**



Emergency Help Line Numbers

(For Information only, Not to be asked in Exam)

CONCLUSION

24. Safety is paramount during travel, necessitating adherence to rail, road, and air safety measures. Rules and regulations, including motor vehicle laws, ensure everyone's well-being. Vigilance and compliance with safety protocols are crucial.

25. India's transportation sector faces accidents and fatalities despite advancements. Human error, inadequate infrastructure, and lack of enforcement contribute. Government initiatives like the National Road Safety Policy, Rail Safety Fund, and Air Safety Management System address these challenges. Public awareness campaigns highlighting safe practices, education, and enforcement are vital.

SUMMARY

- Road, rail, and air accidents are man-made disasters that involve high human suffering. They impose a huge cost in terms of deaths, injuries, and loss of income.
- One needs to understand the causes and abide by certain Dos and Don’ts and have a precautionary approach to ensure adequate safety and security.
- Spreading awareness is crucial to prevent road, rail, and air accidents in India.
- The country's alarming number of fatalities and injuries on roads can be reduced by addressing the main causes of accidents, such as driving on the wrong side of the road, driving recklessly, over-speeding, especially over poor road conditions, through awareness campaigns, education, and enforcement of safety protocols.
- Promoting awareness and education can help prevent rail accidents by addressing human error, technical failure, and overcrowding.
- Furthermore, ensuring safe air travel requires raising awareness about preventing air accidents, mitigating key factors such as technical failure and human error.
- Awareness can foster a culture of safety and reduce the number of accidents on the roads, railways, and airways.
- In addition, individuals needs to make a note of emergency response numbers so as to seek assistance in times of need representatives of NCC, they are entrusted with upholding the highest standards of behaviour, conduct, and community service.

ASSESSMENT EXERCISE

Multiple Choice Questions

Q1. The road, rail and air accidents are _____ types of disasters:-

(a) Manmade (b) Natural

(c) Neither (a) nor (b) (d) None of the above

Q2. Do not cross the road during the _____ signal.

(a) Yellow (b) Green

(c) Red (d) None of the Above

Q3. _____ are places where railway tracks cross without any barriers:-

(a) Manned Level Crossings (b) Semi-manual Level Crossings

(c) Unmanned Level Crossings (d) None of the above

Q4. One should report to the railway police regarding unidentified objects or suspected persons in the railway station:-

(a) False (b) True

(c) Maybe (d) None of the above

Q5. What is the primary cause of road accidents in India?

(a) Drunken Driving (b) Over-speeding

(c) Poor Road Conditions (d) All of the above

Q6. What should you do immediately in case of a road accident?

(a) Call the police (b) Provide first aid

(c) Take photos of the scene (d) All of the above

Q7. What should you do in case of a train emergency?

(a) Panic and try to exit the train immediately.

(b) Remain calm and follow the instructions of the train staff.

(c) Try to call for help using your mobile phone.

(d) None of the Above

Q8. Understanding _____ Safety refers to the measures that must be adopted by everyone while using roads:-

(a) Rail (b) Air

(c) Road (d) None of the above

Q9. Spreading consciousness to prevent accidents is crucial in reducing the alarming number of fatalities:-

(a) False (b) True

(c) Maybe (d) None of the above

Q10. Which of the following is a common cause of rail accidents?

(a) Excessive speed of the train

(b) Poor track maintenance

(c) Failure in signalling System

(d) None of the above

Q11. Which is the most effective safety device for a driver or passenger in a car?

(a) Air-conditioning (b) Seat Belt

(c) GPS Device (d) None of the above

Q12. What does a solid white line on the side of the road indicate?

(a) Passing is allowed.

(b) No parking zone

(c) The shoulder and limit of the roadway

(d) A divider for oncoming traffic

Q13. What does a red signal on a railway crossing indicate?

(a) Trains are moving slowly.

(b) It is safe to cross.

(c) Stop and do not cross.

(d) Maintenance is happening.

Q14. What should passengers do in case of a fire on a train?

(a) Panic and try to run

(b) Remain calm and follow the instructions of the train staff.

(c) Try to call for help using your mobile phone.

(d) None of the Above

Q15. What should a passenger do in case of a loss of cabin pressure?

(a) Put on the oxygen mask

(b) Get up and move to a side

(c) Notify the pilot

(d) None of the above

Short Answer Questions

Q1. Write any two Dos of road travel safety.

Q2. Write any two Don’ts of rail travel safety.

Q3. What are the main causes of road accidents in India?

Q4. What measures can be taken to reduce the risk of accidents while driving at night?

Q5. Describe the importance of wearing seatbelts while driving.

Long Answer Questions

Q1. How will you plan your journey?

Q2. What safety precautions will you take while undertaking a train journey?

Q3. What are the dos and don’ts of road travel?

Q4. What are the security regulations while you undergo air travel?

Q5. Explain the major causes of road accidents.

ANSWER KEY: MULTIPLE CHOICE QUESTIONS (MCQ)

ANSWER KEY TO MCQ : NCC: BUILDING BLOCKS

Answer key to MCQ : NCC - Building Blocks (Chapter - I)

Q1.	(c)	Q2.	(a)	Q3.	(c)	Q4.	(c)
Q5.	(b)	Q6.	(c)	Q7.	(c)	Q8.	(b)
Q9.	(b)	Q10.	(a)	Q11.	(c)	Q12.	(b)
Q13.	(c)	Q14.	(b)	Q15.	(b)		

Answer key to MCQ : NCC - Building Blocks (Chapter - II)

Q1.	(a)	Q2.	(b)	Q3.	(c)	Q4.	(b)
Q5.	(c)	Q6.	(d)	Q7.	(b)	Q8.	(d)
Q9.	(b)	Q10.	(b)	Q11.	(b)	Q12.	(c)
Q13.	(b)	Q14.	(b)				

Answer key to MCQ : NCC - Building Blocks (Chapter - III)

Q1.	(c)	Q2.	(c)	Q3.	(b)	Q4.	(a)
Q5.	(a)	Q6.	(b)	Q7.	(b)	Q8.	(b)
Q9.	(a)	Q10.	(d)	Q11.	(a)	Q12.	(d)
Q13.	(c)	Q14.	(c)	Q15.	(b)		

ANSWER KEY TO MCQ: NATIONAL INTEGRATION AND AWARENESS

Answer key to MCQ : National Integration and Awareness (Chapter - I)

Q1.	(b)	Q2.	(c)	Q3.	(c)	Q4.	(a)
Q5.	(d)	Q6.	(a)	Q7.	(d)	Q8.	(d)
Q9.	(a)	Q10.	(b)	Q11.	(b)	Q12.	(c)
Q13.	(b)	Q14.	(a)	Q15.	(c)		

Answer key to MCQ : National Integration and Awareness (Chapter - II)

Q1.	(d)	Q2.	(b)	Q3.	(c)	Q4.	(a)
Q5.	(b)	Q6.	(c)	Q7.	(b)	Q8.	(d)
Q9.	(b)	Q10.	(a)	Q11.	(a)	Q12.	(b)
Q13.	(d)	Q14	(b)	Q15.	(a)		

ANSWER KEYS TO MCQ : BORDER & COASTAL AREA

Answer key to MCQ : Border & Coastal Area (Chapter - I)

Q1.	(c)	Q2.	(d)	Q3.	(d)	Q4.	(b)
Q5.	(a)	Q6.	(d)	Q7.	(a)	Q8.	(b)
Q9.	(d)	Q10.	(a)	Q11.	(c)	Q12.	(d)
Q13.	(d)	Q14.	(a)				

Answer key to MCQ : Border & Coastal Area (Chapter - II)

Q1.	(c)	Q2.	(a)	Q3.	(a)	Q4.	(b)
Q5.	(c)	Q6.	(a)	Q7.	(d)	Q8.	(c)
Q9.	(b)	Q10.	(a)	Q11.	(c)	Q12.	(c)
Q13.	(c)	Q14.	(b)				

Answer key to MCQ : Border & Coastal Area (Chapter - III)

Q1.	(a)	Q2.	(a)	Q3.	(d)	Q4.	(b)
Q5.	(d)	Q6.	(c)	Q7.	(a)	Q8.	(d)
Q9.	(c)	Q10.	(d)	Q11.	(b)	Q12.	(a)
Q13.	(c)						

ANSWER KEYS TO MCQ : DM

Answer key to MCQ: DM (Chapter - I)

Q1.	(b)	Q2.	(a)	Q3.	(c)	Q4.	(d)
Q5.	(d)	Q6.	(b)	Q7.	(c)	Q8.	(a)
Q9.	(d)	Q10.	(a)	Q11.	(d)	Q12.	(d)
Q13.	(d)	Q14.	(b)	Q15.	(b)		

Answer key to MCQ: DM (Chapter - II)

Q1.	(d)	Q2.	(b)	Q3.	(a)	Q4.	(d)
Q5.	(e)	Q6.	(d)	Q7.	(c)	Q8.	(c)
Q9.	(d)	Q10.	(b)	Q11.	(c)	Q12.	(b)
Q13.	(c)	Q14.	(a)	Q15.	(c)		

Answer key to MCQ: DM (Chapter - III)

Q1. (d)	Q2. (c)	Q3. (b)	Q4. (d)
Q5. (d)	Q6. (d)	Q7. (c)	Q8. (d)
Q9. (b)	Q10. (c)	Q11. (c)	Q12. (b)
Q13. (c)	Q14. (a)	Q15. (a)	

Answer key to MCQ: DM (Chapter - IV)

Q1. (d)	Q2. (a)	Q3 (b)	Q4. (b)
Q5. (c)	Q6. (b)	Q7. (c)	Q8. (b)
Q9. (b)	Q10. (d)	Q11. (c)	Q12. (b)
Q13. (b)			

Answer key to MCQ: DM (Chapter - V)

Q1. (b)	Q2. (d)	Q3. (b)	Q4. (a)
Q5. (c)	Q6. (a)	Q7. (a)	Q8. (d)
Q9. (d)	Q10. (b)	Q11. (c)	Q12. (a)
Q13. (b)			

Answer key to MCQ: DM (Chapter - VI)

Q1. (d)	Q2. (b)	Q3. (a)	Q4. (b)
Q5. (b)	Q6. (b)	Q7. (a)	Q8. (a)
Q9. (c)	Q10. (b)	Q11. (b)	Q12. (b)
Q13. (b)	Q14. (b)		

Answer key to MCQ: DM (Chapter - VII)

Q1. (a)	Q2. (b)	Q3. (c)	Q4. (d)
Q5. (b)	Q6. (b)	Q7. (a)	Q8. (b)
Q9. (c)	Q10. (c)	Q11. (b)	Q12. (a)
Q13. (a)	Q14. (b)		

ANSWER KEYS TO MCQ : ENVIRONMENTAL & GENERAL AWARENESS

Answer key to MCQ: EA (Chapter - I)

Q1.	(b)	Q2.	(a)	Q3.	(b)	Q4.	(a)
Q5.	(a)	Q6.	(a)	Q7.	(d)	Q8.	(a)
Q9.	(b)	Q10.	(a)	Q11.	(a)	Q12.	(b)
Q13.	(a)	Q14.	(a)	Q15.	(b)	Q16.	(a)
Q17.	(c)	Q18.	(b)	Q19.	(a)	Q20.	(c)

Answer key to MCQ: EA (Chapter - II)

Q1.	(a)	Q2.	(b)	Q3.	(b)	Q4.	(b)
Q5.	(b)	6.	(a)	Q7.	(b)	Q8.	(b)
Q9.	(a)	Q10.	(a)	Q11.	(c)	Q12.	(b)
Q13.	(c)	Q14.	(b)	Q15.	(b)	Q16.	(b)
Q17.	(b)	Q18.	(a)	Q19.	(b)	Q20.	(b)

Answer key to MCQ: EA (Chapter - III)

Q1.	(a)	Q2.	(b)	Q3.	(a)	Q4.	(c)
Q5.	(a)	Q6.	(c)	Q7.	(b)	Q8.	(b)
Q9.	(b)	Q10.	(a)	Q11.	(c)	Q12.	(b)
Q13.	(b)	Q14.	(a)	Q15.	(c)	Q16.	(b)
Q17.	(b)	Q18.	(d)	Q19.	(c)	Q20.	(a)

Answer key to MCQ: GA (Chapter - I)

Q1.	(b)	Q2.	(b)	Q3.	(a)	Q4.	(c)
Q5.	(b)	Q6.	(b)	Q7.	(a)	Q8.	(b)
Q9.	(c)	Q10.	(b)	Q11.	(c)	Q12.	(c)
Q13.	(a)	Q14.	(a)	Q15.	(b)	Q16.	(c)
Q17.	(b)	Q18.	(b)	Q19.	(a)	Q20.	(b)

Answer key to MCQ: GA (Chapter - II)

Q1.	(b)	Q2.	(c)	Q3.	(a)	Q4.	(b)
Q5.	(b)	Q6.	(c)	Q7.	(b)	Q8.	(b)
Q9.	(c)	10.	(b)	Q11.	(b)	12.	(b)
Q13.	(b)	Q14.	(a)	Q15.	(b)	Q16.	(b)
Q17.	(c)	Q18.	(b)	Q19.	(b)	Q20.	(b)

Answer key to MCQ: GA (Chapter - III)

Q1.	(a)	Q2.	(b)	Q3.	(a)	Q4.	(c)
Q5.	(a)	Q6.	(c)	Q7.	(b)	Q8.	(b)
Q9.	(b)	Q10.	(a)	Q11.	(c)	Q12.	(b)
Q13.	(b)	Q14.	(a)	Q15.	(c)	Q16.	(b)
Q17.	(b)	Q18.	(d)	Q19.	(c)	Q20.	(a)

ANSWER KEYS TO MCQ : LIVING WITH NATURE

Answer key to MCQ: Living with Nature (Chapter - I)

Q1.	(a)	Q2.	(b)	Q3.	(b)	Q4.	(c)
Q5.	(c)	Q6.	(c)	Q7.	(b)	Q8.	(a)
Q9.	(c)	Q10.	(b)	Q11.	(b)	Q12.	(c)
Q13.	(c)	Q14.	(b)	Q15.	(b)		

Answer key to MCQ: Living with Nature (Chapter - II)

Q1.	(b)	Q2.	(b)	Q3.	(b)	Q4.	(b)
Q5.	(a)	Q6.	(d)	Q7.	(b)	Q8.	(b)
Q9.	(b)	Q10.	(b)	Q11.	(b)	Q12.	(b)
Q13.	(a)	Q14.	(b)	Q15.	(b)		

ANSWER KEYS TO MCQ : MH

Answer key to MCQ: MH (Chapter - I)

Q1.	(a)	Q2.	(b)	Q3.	(b)	Q4.	(b)
Q5.	(a)	Q6.	(c)	Q7.	(c)	Q8.	(c)
Q9.	(c)	Q10.	(a)				

Answer key to MCQ: MH (Chapter - II)

Q1.	(c)	Q2.	(b)	Q3.	(a)	Q4.	(d)
Q5.	(c)	Q6.	(b)	Q7.	(b)	Q8.	(d)
Q9.	(b)	Q10.	(b)				

Answer key to MCQ: MH (Chapter - III)

Q1.	(a)	Q2.	(b)	Q3.	(b)	Q4.	(c)
Q5.	(c)	Q6.	(a)	Q7.	(b)	Q8.	(c)
Q9.	(b)	Q10.	(a)				

Answer key to MCQ: PMW (Chapter - IV)

Q1	(b)	Q2	(a)	Q3	(b)	Q4	(b)
Q5	(b)	Q6	(a)	Q7	(b)	Q8	(c)
Q9	(d)	Q10	(c)				

Answer key to MCQ: MH (Chapter - V)

Q1.	(b)	Q2.	(d)	Q3.	(c)	Q4.	(b)
Q5.	(a)	Q6.	(b)	Q7.	(b)	Q8.	(b)
Q9.	(d)	Q10.	(B)	Q11.	(b)	Q12.	(b)
Q13.	(d)	Q14.	(b)	Q15.	(b)	Q16.	(c)
Q17.	(b)	Q18.	(a)	Q19.	(b)	Q20.	(a)

Answer key to MCQ: MH (Chapter - VI)

Q1.	(b)	Q2.	(c)	Q3.	(b)	Q4.	(c)
Q5.	(c)	Q6.	(c)	Q7.	(d)	Q8.	(b)
Q9.	(a)	Q10.	(c)				

Answer key to MCQ: MH (Chapter - VII)

Q1.	(b)	Q2.	(a)	Q3.	(b)	Q4.	(b)
Q5.	(b)	Q6.	(a)	Q7.	(b)	Q8.	(c)
Q9.	(d)	Q10.	(c)				

Answer key to MCQ: MH (Chapter - VII)

Q1.	(c)	Q2.	(b)	Q3.	(c)	Q4.	(c)
Q5.	(b)	Q6.	(b)	Q7.	(b)	Q8.	(b)
Q9.	(a)	Q10.	(a)				

ANSWER KEY TO MCQ : SSCD

Answer key to MCQ : SSCD (Chapter - I)

Q1.	(c)	Q2.	(a)	Q3.	(a)	Q4.	(b)
Q5.	(b)	Q6.	(b)	Q7.	(c)	Q8.	(b)
Q9.	(b)	Q10.	(d)	Q11.	(d)	Q12.	(c)
Q13.	(d)	Q14.	(c)	Q15.	(a)		

Answer key to MCQ : SSCD (Chapter - II)

Q1.	(a)	Q2.	(d)	Q3.	(a)	Q4.	(c)
Q5.	(a)	Q6.	(a)	Q7	(d)	Q8.	(c)
Q9.	(b)	Q10.	(c)	Q11.	(a)	Q12.	(c)
Q13.	(d)	Q14.	(c)	Q15.	(a)		

Answer key to MCQ : SSCD (Chapter - III)

Q1.	(a)	Q2.	(b)	Q3.	(a)	Q4.	(a)
Q5.	(b)	Q6.	(a)	Q7.	(d)	Q8.	(b)
Q9.	(a)	Q10.	(b)	Q11.	(c)	Q12.	(b)
Q13.	(b)	Q14.	(c)	Q15.	(c)		

Answer key to MCQ : SSCD (Chapter - IV)

Q1.	(c)	Q2.	(b)	Q3.	(b)	Q4.	(c)
Q5.	(b)	Q6.	(c)	Q7.	(c)	Q8.	(b)
Q9.	(b)	Q10.	(b)	Q11.	(b)	Q12.	(c)
Q13.	(c)	Q14.	(a)	Q15.	(c)		

Answer key to MCQ : SSCD (Chapter - V)

Q1.	(b)	Q2.	(a)	Q3.	(c)	Q4.	(a)
Q5.	(c)	Q6.	(d)	Q7.	(c)	Q8.	(a)
Q9.	(a)	Q10.	(d)	Q11.	(b)	Q12.	(a)
Q13.	(d)	Q14.	(a)	Q15.	(d)		

Answer key to MCQ : SSCD (Chapter - VI)

Q1.	(a)	Q2.	(c)	Q3.	(c)	Q4.	(b)
Q5	(d)	Q6.	(d)	Q7.	(b)	Q8.	(c)
Q9.	(b)	Q10.	(d)	Q11.	(b)	Q12.	(c)
Q13.	(c)	Q14.	(b)	Q15	(a)		

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