SD/SW

NATIONAL CADET CORPS
UNITY & DISCIPLINE

CADET'S HAND BOOK (ARMY)
COMMON SUBJECTS

Preface

1.   National Cadet Corps (NCC), came into existence, on 15 July 1948 under an Act of Parliament. Over the years, NCC has spread its activities and values, across the length and breadth of the country; in schools and colleges, in almost all the districts of India. It has attracted millions of young boys and girls, to the very ethos espoused by its motto, "unity and discipline" and molded them into disciplined and responsible citizens of the country. NCC has attained an enviable brand value for itself, in the Young India's mind space.

2.   National Cadet Corps (NCC), aims at character building and leadership, in all walks of life and promotes the spirit of patriotism and National Integration amongst the youth of the country. Towards this end, it runs a multifaceted training; varied in content, style and processes, with added emphasis on practical training, outdoor training and training as a community.

3.   With the dawn of Third Millennia, there have been rapid strides in technology, information, social and economic fields, bringing in a paradigm shift in learning field too; NCC being no exception. A need was felt to change with times. NCC has introduced its New Training Philosophy, catering to all the new changes and developments, taking place in the Indian Society. It has streamlined and completely overhauled its training philosophy, objectives, syllabus, methodology etc, thus making it in sync with times. Subjects like National Integration, Personality Development and Life Skills, Social Service and Community Development activities etc, have been given prominent thrust.

4.   The new syllabus, has been crystallised after obtaining a detailed feedback, from all the Directorates and the same having been brainstormed at HQ DG NCC. The syllabus has been implemented with effect from 01 May 2019.

5.   For the ease of Trainees, a summary has been given at the end of each chapter. The syllabus has been revised, to make it cadet friendly, by removing the commonalities in subjects, of the school/college syllabus and making it more relevant. It is hoped, that this will facilitate, better assimilation and increased interest among the cadets.

6.   The book has been the outcome, of sincere devotion and relentless effort of the Study Team ordered by HQ DG NCC. Our sincere gratitude and compliments to them. Any suggestions are welcome for its improvement in the future editions

7.   Contents of this hard work, must form the basis of Institutional Training, with explicit commitment.

(Rajeev Chopra)
Lieutenant General
Director General
National Cadet Corps

Acknowledgement

SD/SW COMMON SUBJECTS

BLOCK SYLLABUS

S.No	Subject	Periods			
		First Year	Second Year	Third Year	Total Periods
1	NCC General	6	0	0	6
2	National Integration and Awareness	4	3	0	7
3	Drill	21	14	10	45
4	Weapon Training	13	6	6	25
5	Personality Development	5	11	12	28
6	Leadership	3	4	5	12
7	Disaster Management	7	3	4	13
8	Social Service and Community Development	10	19	18	47
9	Health and Hygiene	5	4	1	10
10	Adventure	1	0	0	1
11	Environmental Awareness and Conservation	0	0	3	3
12	Obstacle Training	3	3	3	9
13	General Awareness	0	0	4	4
Total		**78**	**67**	**66**	**210**

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CHAPTER NCC-I

AIMS, OBJECTIVES AND ORG OF NCC

Introduction

1.   With an aim for raising a second line of defence and to create a large pool of trained youth available for Armed Forces during the First World War, University Corps was conceptualized by the British Government. In India, NCC was raised with an aim of grooming both the boys and the girls, nurture them and direct their energy towards nation building by making them responsible citizens.

2.   After independence, the present day NCC formally came into existence on 15 July 1948 through XXXI Act of Parliament. The Girls Division of the NCC was raised in July 1949. On 01 April 1950, Air Wing was raised, with one Air squadron each at Bombay and Kolkata. The Naval Wing of the NCC was raised in July 1952, thus representing all three services in the Corps.

3.   Today the NCC has an enrolled strength of more than 13 Lakh cadets and consists of two divisions of all the three Services, i.e., the Senior Division / Senior Wing for boys/girls from colleges and the Junior Division / Junior Wing for boys/girls from schools. The Motto of NCC is 'Unity and Discipline'.

Aims of NCC

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

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

        (i)   Character.
        (ii)   Comradeship.
        (iii)   Discipline.
        (iv)   Secular Outlook.
        (v)   Spirit of Adventure.
        (vi)   Ideals of selfless service.

    (b)   To create a human resource of organised, trained and motivated youth, to provide leadership in all walks of life who will serve the nation regardless of which career they choose.

    (c)   To provide an environment conducive to motivating young Indians to choose the Armed Forces as a career.

Objectives of NCC

5.   The objectives of the NCC are:-

    (a)   Train volunteer youth to become confident, committed and competent leaders in all walks of life.

    (b)   Enhance awareness levels of cadets to become responsible citizens of the country.

    (c)   Provide opportunities and encourage cadets to enrich their knowledge, develop communication skills and build character.

    (d)   Conduct social activities and community development programmes, to make constructive contributions toward society.

    (e)   Undertake adventure activities to hone leadership qualities and risk-taking abilities.

    (f)   Provide a platform to launch "Goodwill Ambassadors" to project the image of country overseas.

    (g)   Conduct military training to develop awareness about Armed Forces, leadership skills and military values thus, provide an environment to motivate cadets to join the Armed Forces.

Organisation of NCC

6.   The NCC is a voluntary organisation which is administered through the Ministry of Defence. The Defence Minister is overall in charge, and responsible to the Government of India for efficient functioning of the NCC and other matters.

7.   The NCC Headquarters is situated in New Delhi, headed by an officer of the rank of Lieutenant General who is responsible for the smooth functioning of the NCC in the country.

8.   There are 17 Directorates located in the state capitals headed by an officer of the rank of a Major General / Brigadier or equivalent from the three Services.   According to the size of the state and growth of NCC in the states, Directorates have up to 14 Group Headquarters under them through which they exercise their command and control over the organisation in the state.   Each group is headed by an officer of the rank of Brigadier /Colonel or equivalent known as Group Commander.

9.   Each NCC Group Headquarters controls 5-7 NCC units / battalions, commanded by Colonel / Lieutenant Colonel or equivalent.   Each battalion consists of companies which are commanded by the Associate NCC Officers (ANO) of the rank of Lieutenant, Captain or Major.   In all, there are 99 Group Headquarters in the country who exercise control over a network of 700 Army Wing Units (including technical and girls' unit), 73 Naval Wing Units and 64 Air Squadrons.

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

11.   NCC is staffed by the following:-

(a)   Regular officers drawn from the three services.

(b)   Whole Time Lady Officers (WTLO) from NCC.

(c)   Associate NCC officers (ANOs), who are professors and teachers.

(d)   Girl Cadet Instructors (GCI) from NCC.

(e)   Permanent Instructional (PI) Staff from Army, Navy and Air Force.

(f)   Civilian Gliding Instructors and Ship Modelling Instructors.

(g)   Civilian Staff.

12.   Good and organized training is an important part of NCC and hence it is given due importance. The corps has achieved success through its well-regulated system of rigorous training which includes Basic, Advanced and Specialized training, with more stress on training camps.

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

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

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

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

(d)   **Naval Wing Activities**. Seamanship,   Navigation,   Communication   and   other associated naval subjects are taught to cadets.   Swimming, Scuba Diving and Wind Surfing are other interesting activities to which the cadets are exposed to.

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

(f) **Remount & Veterinary Activity**. This activity is primarily meant for horsemanship and riding.

14. Organisation and structure of NCC is as under:-

Head Quarters Director General NCC
Director General NCC (Lieutenant General)
2 x Additional Director (Major General /Equivalent) and 5x Brigs/Director (Brigadier/Equivalent)

OTA GWALIOR   **OTA KAMPTEE**

17 State Dtes

Army - 12

Navy - 02

Air force - 03

99 – GP HQs

Army - 89

Navy - 04

Air Force- 06

837 Units

Navy - 73

Technical - 01

Medical - 01

Dockyard- 01

Non-Technical - 70

Air Force-64

Flying - 53

Technical- 11

Army - 700

Infantry Bn- 398

Girls Bn - 108

Armoured Sqn - 22

Artillery Bty - 23

Signals Coy - 14

Engineers Coy - 13

Medical Bn - 13

Remount & Veterinary Bn - 21

Electronics & Mechanical Engineers Coy - 08

Compo Coy - 23

Boys Coy – 46

Girls Coy - 11

Conclusion

15.   NCC as an organisation has unified the youth, not only of our country, but has made significant efforts to interact with the youth of other countries through YEP (Youth Exchange Programme), thus expanding the scope of its training and the ultimate goal of attaining Unity.

SUMMARY

Aims of NCC

1.   The aims of NCC are:-

(a)   To develop qualities of Character, Comradeship, Discipline, Secular Outlook, Spirit of Adventure and Ideals of selfless service in the cadets.

(b)   To create a human resource of organised, trained and motivated youth, to provide leadership in all walks of life who will serve the nation regardless of which career they choose.

(c)   To provide an environment conducive to motivating young Indians to choose the Armed Forces as a career.

Organisation of NCC

2.   The NCC Headquarters is situated in New Delhi and t here are 17 Directorates located in the state capitals. Directorates have up to 14 Group Headquarters and each NCC Group Headquarters controls 5-7 NCC units / battalions. There are two training academies namely Officers Training Academy, Kamptee for men and Officers Training Academy, Gwalior for ladies.

3.   NCC is staffed by Regular officers, Permanent Instructional (PI) Staff , Associate NCC officers (ANOs), Girl Cadet Instructors (GCI) , Whole Time Lady Officers (WTLO) , SMIs and CivilianStaff.
4.   Training activities of NCC are Institutional Training, Camp Training, Attachment Training, Remount & Veterinary Activity, Air Wing Activities and Naval Wing Activities.
5.   NCC has 837 units which include 700 Army units (including 108 Girls unit), 73 Navy units and 64 Air Force units.

CHAPTER NCC-II

INCENTIVES TO CADETS

Introduction

1.   Apart from training and preparing the youth for future challenges in NCC, cadets are given various benefits in terms of job opportunities, scholarships and financial aid in time of any tragedy while doing any NCC related activities.   These incentives are announced from time to time both by the Central and State Governments.   These incentives are in the field of employment as well as academics and personal including medals, trophies, cash award etc.   The best incentive being the vacancy reserved for 'C' certificate holder cadets for the commission as officer in the Armed Forces.

Incentives by the Central Government

2.   **For 'C' Certificate Holders**.   Specific vacancies in the Army, Air Force and Navy are allotted for **NCC 'C'** certificate holders.   For officers there is **no UPSC written exams**.   After application, the cadet is called directly for **SSB interview**, which he/she has to clear before final selection as per the merit list.   The following vacancies are reserved by each service as officers:-

        (a)   Army.   100 seats per year at OTA for Men and 10% for Women.

        (b)   Navy.   06 seats per course.

        (c)   Air Force.   10% vacancies in all courses.

3.   **5-10% bonus** marks for recruitment in ranks in Army, Navy and Air force.

4.   **Bonus marks** for employment in **CAPF/Para Military Forces** and **Department of Telecommunication.**

5.   Can apply for gazetted post in CRPF if the cadet is a graduate.

6.   Preference in State Services and also in private sectors.

7.   Employment within NCC as Whole Time Lady Officer, Girl Cadet Instructor, Aero and Ship Modelling Instructor.

8.   In Air Force Academy 5% seats are reserved for Girl candidates holding NCC 'C' certificate.

9.   In OTA Chennai, seats are reserved for Girls candidates holding NCC 'C' certificate (Seats are notified every year).

Financial Assistance / Scholarships

10.   Financial aid and relief to cadets is provided by Cadet Welfare Society (CWS) to the cadet in case of any injury or, to the NOK in case of any fatality during NCC related activities.   Details of the financial assistance are:-

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

11.   The benefits provided by the CWS are:-

        (a)   **CWS awards 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.

Incentives by State Governments

12.   Preference is given by various state governments to the NCC 'B'/ 'C' certificate holders for Recruitment in following departments:-

(a)   Police Service.

(b)   Transport Department.

(c)   Forest Department.

(d)   Excise Department.

(e)   Preference to the Girl Cadets as nurses, receptionists and telephone operators.

13.   State wise **incentives*** provided by various state governments are as enumerated:-

Ser No	Name of State	Academic Field	Employment Field	Cash Award
(a)	Andhra Pradesh	1% seat reserved in each Course of Engineering College, Medical Courses, MBA/MCA/MA/MCom/M Sc, degree and diploma courses, LLB Courses, Govt Polytechnics. **Auth: dated17/11/2000 and 07 Jul 2012.**	Weightage of 5% marks given for 02 Foresters, 03 Beat Officers, 04 Asstt Beat Officers.	Nil
(b)	Arunachal Pradesh	Relaxation of 5% marks for admission to educational institutions.	Preference in recruitment to the State Police Service.	
(c)	Haryana		Preference in Home Guard Department and State Police Force.	
(d)	Himachal Pradesh	Weightage for admission to various courses of study in Himachal Pradesh University.		
(e)	Jammu and Kashmir	2% Seats reserved in Kashmir University for the candidates possessing outstanding proficiency in NCC. **Auth: dated 27 Apr 1976 and 25 Sep 2009.**	Preference given for recruitment to non-gazetted post services in Police, Home Guard, Forest and Excise Deptt to an NCC 'C' Certificate holder up to 01 post or 10% which is higher. Similarly, for the girl candidate for the non-gazetted post in Police, Nurses, Receptionist and Telephone operators.	Nil

Ser No	Name of State	Academic Field	Employment Field	Cash Award
(f)	Karnataka	Reservation of seats for NCC Cadets in professional courses in Medical, Engineering and other Technical Courses.	Nil	Rs. 10,000/- to Medal winner in RDC and Rs. 5000/- to participants in RDC. **Auth: - 02 Dec 2014.**
(g)	Kerala and Lakshadweep	Seats in Engineering Colleges, Polytechnics, Ayurveda Medical and Nursing Colleges. Bonus marks for Pre-Degree, Degree Courses, Post Graduate Courses, B.Ed. Courses and Teachers Training Course. Weightage for admission to higher studies.		
(h)	Madhya Pradesh	Preference for admission to the post graduate/ professional/ degree colleges. 10 marks being added to final marks to NCC cadets selected for participation in Republic Day Camp.	Preference given to NCC 'C' certificate holders for recruitment in all state jobs.	
(j)	Maharashtra	15 seats reserved for Polytechnics college. Ten grace marks to NCC cadets appearing in various degree examinations by University of Mumbai. 2% marks to NCC cadets by Maharashtra University. Three marks given for admission in medical colleges. Ten seats reserved in Engineering colleges for NCC cadets representing State in the All-India Competition. Weightage of four marks for admission in ITI. Auth: -24 Aug 1984	Nil	Chief Minister Scholarship:- 150 Cadets @ 3 cadets per major unit 1 cadet per minor unit are awarded Rs. 2000/- for SD/SW cadets and Rs. 1500/- for JD/JW cadets.
(k)	Manipur		Reservation of 10% posts in the Police Department.	
(l)	Meghalaya		Posts of women constable in state police force.	
(m)	North Eastern Region – Assam	Two seats reserved in diploma and certificate courses in engineering and technology. One seat each in Assam and Jorhat Engineering College.	Preference given to NCC 'B'/'C' certificate holders for recruitment in Police Service and Government Jobs.	

Ser No	Name of State	Academic Field	Employment Field	Cash Award
(n)	Nagaland	Relaxation of 5% marks for admission to educational institutions including technical institution under State	Govt. Preference to NCC 'B' and 'C' certificate holders in State Police Force.	
(o)	Odisha	Additional weightage of marks over and above the aggregate marks obtained for admission in various colleges.	Preference for recruitment to the State Police Force.	
(p)	Pondicherry	A weightage of 2% of marks for B.A. /B.Sc. / B.Com. Courses.	Preference in all Departments of Pondicherry, especially in Police.	
(q)	Punjab	Weightage of marks given for admission in various courses in State Government Polytechnics, Colleges and Universities.		
(r)	Rajasthan	Weightage for the purpose of admission to various courses.	Preference in State Police Force.	
(s)	Tamil Nadu	One seat reserved in Under Graduate Course in each college and one seat in any Post Graduate Course and Polytechnic, where NCC Scheme is available.	Consideration by Tamil Nadu Public Commission in Civil Services, exams. Out of twelve marks for the oral test in the B.T. and P.G. Assistant recruitment/ appointment in Tamil Nadu.	
(t)	Tripura		Preference to NCC 'B' and 'C' certificate holders in Police service and Government jobs.	
(u)	Uttar Pradesh	Bonus marks/weightage by various Universities for admission in various Degree, B.Ed. and Post-Graduation courses	8% posts are reserved in State Government for part time NCC officers and NCC cadets who become disabled during the course of training.	
(v)	Uttarakhand	One seat in each branch in Kumaon Engineering College, GB Pant Engineering College and Govt. Polytechnic Colleges and two seats each in Kumaon University and Garhwal University for B.Ed.		Cash Incentives, Chief Minister Gold and Silver Medal prize-amount not fixed.
(w)	West Bengal and Sikkim		Weightage being given for enrolment in Police. 20% weightage is given to NCC cadets for recruitment in Home Guard.	

Admission in Educational Institutes

14.   Many educational institutes have allotted special quota to the certificate holders from NCC. Preference is given in following fields:-

(a)   Degree and diploma courses.

(b)   LLB courses.

(c)   Govt. Polytechnics and Engineering Colleges.

(d)   Medical Courses.

15.   The incentives keep changing from time to time.   Hence, the cadets must keep themselves aware of the incentives published in various Central / State Government orders.

Conclusion

16.   The youth of Independent India are indeed fortunate to have such an organisation existing in the country which spends vast amount of financial and physical resources towards their personality development, and thus is indeed a nursery for grooming of future leaders in various walks of life.   The NCC offers relaxation in the selection standard for employment in various armed forces, para-military forces as well as state government jobs; provides opportunities to work for NCC either in the form of GCI (Girl Cadet Instructor) or WTLO (Whole Time Lady Officer).

SUMMARY

1.   Specific vacancies in the Army, Air Force and Navy are allotted for **NCC 'C'** certificate holders. The following vacancies are reserved by each service as officers:-

        (a)   Army.   100 seats per year at OTA for Men and 10% for Women.
        (b)   Navy.   06 seats per course.
        (c)   Air Force.10% vacancies in all courses.

2.   Financial aid and relief to cadets is provided by Cadet Welfare Society (CWS) to the cadet in case of any injury or, to the NOK in case of any fatality during NCC related activities.

3.   Preference is given by various state governments to the NCC 'B'/ 'C' certificate holders for Recruitment in following departments:-

(a)   Police Service.
(b)   Transport Department.
(c)   Forest Department.
(d)   Excise Department.
(e)   Preference to the Girl Cadets as nurses, receptionists and telephone operators.

4.   Many educational institutes have allotted special quota to the certificate holders from NCC. Preference is given in following fields:-

(a)   Degree and diploma courses.
(b)   LLB courses.
(c)   Govt. Polytechnics and Engineering Colleges.
(d)   Medical Courses.

CHAPTER NCC-III

DUTIES OF NCC CADETS

Introduction

1.   NCC is the largest youth organisation in the world with an enrolled strength of more than 13 lakh Cadets. The aim of NCC is to train the young boys and girls to be better citizens and future leaders of our great country in all walks of life, including defence forces.   NCC strives to be and is one of the strongest unifying forces of our nation, bringing together the youth hailing from different parts of our country and moulding them into united, secular and disciplined citizens of our nation.   Any student joining the ranks of NCC must know his/her duties and responsibilities as a cadet and he/she must maintain a conduct expected of a trained youth leader of the country.

The Cadet

2.   The term Cadet stands for "trainee".   It is generally used as a military term. Cadets are the integral part of NCC and they are divided into two divisions i.e. SD/SW and JD/JW. SD/SW represents cadets from colleges and universities where as JD/JW represents only schools.

3.   Any volunteer citizen of India or Nepal who is of good character and on the roll of schools or colleges; fulfilling the age, medical and other criteria can be enrolled into NCC. He/she has to undergo the stipulated training; both at their institution as well as at a training camp.   He/she is called a cadet of NCC.

4.   **Advantages of being a Cadet**. The advantages of being an NCC cadet are many fold. NCC as an organisation plays an active role in shaping the character and outlook of the cadet through its training and strict day to day schedule.   An NCC cadet wearing a uniform and seen around is envy to the society especially youth.   The main advantages of being an NCC cadet are enumerated below:-

(a)   Being part of **13 lakh** strong and the **largest youth organisation** in the world.

(b)   Being moulded into a disciplined and motivated youth.

(c)   Chance to take part in disaster relief tasks.

(d)   Opportunity to attend NCC camps like ATC, CATC, NIC, COC etc.

(e)   Wear the uniform and lead a life style akin to military.

(f)   Opportunity to visit foreign countries as part of YEP.

(g)   Opportunity to take part in social awareness programs.

(h)   Preference for joining armed forces and other forces.

(j)   Preference in higher studies.

Duties and Responsibilities of Cadets

5.   An NCC cadet once enrolled has certain duties and responsibilities unlike his/her peers in the institution.   The duties and responsibilities are towards nation, society at large, his institution, NCC organisation and to his fellow cadets too.

6.   Duties of NCC cadets during parades and camps are as under:-

(a)   Self discipline is the most basic trait of an NCC Cadet.

(b)   He/she has to be punctual during parade and roll call.

(c)   Obeying the orders of higher ranks is yet another important duty of NCC Cadet.

(d)   Every cadet should participate in camp activities with complete enthusiasm.

(e)   Always take proper hair cut and wear clean and correct pattern of uniform.   Polishing of shoes, pressing of uniforms and wearing of beret in correct manner should be followed.

(f)   Take part in the cultural activities organized by the NCC.

(g)   Attend all NCC parades regularly without fail.

(h)   Participate in the team work.

(j)   Extend complete cooperation to the seniors.

(k)   Pursue the adventure activities.

7.   **Responsibilities of a Cadet**.   An NCC cadet by the very fact of being an active cadet has to shoulder extra responsibilities unlike his fellow classmates who are not members of NCC.   His responsibilities are nowhere written but obligatory as an outcome of his training.   Thus, he or she fulfills the main aims of NCC i.e., becoming a potential leader with character qualities and responsible citizen. He has separate responsibilities to his NCC unit, Organisation, his institution, society at large and to the country.   That includes active participation in social awareness initiatives, environmental issues, disaster relief, adventure and sports activities and other nation building efforts.   It doesn't end with his NCC training at his institution, but has to be carried forward to all the fields where he is going to be engaged in the future too.   Thus, with passage of time, country would have had past NCC cadets occupying leadership positions in all walks of life espousing the noble values and objectives of NCC.

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

(a)   I will ensure construction of toilet in my house and motivate at least 10 persons for the same.

(b)   I will be an 'Aadhar' Indian and would motivate 10 more persons to be one.

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

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

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

(f)   I will obtain my voter and PAN Card once I have crossed 18 years of age.

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

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

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

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

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

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

Conclusion

9.	There are a number of examples of persons whose names have become immortal in history through devotion to duty and sense of discipline. Shivaji, Maha Rana Pratap, Tipu Sultan, Mahatma Gandhi, Sardar Patel and Rani of Jhansi to name only a few. The young generation of today is the future leaders of India. The NCC cadets of today should endeavour to be good citizens of tomorrow and motivate others to emulate them. NCC cadets should understand their duties completely so that both, the nation as well as the society benefit from them.

SUMMARY

1.	The term Cadet stands for "trainee".	It is generally used as a military term. Cadets are the integral part of NCC and they are divided into two divisions i.e. SD/SW and JD/JW.	SD/SW represents cadets from colleges and universities where as JD/JW represents only schools.

2.	An NCC cadet once enrolled has certain duties and responsibilities unlike his/her peers in the institution.	The duties and responsibilities are towards nation, society at large, his institution, NCC organisation and to his fellow cadets too.

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

(a)	I will ensure construction of toilet in my house and motivate at least 10 persons for the same.

(b)	I will be an 'Aadhar' Indian and would motivate 10 more persons to be one.

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

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

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

(f)	I will obtain my voter and PAN Card once I have crossed 18 years of age.

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

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

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

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

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

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

<u>**CHAPTER – NCC- IV**</u>

<u>**NCC CAMPS: TYPES AND CONDUCT**</u>

<u>**Introduction**</u>

1.   The aim of Camps is to impart collective training to the cadets with special emphasis on the development of qualities of leadership.   Special emphasis is laid on Development of Team Spirit and Leadership Qualities and comprehensive training in Drill, WT, Hygiene and Sanitation, Social Service etc.

2.   It is imperative that all camps be planned in consultation with all agencies including Educational institutions, District Administration and the Director of Public Instruction / Education well before the commencement of the year and all concerned be intimated of date and location well in advance.

<u>**Types of Camps**</u>

3.   NCC conducts the following types of Camps:

(a)   **Annual Training Camps/Combined Annual Training Camps (ATCs/ CATCs)**. These camps are conducted for SD, SW, JD and JW cadets over a period of 10 days. The aim of these camps is to introduce cadets to a regimented way of life. During Camp training endeavour should be made to give cadets maximum exposure to Range Drill, Firing and Specialized training with emphasis on community living, discipline, character, confidence building and First Aid.

(b)   **Centrally Organised Camps (COC)**.   These are planned at the HQ DGNCC level and are of 12 days duration. The Aim of these camps is to bring together all cadets from various parts of the country and to enable them to live and know the culture of different states, which help them in imbibing 'Espirit De Corps' as well as Unity in Diversity against a backdrop of national Integration.   The various types of COCs are:

(i)   **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 Armed Forces.

(ii)   **Thal Sainik Camp**. The aim of this camp is to give an exposure to salient aspects of Army Wing training and generate healthy competitive spirit by conducting Army Wing competitions contributing towards Prime Minister's Banner awarded during Republic Day Parade. It is conducted at Delhi in DGNCC Camp.

(iii)   **Nau Sainik Camp**.   The aim of this camp is to give an exposure to salient aspects of Naval Wing training and generate healthy competitive spirit by conducting Naval Wing competitions contributing towards Prime Minister's Banner awarded during Republic Day Parade. It is conducted at Karwar/Visakhapatnam.

(iv)   **Vayu Sainik Camp**.   The aim of this camp is to give an exposure to salient aspects of Air Wing training and generate healthy competitive spirit by conducting Air Wing competitions contributing towards Prime Minister's Banner awarded during Republic Day Parade. It is conducted at Jodhpur in Rajasthan.

(v)   **Republic Day Camp (RDC)**.   NCC Republic Day camp is the culmination of all NCC Training activities and is held at Garrison Parade Grounds, Delhi Cantt from 01 Jan to 29 Jan each year.   Selected NCC cadets from all the states and Union Territories attend the camp as per vacancies allotted by HQ DGNCC annually.   The camp is inaugurated by the Hon'ble Vice President of India and culminates with the Prime Minister's Rally on 28 January.   During the camp, visit of Hon'ble Raksha Mantri, Hon'ble Raksha Rajya Mantri, Hon'ble Chief Minister of Delhi and three service chiefs are also organized.   During the RDC, various competitions are conducted amongst the 17 NCC Directorates to decide the Champion Directorate for award of Prime Minister's Banner. Competitions are keenly contested in various events such as Drill, Guard Of Honour, Rajpath Contingent and Prime

Minister's Rally, National Integration Awareness, Line & Flag Area, Cultural, Best Cadet in each wing, i.e. Army, Navy and Air Force, Aero modelling, Ship modelling competitions are also conducted.

(vi) **Ek Bharat Shresth Bharat Camp**. National Integration camps are conducted on all India basis with representation from each region and help to integrate the diversity amongst various states of India. In addition, Special National Integration Camps are held at remote and border areas to give an exposure to the difficulties faced by the citizens residing in these areas. The duration of the camp is 12 days for SD/SW and JD/JW.

(vii) **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 Armed Forces.

(viii) **Rock Climbing Camp**. Rock Climbing camps are held to expose the cadets to the basics of elementary rock climbing and to inculcate spirit of adventure, leadership qualities, team spirit, camaraderie as also physical fitness to include enhancing of stamina and endurance amongst the cadets.

(ix) **All India Treks**. These camps are conducted under the aegis of DGNCC. These treks are conducted by designated State Directorates. These camps make the cadets aware of the uniqueness and rich cultural diversity of India. The duration of these camps is of 10 days. The aim of trekking camps is to develop spirit of adventure, leadership, stamina, endurance, self-confidence, team spirit as well as espirit-de-corps' and also to imbibe environmental awareness and concern, inculcate respect for local customs, culture and history and lastly to promote national integration' their conduct is covered by DG NCC "SOP: All India Treks" issued vide DG NCC letter No 17812/Trek/DG NCC/Trg(E) of 28 Nov 2013.

(c)   **Military Attachment Camp**.   These Camps are of 12 days duration and are for Senior Division boys and Senior Wing Girls. Aim of these camps is to expose selected Senior Division Cadets to Armed Forces environment to give a feel of Military Training which would give them confidence and inspire them to join the Armed Forces. Selected girl cadets are exposed to day to day functioning of a Military Hospitals, which would give an exposure in the field of Hygiene, Sanitation and patient management. Attachment training is also given to SW and SD cadets at OTA and IMA, Air Force and Navy academies.

(d)   **Attachment Training IMA/OTA**   These camps are conducted for a duration of 12 days for SD/SW cadets. Detailed training schedule is prepared in 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'.

Training Activities in Camp.

4.   The following types of training activities are carried out in camps:

      (a)   PT/Yoga.
      (b)   Drill.
      (c)   Games.
      (d)   Guest Lectures.
      (e)   Line Area maintenance.
      (f)   Map Reading.
      (g)   Night Navigation.
      (h)   Obstacle Training.
      (j)   Firing.
      (k)   Social Service Work/Rally.
      (l)   Visit to places of Historical interest.
      (m)   Cultural activities.
      (n)   Organizing sports and other competitions.

5.   **Camp Routine.** Routine followed by cadets during the camp is as under:

(a)   Reveille.
(b)   Physical Training.
(c)   Breakfast break.
(d)   Training periods with timely breaks.
(e)   Lunch break.
(f)   Rest Period.
(g)   Tea.
(h)   Game.
(j)   Washing/Bathing.
(k)   Retreat.
(l)   Roll Call Parades.
(m)   Cultural Activities/Recreation.
(n)   Dinner.
(o)   Private Study.
(p)   Lights Out.

Republic Day Camp

6.   All India Annual NCC Republic Day Camp held in January every year is an event of National importance and National integration. The activities of the cadets and officers attending the camp are observed with keen interest by various dignitaries and participants in the camp. The programme is widely covered by the international and national media. Also, the international participants in the camp carry indelible memories of their stay and association with their Indian counterparts.

7.   This camp is attended by cadets from all wings of NCC Directorates selected on the basis of their skill, proficiency and capabilities on various competitions and events. The camp witnesses the presence of cadets from all 17 Directorates of the country. They share their culture, traditions, customs etc, informally and also through National Integration Awareness Programme which is a competition held as part of the Camp. The culmination of activities is the Prime Minister's Rally during which Banner to the Champion NCC Directorate and awards to All India Best Cadets of each Wing are awarded. The Camp is intended to:-

(a)   Project the best of NCC to the national leaders and people.

(b)   Conduct Inter-Directorate Competitions to determine the winner of Inter Directorate Championship Banner and All India Best Cadets of all Wings.

(c)   Select and train NCC Marching Contingents to participate in the Republic Day Parade at Rajpath on 26 January and Guard of Honour for the Vice President, Prime Minister and other dignitaries.

(d)   Foster spirit of national unity amongst the cadets through exchange of cultural programmes and national integration awareness programmes.

8.   The aim of the Republic Day Camp is to enhance the self-confidence of cadets, deepen their value systems and provide an exposure to the rich culture and traditions of our nation and the important events that take place at the National Capital during the Republic Day. The camp portrays a reflection of 'Mini India'. Basic qualities developed amongst the cadets through RDC are:-

(a)   **National Integration**. It helps to inculcate sense of national unity. By interacting with cadets from different parts of the country cadets will come to know the basic ideology and culture where India stands. It helps the nation in creating a pool of citizens to spread the message of national unity which subsequently helps in national integration.

(b)   **Cultural Exchange**. The camp sensitizes cadets on the diverse culture of India. Basic understanding of cultural differences will help in overcoming negative sentiments developing in the nation due to cultural imitation.

(c)   **Social Awareness & Community Development**.   The social service and community development activities include Swachh Bharat Abhiyan, Tree Plantation, Anti-Drug Rally, Cancer Awareness, Disaster Relief, Blood Donation, Beti Bachao Beti Padhao, AIDS Awareness and Care for the Blind, Traffic Control and other similar relevant contemporary social issues. The objectives of Social Service are as follows:-

   (i)   To teach the cadets the dignity of labour and to create in them an interest in constructive work which will be helpful in community development.

   (ii)   To set an example of selfless service and team work.

   (iii)   To give a lead in organized work, with a view to utilizing to the maximum possible extent the available unused time, energy and other resources of our people and direct them in various fields of social and economic activity.

(d)   **Leadership**.   To develop an all-round dynamic personality with adequate leadership traits to deal and contribute effectively in all walks of life. It improves self-awareness of a cadet and helps in building up interpersonal relationship, positive attitude, improves communication skills, time management, leadership skills, realization of importance of teamwork etc.

Ek Bharat Shresth Bharat Camp

9.   Ek Bharat Shresth Bharat (EBSB) Camps were previously known as National Integration Camps. These are conducted to make cadets understand and value the rich heritage of cultures that forge unity despite the diverse languages, traditions and religions of our country. These camps are conducted on an all India basis and help bridge the cultural gap amongst various states of India. SBEB aims to propagate national integration among cadets and society. 35 EBSB camps are conducted every year in different parts of the country. The following activities are conducted in the camp:-

   (a)   **Cultural Programmes**. Cultural exchange is one of the prominent attractions of Special National Integration Camp. Understanding of the common historical and cultural heritage of the country as symbolized in historical monuments, cultural forms and the way of life of the people. It promotes the spirit of national integration and communal harmony amongst the youth in particular and amongst the masses in general through different creative and innovative cultural activities.

   (b)   **Awareness Programmes**.   Familiarization with the environment, family life, social customs, etc. of the people living in different parts of the country is the main theme of awareness programmes.

   (c)   **Quiz Competitions**.   The idea behind this competition is to promote knowledge-based initiatives amongst the youth and to excel in a knowledge-based economy. The concept of National Integration, spirit of communal harmony, brotherhood, courage and adventure are being propagated in this competition.

   (d)   **Demonstrations on National Unity.**   Appreciation of the vastness of the country, its varied customs and traditions and yet the basic oneness which should instil in participants a sense of pride in being an Indian and to inculcate a feeling of communal harmony amongst youth.

Conclusion

10.   NCC is the premier organisation which nurtures the youth of our nation. Unity and discipline is the motto of NCC. A large number of camps are conducted by NCC where cadets from different parts of the country get together. Republic Day Camp is the most important one that promote national integration. Direct interaction amongst the cadets from different parts of the country helps in forming a better understanding on India. The role of NCC in this regard is incomparable because of its great contribution towards the process of national integration.

SUMMARY

1.   The aim of Camps is to impart collective training to the cadets with special emphasis on the development of qualities of leadership. NCC conducts the following types of Camps:

        (a)   Annual Training Camps/Combined Annual Training Camps (ATCs/ CATCs).
        (b)   Centrally Organised Camps (COC).

                (i)   Leadership Camps.
                (ii)   Thal Sainik Camp.
                (iii)   Nau Sainik Camp.
                (iv)   Vayu Sainik Camp.
                (v)   Republic Day Camp (RDC).
                (vi)   Ek Bharat Shresth Bharat Camp.
                (vii)   SSB Screening Camp.
                (viii) Rock Climbing Camp
                (ix)   All India Treks

        (c)   Military Attachment Camp.
        (d)   Attachment Training IMA/OTA.

2.   The following types of training activities are carried out in camps:

        (a)   PT/Yoga.
        (b)   Drill.
        (c)   Games.
        (d)   Guest Lectures.
        (e)   Line Area maintenance.
        (f)   Map Reading.
        (g)   Night Navigation.
        (h)   Obstacle Training.
        (j)   Firing.
        (k)   Social Service Work/Rally.
        (l)   Visit to places of Historical interest.
        (m)   Cultural activities.
        (n)   Organizing sports and other competitions.

3.   All India Annual NCC Republic Day Camp held in January every year is an event of National importance and National integration. The aim of the Republic Day Camp is to enhance the self-confidence of cadets, deepen their value systems and provide an exposure to the rich culture and traditions of our nation and the important events that take place at the National Capital during the Republic Day.

4.   Ek Bharat Shresth Bharat (EBSB) Camps are conducted to make cadets understand and value the rich heritage of cultures that forge unity despite the diverse languages, traditions and religions of our country. These camps are conducted on an all India basis and help bridge the cultural gap among various states of India. EBSB aims to propagate national integration among cadets and society. 35 EBSB are conducted every year in different parts of the country. In addition, six Special NICs are conducted regularly at Leh/Srinagar, Dimapur/ Kohima, Jaisalmer, Kakinada, Lakshdweep and Port Blair.

CHAPTER NI - I

NATIONAL INTEGRATION: IMPORTANCE AND NECESSITY

Introduction

1.   National integration means a feeling of togetherness and unity among the people of a country. It also means an atmosphere in which all citizens, irrespective of their caste, religion and region live together peacefully. It refers to integration in all respects, social political, economic and emotional. In an integrated country people share common goals. They all work together and co-operate with each other for the prosperity of the nation.

Importance of National Integration

3.   It means the preservation of diverse cultures and at the same time living in harmony with each other. No country can survive if its people do not remain united. The feeling of togetherness and a sense of belonging are absolutely necessary for a nation to survive. Such a feeling can only be generated through the process of integration. Thus, national integration is a positive concept which provides strength to the people to fight against all evil forces.

4.   The realisation of its importance in itself is a step in the desired direction. The Government having appreciated the urgency and seriousness of the subject is taking positive steps towards achieving the national integration. NCC, one of the prime organisations of the country training the youth, the future of this great nation, makes the ideal ground to start with. National integration has been made part and parcel of NCC training. Lot of emphasis is laid on national integration by conducting national level camps and number of other activities where cadets from all over the country participate.

Essence of National Integration

5.   National Integration is an emotional and spiritual bond which binds all of Indians irrespective of caste, creed, colour, race, religion and region. In reality, it is the common ideal whose intensity in the passions of the people, determines our "real strength". Emotional integration of the country connotes a firm conviction on the part of the individual that there exists a stake for him or her in the well-being of the Nation. In short being a good citizen of the country in its true sense is what National Integration is all about. In fact, National Integration and Nation Building are synonymous. National Integration includes the following:-

(a)   Cultural Integration.   Cultural integration is a form of cultural exchange in which one group assumes the beliefs, practices and rituals of another group without sacrificing the characteristics of its own culture. It is generally looked upon as positive because nothing is lost. Seen from this light, cultural integration is a healthy intermingling of the beliefs and rituals of two unique cultures.

(b)   Economic Integration.   The perception of the common man in India is that generally, the poor are becoming poorer and the rich-richer. It is an open question whether equal social and economic justice is available to all segments of the society. However, the economic injustice gives rise to indifferent tendencies in the society. These people are always ripe for misguidance and to keep them in the mainstream, economic integration is essential. Various reasons for economic inequality are:-

(i)   Unemployment / Underemployment of People.   The main reason for low level of income of the majority of Indian people is unemployment and underemployment. Since sufficient employment could not be created through the process of planned economic development, it was not possible to increase the income levels of most people.

(ii)   Inflation.   Another cause of inequality is inflation. During inflation, few profit earners gain and most wage earners lose. This is exactly what has happened in India. This has created more and more inequality and this leads to a fall in the standard of living of the poor people since their purchasing power falls.

(iii) <u>Farmer Distress</u>. No doubt, India's new agricultural strategy led to the Green Revolution and raised agricultural productivity. But the benefits of higher productivity were enjoyed mainly by the rich farmers and landowners. At the same time, the economic conditions of landless workers and marginal farmers deteriorated over the years. Most farmers in India could not enjoy the-benefits of higher agricultural productivity. As a result, inequality in the distribution of income in the rural areas has increased.

(c) <u>Political Integration.</u> Politics needs to be separated from religion. Strict laws must be enforced against exploitation of the common man by the politicians and vested interests. This can be achieved only through correct understanding of different political ideologies being practiced by politicians from different backgrounds.

(d) <u>Religious Integration</u>. Our Constitution permits practice of individual religion, without hurting or offending the religious sentiments and beliefs of others. The need is to understand the existing commonalities in the principles and teachings of all the religions to develop a positive attitude towards religion. The correct understanding and Interpretation of our own religion and faith will automatically help in developing mutual respect for each other's religion leading to religious harmony and tolerance in the country.

(e) <u>Social Integration</u>. Social integration is movement of minority groups such as ethnic minorities and underprivileged sections of our society into the mainstream of societies. Social integration requires proficiency in an accepted common language of society, acceptance of laws of the society and adoption of common set of values of the society. Provision of equal rights and opportunities has been guaranteed through our Constitution.

Necessity of National Integration

6. India has a rich cultural heritage characterized by tolerance, compassion and synthesis. After independence, our country opted for secularism and equal opportunity for all, but vested interests and divisive forces under the cover of communal organisations and political parties have been encouraging fissiparous tendencies to undermine the security, unity, and integrity of India. They exploit and spread casteism, communalism, regionalism, religious bigotry, intolerance, linguism and so on, for their narrow and immediate interests and sacrifice national interests. To fight this growing menace, it is the sacred duty of every Indian to work for National Integration.

7. National integration is necessary particularly in a country like India, where people with different languages, religions, races and culture are required to be weaved together. The unity in diversity of which we are proud of can only be maintained if, we have the understanding and respect for each other's religion, customs and traditions. If we have to survive as a nation and safeguard our sovereignty and national integrity, we have to remain united. National integration is a pre-requisite for the survival and prosperity of any nation and hence needs no emphasis. National integration is therefore a basic necessity for survival of any nation through the following means:-

(a) **Maintenance of Peace and Harmony**. Peace and harmony between the people of a nation can be achieved only through the feeling of togetherness amongst the people.

(b) **Growth and Development of the Nation**. National integration is a process that must be equally understood by all citizens of a nation which will subsequently lead the nation achieve the growth and development.

(c) **Law and Order**. Provision of equal rights and opportunities can be ensured only through proper awareness of the prevailing laws. It will lead to proper maintenance of law and order situation.

(d) **Culture and Religious Development**. Our constitution permits practice of individual religion without hurting the beliefs of others. National integration is essential for developing mutual respect for each other's religion.

(e) **Dignity and Self-Respect**. Every citizen must be dealt with equal dignity. Mutual respect and dignity will develop only if we believe in it and practice it.

(f) **Welfare and well-being of the People**. Welfare of the masses can be achieved only through proper understanding between the people and it can be achieved through the process of oneness.

8. National integration is the awareness of a common identity amongst the citizens of a country. It means that though we belong to different castes, religions and regions and speak different languages we recognize the fact that we are all one. National festivals act as an important unifying force. Independence Day, Republic Day, Gandhi Jayanti etc are festivals that are celebrated by all Indians and in all parts of the country, regardless of language, religion or culture. They remind us of our common nationality. On Republic Day we stress on the importance of showing proper respect to the nation. Republic Day Camp of NCC provides ample opportunities to the youth of the country to meet and share their respective cultures and ultimately helps in the promotion of national integration.

Conclusion

9. It is the duty of each and every citizen of our country to strive to achieve unity in spite of diversity and further maintain that. We must remember that there should be no divisions between different parts of the country. There is only one India of which we all Indians are inheritors. We are Indian first and Indians last. The unity in diversity of which we are proud of can only be maintained if, we have the understanding and respect for each other's religion, customs and traditions.

SUMMARY

1. National integration means a feeling of togetherness and unity among the people of a country. It also means an atmosphere in which all citizens, irrespective of their caste, religion and region live together peacefully. NCC, one of the prime organisations of the country training the youth, the future of this great nation, makes the ideal ground to start with. National integration has been made part and parcel of NCC training. Lot of emphasis is laid on national integration by conducting national level camps and number of other activities where cadets from all over the country participate.

2. National Integration includes the following:-

    (a) Cultural Integration.
    (b) Economic Integration.
        (i) Unemployment / Underemployment of People.
        (ii) Inflation.
        (iii) Farmer Distress.
    (c) Political Integration.
    (d) Religious Integration.
    (e) Social Integration.

3. National integration is survival of any nation through the following means:-

    (a) Maintenance of Peace and Harmony.
    (b) Growth and Development of the Nation.
    (c) Law and Order.
    (d) Culture and Religious Development.
    (e) Dignity and Self-Respect.
    (f) Welfare and well-being of the People

CHAPTER NI - II

FACTORS AFFECTING NATIONAL INTEGRATION

Introduction

1.   India is a country with innumerable diversities; an entity composed of many communities, races classes, languages and sub cultures. In any such nation, there are many obstacles to the achievement of national integration. In India, various issues/ factors are obstructing the growth of national feeling, viz. casteism, communalism, linguistic fanaticism, social disparity, economic inequalities and immorality, regionalism etc. In spite of all these limitations. India has developed into one nation by the influence of common territory, common history and common fight for freedom against the foreign rule.

Factors Affecting National Integration

2.   The People of India are at cross roads today. A number of divisive forces are working overtime to divide the nation. The overzealous religious, linguistic and regional groups have by and large, adopted myopic policies. For their immediate gains, they sacrifice country's long-term interests. There are several forces of disintegration in the country which are jeopardising the National Unity. Some of the factors chiefly responsible for weakening the National Integration have been discussed in the succeeding paragraphs.

3.   **Cultural Aspects**.   The Indian society is multi-racial and multi-religious with a diverse culture. Indian culture has given rise to various complications in the society. The mixed culture of today and the rich cultural heritage can prove to be the most effective tool for achieving National Integration. Unfortunately, the people are not being correctly taught and guided on these cultural aspects. It is often forgotten that we all belong to the same culture, whatever be its beginning.

4.   **Political Motives**.   For the sake of maintaining their status, political parties indulge in exploitation of the people in one form or the other. Such actions misguide people to move away from the national mainstream, paving the way for insurgency and resurgence of religious fanaticism and fervour.

5.   **Lack of Education.**   Inspite of the political independence of the country in 1947, the people at large are yet to be liberated. Illiteracy is still rampant though being overcome slowly and gradually. Illiterates and unemployed are more easily misguided and exploited by the people with vested interests, due to their ignorance and lack of proper perspective.

6.   **Communalism**.   Religious antagonism has posed a serious challenge to national integration in India. Political manipulation has projected one religion against the other which has resulted in communal riots, bloodbath, mutual distrust and disunity in the country. Large scale illiteracy and superstitions are responsible along with other causes for rise of communalism in the country. It is very difficult to promote national integration under these situations.

7.   **Casteism**.   Casteism has always played a dirty role in matters of politics and reservation policy and has created a wide gulf between different segments of society.   Unfortunately, the caste system has been recognized by the framers of the Constitution by providing a protective discrimination to Scheduled Castes and Scheduled Tribes.   Unity and integrity have become a challenging dream in a caste ridden society. The socially neglected and scheduled castes under the suppression of upper castes have less sense of feeling of unity. It becomes a challenge for national integration.

8.   **Regionalism**.   There are several regions in India having their unique traditions, food habits, dress and languages. Each region differs from the other in one or other ways which leads to divisive tendencies within the country.   The unequal development of different regions of India has negatively affected the character of national integration. The unequal development has become the major cause of many social movements after independence. People of one region compete with the persons of other regions leading to conflicts and retards progress. Land disputes, language problem etc are some of the reasons which pose hurdle on the way of national integration.

9.   **Linguistic Fanaticism.**   Multi-linguism is one of the important characters of India. Due to linguistic and regional loyalties the national feeling gradually erodes. Linguistic tensions are manifested in the borders which are bilingual. India has fifteen officially recognized languages. There are about 1652 dialects which are spoken in India which shows its diversity. People of one language try to establish supremacy of their language over others. When Hindi was declared as the national language, people of South India resented against this decision. Language issue has become a barrier on the way of national integration.

10.   **Social Disparity.**   In every society there is a system of social stratification.   Social stratification refers to inequality in society based on unequal distribution of goods, services, wealth, power, prestige, duties, rights, obligations and privileges.   Social disparity among the people of different communities, castes and sometime within the community and caste, causes tension and imbalance among the people. Social disparity poses great challenge to national integration.

11.   **Economic Inequalities.**   Economic standard of people in a state depends on the fertility of land, resources available and manpower management. All the states are not equal in the above matter which leads to uneven economic progress of the people. Even in a state distribution of wealth is not properly done. Day by day poor are becoming poorer and rich becoming richer causing tension and conflicts. It is a problem for national integration.

12.   **Ethnic Conflicts.**   Ethnic conflict has hindered national integration. Whereas the modern concept of nationalism is closely linked with the concept of nation-state, scholars have described another prevailing notion of nationalism such as religious nationalism, ethno nationalism etc. The concept of "ethno nationalism" best defines the self-understanding of the ethnic groups in Northeast India in the various forms of their struggle for identity.

13.   **Tribal Identity.**   The term "tribal" carries a denotation of primitivity and inferiority of the people for whom the name is applied. The attitude of the national mainstream that looks down upon the tribals is in serious conflict with the proud self-understanding of the tribals in various parts of the country. Such a pride is exhibited in their ethno national feeling.

14.   **Corruption and Lack of Character.**   Corruption in the country is on a scale that can be linked to the ants eating away the roots of the foundations. The lack of moral character and ethical values deprive us of the strength to overcome our own weaknesses. Combined together, corruption and lack of character have caused immense damage to the nation, whereby people at large have literally sold their souls (and the nation) for short-term personal and political gains.

Measures to Achieve National Integration

15.   **Philosophy of Integration.**   Integration requires commitment in theory and practice, to work in a cooperative manner. It needs to be unequivocally understood that National Integration is a process, a growth and a development, in which every citizen has a common stake and has to equally strive for achieving it, continuously and vigorously. A sense of patriotism and nationalism alone is not sufficient for maintaining this high ideal; rather we have to keep working at it in a systematic manner all the time, always keeping in view the Nation before self.

16.   **Culture as a Unifying Factor.**   The process for evolution of Indian composite culture of today needs to be understood by one and all through its systematic education at all levels. Oneness of the country since time immemorial has never been in doubt. The messages of unity by Indian Saints and Sufis need to reach the common people of the country. The rich cultural heritage of India, in terms of the variety of languages, dialects, literature, arts, architecture, secular thoughts, customs and traditions, food and eating habits, music, dances, ethics and spiritual/moral values and so on, developed by all for understanding as to what India is.

17.   **Promotion of Secularism.**   The spirit of secularism is highly necessary in our multi-religious society. Any sorts of activities creating communal reactions in the public mind should be prohibited. No discrimination among the people on the grounds of religion should be made.

18.   **Role of Politics.**   The regional political parties play a dirty role in exploiting the regional feelings of the people. Regional political parties formed on the basis of linguism at times form the

Government. Politics needs to be separated from religion and strict laws enacted and enforced against exploitation of the common man by the politicians and vested interests.

19.   **Economic Unity.**   Earlier we have already hinted at the economic inequality existing in our country. For the sake of national integration, we have to see that no part of the country is particularly backward from the economic viewpoint. For this the backward classes and the minority people should be accorded special assistance for their general uplift. In government services and in distributing economic assistance these people should be given special preferences. Happily, our central government and state governments have started suitable measures in this sphere.

20.   **Dignity of Individuals.**   Every citizen must be dealt with equal dignity, irrespective of religion, region, language, caste, creed and socio-economic status. Mutual respect will develop only if we believe in it and practise it, rather than paying only lip service to it.

21.   **Socio-Economic Reforms.**   Provision of equal rights and opportunities has been guaranteed through our Constitution. However, its practice leaves much to be desired. The justice needs to be meted out equally and swiftly to ensure against frustrations and the forces of disintegration in the society. Eradication of the social injustices and the evils will automatically take care of the economic backwardness of the downtrodden and provide succour to all, particularly the backward classes.

22.   **Education.**   Education is a very powerful weapon for national integration. Through education we may give the necessary motivations to children, i.e., the future citizens of the nation. In the organisation of curriculum, in admission in various educational centres and in appointment of teachers our general policy should be such as to encourage the propagation of national elements and not to give any place to caste, religion, class and community. In the organisations of our schools, colleges and universities preference should be given to national ideas whenever possible only then we shall be able to promote national integration in the students, teachers and the people as a whole.

23.   **Emotional Unity.**   For national integration, the people of the land must come together into one emotional thread. There can be no national integration unless all the people consider themselves as one. Through emotional integration we get the power and implicit sanction of the people for national integration. Therefore, for national integration, the most urgent need is for effecting emotional unity of the people. For fulfilling this objective, we have to impress on all concerned that India has always been one and it will always remain one. We have to infuse in them the spirit that culture of India is such that everyone should be proud of it. In fact, this is exactly so.

24.   **National Language.**   It needs to be ensured that the language should not become a barrier instead of a medium. The people should not be deprived of equal opportunity, because of any language or the lack of it, particularly in securing Central Government jobs. The tri-lingual formula of National, State and Link language is quite adequate for the time being. It is important that no language be enforced on any particular region, rather people be encouraged to learn additional languages as a matter of habit for better understanding of the literature and culture of other regions.

25.   **Nationalism and Patriotism.**   We have had a glorious past, but regrettably our "today" is rather hollow. We have a rich cultural heritage, but we have to keep building it up through dedication and hard work. There is a definite need to inculcate the spirit of nationalism. The ethical, moral and spiritual values need to be built up to act as deterrence against the fissiparous tendencies in the society. "Society and Country before Self" has to be the common motto for all to be followed in letter and spirit and it is in this regard that the National and State Leadership at all levels has to set personal example.

26.   **Proper Use of Media.**   The services of the Radio and TV must be intelligently used. People of different states must be introduced to each other's cultures and ways of life and common elements should be stressed upon. These will create an atmosphere of goodwill and mutual understanding. Media cut through all language barriers and reach the masses in no time whose potential is tremendous.

27.   **Political and Administrative Measures.**   Since India is a federal-democratic country, its integration in all respects should also be done in a democratic manner. Each ethnic, caste, tribal, religious and linguistic group should have freedom for protecting and promoting their own cultures and traditions. Analysing the process of national integration in India, Prof. Rasheed-ud-din Khan has

observed that "it means cohesion not fusion, unity but not uniformity, reconciliation but not merger, agglomeration but not assimilation, solidarity but not regimentation of the people constituting our political community". Emotional integration with the development of a strong brotherhood among the people discourages the growth of separatism, regionalism or secessionism.

Conclusion

28.   We need national integration on permanent footing and this can be achieved by enlightening our children. All the children, during their formative years, must be taught that we all are Indians belonging to the one Motherland. We must not give too much importance to separate identities. Achieving national integration is a slow moving, continuous and long-term work in progress which needs to be understood, encouraged and practiced by every citizen of the country especially the youth.

SUMMARY

1.   In India, various issues/ factors are obstructing the growth of national feeling, viz. casteism, communalism, linguistic fanaticism, social disparity, economic inequalities and immorality, regionalism etc. In spite of all these limitations, India has developed into one nation by the influence of common territory, common history and common fight for freedom against the foreign rule. Some of the factors chiefly responsible for weakening the National Integration are as follows: -

    (a)   Cultural Aspects.
    (b)   Political Motives
    (c)   Lack of Education.
    (d)   Communalism.
    (e)   Casteism
    (f)   Regionalism
    (g)   Linguistic Fanaticism.
    (h)   Social Disparity.
    (j)   Economic Inequalities
    (k)   Ethnic Conflicts.
    (l)   Tribal Identity
    (m)   Corruption and Lack of Character.

2.   **Measures to Achieve National Integration.** Some measures to achieve National Integration are listed below: -

    (a)   Philosophy of Integration
    (b)   Culture as a Unifying Factor.
    (c)   Promotion of Secularism.
    (d)   Role of Politics.
    (e)   Economic Unity.
    (f)   Dignity of Individuals
    (g)   Socio-Economic Reforms
    (h)   Education.
    (j)   Emotional Unity.
    (k)   National Language.
    (l)   Nationalism and Patriotism.
    (m)   Proper Use of Media.
    (n)   Political and Administrative Measures.

CHAPTER NI - III

UNITY IN DIVERSITY

Introduction

1.   India is a vast country with different regions, religions, cultures and traditions and presents endless varieties of physical features and cultural patterns. It is the land of many languages. It is only in India people professes all the major religions of the world. In short, India is "the epitome of the world". The vast population is composed of people having diverse creeds, customs and colours.

2.   India is probably the only country in the world where people belonging to different religions, castes and creeds, speaking different languages, having different cultures, different modes of living, different clothing, different food habits, worshiping different gods and deity live together in harmony and believe to be the children of one mother- Mother India. We are one nation governed by one central authority. This is why we say we have unity in diversity.

Fundamentals of Unity in Diversity

3.   India is a nation having great diversities. The people who inhabit this nation belong to different races, communities and castes. They reside in different geographical regions and speak different languages. They believe in and practice different religions and have varied life styles. But with certain shared fundamentals for national unity, the people of India can develop the feeling of oneness in spite of all these diversities. The main binding factor remains the constitution of India. There are several other institutions which are pillars of unity in the country. NCC, the premier youth organisation of the country is true example of National Unity.

4.   **Geographical Unity**.   Undoubtedly, down through the ages India has maintained geographical unity. Even, the seers of the past had visualized it. After independence, India maintained and still maintains that uninterrupted geographical entity. Thus, goes the popular saying – 'from Kashmir to Kanyakumari India is one'. The concept of 'Bharatmata' our national song 'Vande Mataram' and national anthem 'Jana-gana-mana' clearly project India as one geographical unit. The poets, philosophers, prophets, reformers had conceived this geographical unit of this land and today the Indians are preserving that ideal with all its sanctity.

5.   **Spirit of Religious Unity.**   Apart from Hinduism we have the followers of Buddhism, Jainism, Islam, Sikhism, Christianity and Zoroastrianism. But Hindus form the greater majority. There are, no doubt, different factions, sections and sub-sections but basically all Hindus believe in the theory of Dharma and Karma. The theory of rebirth, purification of soul, salvation, heaven and hell holds good for each and every one. We celebrate the festivals like Holi, Diwali, Christmas, Id, Buddha Jayanti, Mahavir Jayanti etc unitedly. This provides unity in diversity.

6.   **Indian Philosophy.**   Indian philosophy was developed on Indian soil and not borrowed from anywhere. This has blended the various cultures together. There are differences in overall conception of Gods and modes of worship. These changes have been gradual due to interaction of different groups. But the ultimate aim of achieving salvation and the fear of hell keeps them all bound together.

7.   **Ethnic Coexistence**.   A very important characteristic of Indian society is the coexistence of different ethnic groups. These groups formulated inter-group behaviour. Hence there is no mutual interference as also no merging of their identity. There might be some drawback in our constitution such as separate provision for different castes; particularly the backward and scheduled castes and scheduled tribes but industrialization policy and agrarian reforms have generated a new inclusive culture. Members of different castes and communities and followers of different religions have come together in farms, factories and educational institutions. As a result, different cultures have been blended together thereby bringing unity among them.

8.   **Cultural Unity.** Cultural unity amidst various diversities is found in India. In spite of differences in language, religion, dress and manners, Indian culture is homogeneous. Many festivals like Holi, Diwali, Dusshera, Rakshabandhan, Eid and Christmas are observed throughout the country with their colourful lustre. Further, the Kumbh Mela at Allahabad, Hardwar and Ujjain are attended by people from

different parts of the country. The caste system, family sanctity, modes of offerings, several social ceremonies are celebrated almost in a similar manner in different parts of the country. Thus, the cultural unity in India amidst several diversities is a unique phenomenon. We have a cultural unity in India in as much as our philosophy of life; our customs, creeds and traditions are more or less, the same. The institution of marriage, the very foundation of a society, exists all over the country and most of the rituals and sanskars are similar everywhere.

9.   **Social Unity.**   It is a well-known fact that Indian society is diversified. In dress, food-habit and customs, the northern Indians are quite different from the southern Indian people. However, there are certain common factors that guide all the societies of India. Treatment of guests, offering alms to beggars, to help others at the times of need, to show mercy to the poor, destitute and needy etc. are certain common practices found in every Indian society. The magnanimity of Indian society is well recognized by all the people of the world. For this greatness, the Indian society has received commendation from the tourists who came to visit India from abroad.

10.   **Political Unity.** Article 1 of the Indian constitution speaks, "India that is Bharat shall be a union of states". This political unity is not recent It had its origin in the long past. For the first time India was united under one umbrella by the redoubtable leadership of Chandragupta Maurya. Right from him, the concept of 'Rajachkravartin or the Paramount Sovereign' began to evolve and Chandragupta, Ashoka, Samudragupta, Harsavardhan, Akbar and many others maintained it.

11.   Even after the British conquest of India, this political unity was maintained like today with uniform pattern of law, penal code, administrative works etc. everywhere inside the country. The concepts of 'Danda Samata' (uniformity of penal code) and 'Vyavahara Samata' (uniformity in judicial procedure) invoked by Ashoka became the ideal for all the rulers of India. No Mughal rule, British rule or the present democratic set up of India could escape it. Thus, politically India remained one, remains one and will remain one in future.

12.   **Emotional Unity**.   Emotional unity plays its own part. The name of "Bharat Mata" brings us closer and closer together. In spite of different languages and dialects, Sanskrit, the language of Vedas, brings us all together because Sanskrit is the mother of all languages.

13.   The outstanding features of Indian culture responsible for bringing unity in diversity may be summarized as follows:

    (a)   We Indians lay emphasis on spirituality, not on material wealth.

    (b)   Religion has the most important place in India. We believe in Karma and Sanskar. Performance of duty is our religion.

    (c)   Religious tolerance is the unique feature of religions in India. Hence there is less difficulty in coexistence of followers of different religions.

    (d)   Hinduism which is practiced by majority of the population has the capacity to absorb all good cultures. It has either absorbed the immigrant cultures or has largely influenced them.

    (e)   We have a very broad outlook. We preach and follow religion and spiritualism without ignoring married life and worldly things.

    (f)   We firmly believe in freedom of thought and freedom of expression because such freedom enriches the culture which then becomes dynamic.

Role of NCC In Nation Building

14.   The nation is proud of National Cadet Corps and its activities in facilitating and moulding the character of the youth and contribution towards nation building. NCC has nurtured millions of young boys and girls as responsible, disciplined and motivated citizens of our country. NCC is an image of secularism and national integration and also espouses the ethos of nationalism thus strengthening the basic fibre of a strong India. NCC moulds the youth of today into worthy future citizens of the country.

It has excellent credentials in transforming our youth, in building their character and inculcating in them a sense of duty, discipline and service to the nation.

15.   The National Cadet Corps (NCC) holds a golden key for all-round growth and transformation of our youth. What began in the year 1917, as the University Corps, after many changes and overhauls through the years, has come to be known as the National Cadet Corps since November 1948. Today, with over 13.8 lac cadets, both boys and girls, from over 15700 colleges and schools, inclusive of those in remote and far flung areas, on its roll, the NCC is projected as the largest disciplined, uniformed youth organisation in the world. From a modest beginning, the NCC has blossomed into a truly All India Corps, covering almost all the districts in our country, including the Andaman & Nicobar and Lakshadweep groups of islands. Its motto is 'unity and discipline'.

16.   The NCC has been instrumental in imparting quality training to millions of boys and girls and developing the personality of our youth, many of whom have marched ahead in life and excelled in their chosen fields thereby, contributing immensely towards nation building and national integrity. Imbibed with the spirit of patriotism and selfless service, NCC cadets have been contributing towards strengthening forces of national unity, equality and secularism This is an ever-ongoing process and the organisation remains committed to strive for its very best in this noble endeavour.

Cadet's Role

17.   Every NCC Cadet as an individual can contribute substantially in the process of nation building by adopting the following measures: -

(a)   **Contributing to Adult Education**.   The cadets are trained on various subjects of national importance. This exposure helps the nation to have a trained pool of resources in imparting adult education in a country where illiteracy is widespread.

(b)   **Social Service Activities**.   One of the major roles of NCC is to provide social service towards the citizens of the country. NCC has adopted community development activities with the aim of absorbing amongst cadets' selfless service toward the society, importance of self help, need to protect the environment and to assist weaker sections of the society towards their upliftment. This is done through various programmes aimed at helping out society and in the mean time building a zeal among the cadets towards helping out their society, community and country. The activities of the NCC towards social service may include:

(i)   Tree plantation drives to ensure climatic balance.

(ii)   Blood donation camps aimed at collecting blood to help out those in urgent need.

(iii)   Campaigning against the Dowry in the form of different Rallies.

(iv)   Pledge against Female Foeticide.

(v)   Anti Leprosy Drive to educate people about the disease and also giving information about cure

(vi)   AIDS Awareness Rally to spread information about this disease and also giving information about some prevention tips.

(vii)   Visits to Old Age Homes and spending some quality time there with senior citizens providing help in slum clearance.

(vii)   Disaster Management & Relief at the time of occurrence.

(c)   **Promoting the National language**.   As per the directive principles of Indian constitution Hindi as a national language must be promoted throughout the country without affecting other languages. It is effectively possible through the NCC Cadets because they are trained by Armed Forces personnel coming from different parts of the country.

(d)   **Treating All Human Beings as Equal**.   The motto of NCC is Unity and Discipline. The main part of its training focuses on building a better character for the individual. It will help the cadets to treat all human beings as equals irrespective of their caste, creed or colour.

(e)   **Respecting All Religious Institutes**.   India is a multi-religious country. It respects every religion. To keep the secularism moving, consistent effort is needed from the side of the youth. It is effectively done by NCC Cadets.

Conclusion

18.   Youth is that spark which needs ignition and NCC is an ideal platform for its blossoming. Ever since its inception, the NCC has made immense contributions towards nation-building and promotion of social harmony in our country. NCC as an organisation has unified the youth, not only of our country, but has made significant efforts to interact with the youth of other countries through YEP.

SUMMARY

1.   **Fundamentals of Unity in Diversity.** The fundamentals of Unity in Diversity have been listed below:-

(a)   Geographical Unity
(b)   Spirit of Religious Unity.
(c)   Indian Philosophy.
(d)   Ethnic Coexistence
(e)   Cultural Unity.
(f)   Social Unity.
(g)   Political Unity
(h)   Emotional Unity

2.   The nation is proud of National Cadet Corps and its activities in facilitating and moulding the character of the youth and contribution towards nation building. NCC has nurtured millions of young boys and girls as responsible, disciplined and motivated citizens of our country. NCC is an image of secularism and national integration and also espouses the ethos of nationalism thus strengthening the basic fibre of a strong India.

3.   Every NCC Cadet as an individual can contribute substantially in the process of nation building by adopting the following measures: -

(a)   Contributing to Adult Education.
(b)   Social Service Activities.

(i)   Tree plantation drives to ensure climatic balance.
(ii)   Blood donation camps aimed at collecting blood to help out those in urgent need.
(iii)   Campaigning against the Dowry in the form of different Rallies.
(iv)   Pledge against Female Foeticide.
(v)   Anti Leprosy Drive to educate people about the disease and also giving information about cure
(vi)   AIDS Awareness Rally to spread information about this disease and also giving information about some prevention tips.
(vii)   Visits to Old Age Homes and spending some quality time there with senior citizens providing help in slum clearance.
(vii)   Disaster Management & Relief at the time of occurrence.

(c)   Promoting the National language
(d)   Treating All Human Beings as Equal.
(e)   Respecting All Religious Institutes.

CHAPTER NI - IV

THREATS TO NATIONAL SECURITY

Introduction

1.   While Indian economy has registered phenomenal growth of 9.4%, spectre of internal and external threats is haunting the nation. The entire growth process will come to a screeching halt if security concerns are not timely and adequately addressed. Manifestations of threat range from communal/sectarian violence to jihadi terrorism, separatist insurgencies in northeast and Naxalite extremist militancy.

National Security

2.   National security is the security of a country within its borders. This basically implies maintenance of peace and law and order, and upholding sovereignty of the country within its territory.

3.   National security is different from external security to the extent that external security is security against aggression by a foreign country. External security is solely the responsibility of the armed forces of the country, while National security comes under the purview of the police, which can be supported by the Central Armed Police Forces, if required.

4.   In India, the Ministry of Home Affairs (MHA) takes care of internal security, while external security comes under the Ministry of Defence. In many countries, MHA is also called the Ministry of Internal Affairs or Ministry of Homeland Security.

Classification of Threat

5.   India's national security threat perceptions are a mix of all two shades of threats given below:-

      (a)   Internal.

      (b)   External.

Internal Threats

6.   There are various reasons, both historical and non-historical, which cause problems for our internal security. However, a few root causes are mentioned below:

      (a)   Poverty
      (b)   Unemployment
      (c)   Inequitable growth
      (d)   Widening gap between haves and have nots
      (e)   Failure on administrative front or Governance deficit
      (f)   Increasing communal divide
      (g)   Increasing caste awareness and caste tensions
      (h)   Rise of contentious politics based on sectarian, ethnic, linguistic or other divisive criteria
      (j)   Porous borders
      (k)   Poor criminal justice system and large-scale corruption leading to nexus between criminals, police and politicians with the result that organised crime goes on unabated.

External Threats

Cross-border threats

7.   Most external threats emanate from an unsettled boundary dispute with China and ongoing cross-border jihadi terrorism in J&K sponsored and supported by ISI and Pakistan-based Islamist fundamentalist organizations like Lashkar-e-Taiba and Jaish-e-Mohammad who, in turn, are inextricably linked with international jihadi groups like Taliban and Al Qaida.

8.   Threat from Bangladesh assumes serious dimensions since it became a base for northeast insurgent groups like ULFA and Naga factions. Of late, it has also been serving as a conduit for ISI sponsored infiltration of terrorists along India and Bangladesh's porous border.

9.   To cap it, nuclear threat from neighbouring states and from jihadi groups have the potential of using nuclear weapons in the foreseeable future, significant being China-Pakistan nuclear nexus.

Jihadi Terrorism

10.   However, what concerns India most is their nexus with Pak-based jihadi organizations and the ISI. Some security analysts suspect the hand of HUJBI behind the recent bomb blast at Hyderabad's Mecca Masjid.

11.   Terrorism is not confined to state boundaries alone and has spread to Southeast Asia where Buddhist societies in Thailand and Myanmar have turned soft targets. Even in Muslim dominated countries like Malaysia and Indonesia, fundamentalist jihadi terrorists have struck deep roots. China too is facing threat from jihadi terrorism in its autonomous region of Xinjiang which has a strong Muslim population.

12.   In India, jihadi movement which created Pakistan in 1947 is yet to finish its agenda. This is manifested in the three Indo-Pak wars and the current low intensity war being conducted by ISI with support of Pak-based jihadi outfits. War against Islamist jihadi terrorism cannot be won, unless we purge vote bank politics from our polity.

13.   The China-Pakistan nuclear nexus has come to stay and is a source of constant threat to Indian security. The real problem lies in the intention of a nuclear-capable nation, in that whether it seeks to use nuclear fuel in its reactors to produce clean environment-friendly nuclear energy for economic development or it has designs to reprocess spent fuel for use of nuclear weapons of mass destruction.

Attributes of National Security

14.   The main attributes of National security are:

(a)   Secure territorial integrity and protect internal sovereignty
(b)   Maintain domestic peace
(c)   Prevalence of law and order
(d)   Rule of law and equality before law—law of the land should protect everyone irrespective of status
(e)   Absence of fear from the feared implying individual freedom for people as guaranteed by the Constitution
(f)   Peaceful co-existence and communal harmony

Doctrine

15.   National security doctrine includes the following key elements:

(a)   Political
(b)   Socio-economic
(c)   Governance
(d)   Police & Security Forces
(e)   Centre-State Coordination
(f)   Intelligence
(g)   Border Management
(h)   Cyber Security

Political

16.   First, we need to know the nature of the challenge to our internal security. It could be secessionist, separatist or even regional in nature. We have to analyse the causative factors of various types of movements and see whether the demands are within the constitutional framework or not.

17.   As a matter of principle, we have to deal the secessionist movements with a heavy hand. Separatist elements have to be kept at a distance. We need a clear policy with stringent laws to deal with such elements. On the other hand, regional aspirations and ethnic demands require reasonably softer and sympathetic approach.

Socio Economic

18.   Socio-economic factors are also at the back of many movements which are big threats to the internal security of the country. Many a time, there are genuine socio-economic grievances of a section of the society arising from acute poverty, unemployment and displacement. In such cases, our approach has to be different.

19.   We need to analyse the factors causing the socio-economic grievances and address all the connected issues. Equitable growth and development are the spirit of our Constitution. Therefore, we have to ensure that development reaches all sections of the society and there are no regional disparities.

Governance

20.   Lack of good governance also provides a tool in the hands of anti-establishment elements, who pose a challenge to the internal security of the country. Such elements take advantage of mismanagement and corruption in government schemes, poor implementation of laws and absence of government machinery in the remote areas.

21.   Governance on all fronts becomes an issue whether it is civil administration or policing of the area or the whole of criminal justice system. It is the duty of the state to control all the malaise in governance and provide good governance to the remotest of the areas and control corruption. Otherwise, development of remote areas will be nearly impossible.

Police and Security Forces

22.   It has been seen that, at times allegations of police atrocities and police indifference towards people's problems, aggravate internal security problems. We have seen many a time that agitations are directed against the police or the security forces. Demand for removal of AFSPA is one such example. Police needs to be sensitized so that it becomes people friendly.

23.   We need to carry out police reforms so that the police are seen as a neutral, transparent and professional body. Other security forces aiding state police also need to increase their understanding of the local situation and maintain highest order of efficiency. They need to coordinate with the state police and help achieve overall goal of maintaining the internal security.

Centre-State Coordination

24.   Lack of center-state coordination also leads to many problems related to internal security. This coordination problem exists in all areas from intelligence to operations. We need to develop an institutional framework which resolves all these center-state coordination problems and ensures synergy at all levels.

Intelligence

25.   Intelligence is a major component of Internal Security. We need to be alert against external as well as internal enemies posing a threat to the internal security of the country. Most of the big operations have the back up support of intelligence.

26.   We need to have defensive as well as offensive intelligence to forewarn, neutralize the impending threats and take proactive steps wherever required. We also need to have regular institutional framework to compile, collate and act on intelligence received from various agencies. Multi-Agency Centre (MAC) has made a good beginning in this direction.

Border Management

27.   The country has land borders with seven countries (practically six due to PoK issue) stretching nearly 15,000 km. We have had wars on three sides of our land borders with China, Pakistan and East Pakistan (presently Bangladesh). We also had infiltration problems through Punjab and Kashmir borders, illegal immigration problems through Bangladesh and smuggling of weapons through Indo-Myanmar border.

28.   Kashmiri militants have been taking shelter in PoK while North-East extremists are taking shelter in Bangladesh, Bhutan and Myanmar. Therefore, we need to guard our land borders effectively to prevent infiltration by terrorists, illegal immigration, smuggling of weapons and drugs etc. Coastal security also needs special attention and we need to ensure that the roles of Navy, Coast Guard and Coastal Police are clearly defined and all of them work in harmony with each other.

Cyber Security

29.   The Snowden revelations (WikiLeaks) of 2013 have made it evident that future wars will not be traditional wars which are fought on land, water and air. In fact, it appears that cyber space will be the theatre of warfare in the 21st Century. Therefore, any solid doctrine on internal security needs to cover this front also. India has just made a beginning in this direction. We need to cover a lot of distance before we could say that we have a safe cyber space.

SUMMARY

1.   National security is the security of a country within its borders. This basically implies maintenance of peace and law and order, and upholding sovereignty of the country within its territory.

2.   India's national security threat perceptions are a mix of all two shades of threats given below:

   (a)   **Internal.**

   (i)   Poverty
   (ii)   Unemployment
   (iii)   Inequitable growth
   (iv)   Widening gap between haves and have nots
   (v)   Failure on administrative front or Governance deficit
   (vi)   Increasing communal divide
   (vii)   Increasing caste awareness and caste tensions
   (viii) Rise of contentious politics based on sectarian, ethnic, linguistic or other divisive criteria
   (ix)   Porous borders
   (x)   Poor criminal justice system and large-scale corruption leading to nexus between criminals, police and politicians with the result that organised crime goes on unabated.

   (b)   **External.**

   (i)   Cross-border threats
   (ii)   Jihadi Terrorism.

3.   The main attributes of National security are:

   (a)   Secure territorial integrity and protect internal sovereignty
   (b)   Maintain domestic peace
   (c)   Prevalence of law and order
   (d)   Rule of law and equality before law—law of the land should protect everyone irrespective of status
   (e)   Absence of fear from the feared implying individual freedom for people as guaranteed by the Constitution
   (f)   Peaceful co-existence and communal harmony.

4. National security doctrine includes the following key elements:

    (a) Political
    (b) Socio-economic
    (c) Governance
    (d) Police & Security Forces
    (e) Centre-State Coordination
    (f) Intelligence
    (g) Border Management
    (h) Cyber Security

CHAPTER FD - I

DRILL KI AAM HIDAYATEN AUR WORDS OF COMMAND

Bhumika

1.   Shuru shuru mein fauj ke andar, drill ki sikhlai Germany ke Major General Dral ne 1666 mein shuru kiya tha, is uddesh ko samne rakhte hue ki, faujon ko control karne ke liye drill hi ek aisa zariya hai, jisse discipline, turnout aur team spirit ki bhavna lai ja sakti hai. Yeh pichli ladaion se sabit ho chuka hai ki, ladai ke maidan mein discipline ki buniyad rakhne mein, drill ne kafee sahyog diya hai.

Drill Ki Aam Hidayaten

2.   **Drill Ki Paribhasha**.   Kisi procedure ko kramwar aur uchit tarike se karne ki karyawahi ko **DRILL** kehte hain.

3.   **Drill ke Prakar**. Drill do prakar ki hoti hai:-

   (a)   **Open Drill**.   Open drill field mein kiya jata hai.

   (b)   **Close Drill**.Close drill peace mein rahte hue, parade ground mein kia jata hai

4.   **Drill Ka Maksad.**   Drill ke nimnlikhit maksad hote hain:-

   (a)   Drill discipline ki buniyad hai.

   (b)   Drill se milkar kaam karne ki aur hukm manne ki aadat parti hai.

   (c)   Drill officers, JCOs aur NCOs ko command aur control sikhati hai.

   (d)   Drill dress pahanna aur chalna phirna sikhati hai.

   (e)   Drill ko dekh kar kisi unit ke discipline aur morale ka pata lagaya ja sakta hai.

5.   **Drill Ke Usul**.   Drill ke teen usul hain:-

   (a)   Smartness (furti).

   (b)   Steadiness (sthirta).

   (c)   Coordination (milkar kaam karna).

6.   **Foot Drill Ke Usul.**   Shoot the foot forward (paon ko teji se aage nikalna).

7.   **Drill Mein Buri Adaten**.   Drill mein buri adaten is prakar se hain:-

   (a)   Aankh ka ghumana (rolling of eyes).

   (b)   Koodna aur fudakna (hopping and jumping).

   (c)   Paon ko ghasit kar chalna (dragging of foot).

   (d)   Arion ko takrana (clicking the heel).

   (e)   Boot mein angulion ko harkat dena.

Words Of Command

8.   Ek sahi word of command nirbhar karta hai awaz ki "tone aur pitch" pe. Durust word of command "clear aur unchi awaz" mein diya jata hai, taaki uska turant amal kiya jaye. Ek ache word of command dene ke liye nimnlikhit baten zaruri hain:-

(a)   <u>Loudness (Swar)</u>.   Word of command ki loudness is baat pe nirbhar karta hai ki word of command kitne logon ko diya ja raha hai ya unki duri kitni hai. Word of command dene ke liye, commander apne aap ko squad ki samne, bichon bich unki taraf muh kar ke khada ho kar diya jata hai. Word of command hamesha – savdhan position mein diya jata hai.

(b)   <u>Clarity (Safai)</u>.   Jeeb (Tongue), lips aur danton ka sahi talmel ke saath clear word of command diya jae. Sust word of command squad mein teji nahi paida karega.

(c)   <u>Pitch</u>.   Durust word of command ke liye sahi pitch ka hona zaruri hai.

(d)   <u>Timing</u>.   Word of command ki sahi timing uske turant amal ke liye bahut hi zaruri hai.Ek word of command ke do bhag hoten hai 'cautionary' aur 'executive'.Cautionary aur executive ke bich char (four) tej kadam ka fasla hona chahiye. Tej chal mein, cautionary word of command, baen pair se shuru hota hai.

(e)   <u>Words of Command</u>.   Drill mein nimlikhit words of command diye jaten hain (Byan ke saath namuna):-

        (i)   Savdhan aur Vishram.

        (ii)   Dahine Mud ya Baen Mud.

        (iii)   Piche Mud ya Aage Mud.

        (iv)   Dahine Dekh ya Baen Dekh.

        (v)   Tej Chal ya Dhire Chal aur Tham.

        (vi)   Khuli Line Chal ya Nikat Line Chal.

        (vii)   Line Ban, Saj ja ya Visarjan.

        (viii)   Dahine Salute, Baen Salute ya Samne Salute.

CHAPTER FD - II

SAVDHAN, VISHRAM, AARAM SE AUR MUDNA

Savdhan, Vishram Aur Aram Se

Savdhan

1.   Jab drill ki koi bhi harkat karni ho toh hamesha savdhan position se hi shuru hoti hai. Iske alawa, apne se senior ke saath baat karni ho to, savdhan position se hi baat ki jaati hai.

2.   **Bayan se Namuna**.   Jab word of command milta hai 'Savdhan' toh baen paon ko 6 inch uthate hue dahine paon ki aaedi ke saath baen paon ki aaedi milaen. Jab baen paon zameen par lagta hai to shout karen 'ek'. Savdhan position mein dekhne ki baten.

      (a)   Dono aaedian mili hui aur toe ka angle 30 degree.

      (b)   Dono ghutne kase hue hon.

      (c)   Dono baju dahine aur baen taraf pant ki silai ke saath mile hue aur mutthi kudrati taur par bandh ho.

      (d)   Pant kheencha hua, chhati uthi hui, kandhe pichhe kheenche hue, gardan collar ke saath mili hui, chin upar aur nigah samne.

Vishram Aur Aram Se

3.   Jab senior ke saath baat khatam kar lete hain to, Vshram ki karyawahi ki jaati hai ya drill ki harkat khatam hone par Vishram aur Aram se ki karyawahi karte hain.

4.   **Bayan se Namuna**.   Jab Savdhan position se word of command milta hai 'Vishram' toh baen paon ko 6 inch upar uthate hue, 12 inch door lejate hue zamin par rakhen aur, saath hi, dono bajuon ko pichhe le jaen, bayen haath niche aur dahina haath upar se pakden aur shouting karen 'ek'. Is position mein dekhne ki baten:-

      (a)   Dono aaedion ke beech 12 inch ka fasla.

      (b)   Dono ghutne kase hue.

      (c)   Dono haath pichhe bandhe, Bayen haath niche aur dahina haath upar se, angulian niche ki taraf, dahina angutha baen anguthe ke upar se.

      (d)   Badan ka bojh dono paon par.

      (e)   "Aram se" ke word of command par, kamar ke upar wale hisse ko dheela Karen lekin, paonse harket nahin hogi.

Khade Khade Mudna

Dahine Mudna

5.   Jab hum ek jagah par khade hon aur 90 degree par dahine taraf apni simmat aur formation ki badli karni ho toh "Dahine Mud" ki karyawahi ki jati hai.

6.   **Ginti aur Bayan se Namuna**.

      (a)   Jab savdhaan position se word of command milta hai ginti se mudna "dahine mud ek" toh is word of command par dahine paon ki aaedi aur baen paon ke panje par dahine taraf 90 degree teji se ghoom jayen aur shout karen 'ek' . Is position mein dekhne ki baten dahina paon

pura zameen par laga hua aur, badan ka bojh dahine paon par, baen paon ka panja zameen par aur aedi uthi hui, dono tangen kasi hui hon.

(b)   Jab word of command milta hai 'do' toh is word of command par baen paon ko 6 inch upar uthate hue dahine paon ke saath savdhaan position mein lagaen aur shout karen do'. Is position mein dekhne ki baten - Dahine taraf 90 degree par simmat ko badli ki hue ho.

Baen Mudna

7.   Jab ham ek jagah par khade hon aur 90 degree par baen taraf apni simmat aur formation ki badli karni ho toh "baen mud" ki karyawahi ki jaati hai.

8.   **Ginti aur Bayan se Namuna**.

(a)   Jab Savdhan position se word of command milta hai "ginti se mudna baen mud ek" toh is word of command par baen paon ki aaedi aur baen paon ke panje ki madad se 90 degree, teji se ghoom jayen aur shouting karen 'ek'. Is position mein dekhne ki baten - badan ka bojh baen paon par aur bane paon pura zameen par laga hua ho, dahine paon ka panja zameen par aur aaedi uthi hui ho, dono tangen kasi hui.

(b)   Jab word of command milta hai 'do' toh dahine paon ko 6 inch upar uthate hue baen paon ke saath savdhaan position mein lagaen aur shouting karen 'do'. Is position mein dekhne ki baten - baen taraf 90 degree par simmat ko badli kiye hue ho.

Pichhe Mudna

9.   Jab ham ek jagah par khade hon aur, 180 degree par piche ki taraf apni formation ko kayam rakhte hue simmat ko badli Karen toh "pichhe mud" ki karyawahi ki jaati hai.

10.   **Ginti aur Bayan se Namuna**.

(a)   Jab Savdhan position se word of command milta hai "ginti se mudna pichhe mud ek" toh is word of command par dahine paon ki aaedi aur baen paon ke panje par 180 degree par teji se ghoom jayen aur shouting karen 'ek'. Is position mein dekhne ki baten - dahina paon pura zameen par laga hua, badan ka bojh dahine paon par, baen paon ka panja zameen par aur aaedi uthi hui. Dono tangen kasi hui aur thai muscle apas mein mile hue.

(b)   Jab word of command milta hai 'do' toh baen paon ko 6 inch upar uthate hue dahine paon ke saath savdhan position mein lagaen aur shouting Karen – 'do'. Is position mein dekhne ki baat - 180 degree par simmat ko badli ki hui ho aur baki position savdhan.

Aadha Dahine Aur Baen Mudna

11.   Jab khade khade squad se salute ka abhyas karwana ho ya iske alawa dahine/baen squad banana ho ya disha badal ki karyawahi karna ho toh adha dahine / baen mud ki karyawahi ki jati hai.

12.   **Ginti aur Bayan se Namuna.**   Ginti aur bayan se namuna usi tarah hai jaise aap dahine /baen mud ka namuna dekh chuke hain, sirf itna fark hai ki adha dahine / baen mudne mein 90 degree ke bajay 45 degree par dahine/ baen ko simmat ki badli karen.

13.   **Abhyas**.   Ustad pure squad ka, ginti se "Word of Command" pe durust abhyas karaen.

CHAPTER FD - III

KADWAR SIZING, LINE BANANA, KHULI AUR NIKAT LINE MARCH

Kadwar Sizing

1.   **Zarurat**. Kadwar sizing ki zarurat drill mein hamesha hoti hai, khas kar ke Ceremonial Drill ke liye. Is mein pure squad ko ke line mein khada karten hai taki Lamba sabse dahine khada ho aur size wise chota uske baen khada ho. Kadwar ki hui parade aur squad, dur se dekhne main achchhe aur sundar lagte hai.

2**.   Bayan**

(a)   Kisi bhi formation mein khade squad ko ceremonial kadwar karne ke liye word of command milta hai - squad lamba dahine - chhota baen - ek line mein kadwar khada ho, to pura squad line tod karke, sabse lamba jawan dahine, baki uske baen khade ho jayenge.

(b)   Jab word of command milta hai - squad ginti kar to lambe se shuru karke - ek, do, teen, char ki ginti karen. Is ke bad word of command - visham ek kadam age aur - sam kadam piche par No 1, 3, 5 ek kadam age lenge aur, No 2, 4, 6 ek kadam piche lenge.

(c)   Is ke bad word of command milta hai - No 1 khada rahe, visham dahine aur sab baen, dahine baen mud. Iss word of command pe squad tej chal se bari bari se jawan No 1 ke piche milenge aur phir in 3s madhya, piche aur age khade honge. Yani No1 agli line (peheli rank) ka 1 hoga, No 3 madhya line ka 1 hoga aur No 5 pichli line ka 1 hoga. No 7 fir No 2 rank ka No 1 hoga. Is tarah se, squad kadwar ho jata hai, jis mein lambe jawan dahine aur baen hote hain aur beech mein chote jawan hote hain.

Teen Line Banana

3.   **Zarurat**. Jab nafri nau se jyada ho to teen file (line) banane ki karyawahi ki jaati hai.

4.   **Bayan.**

(a)   Jab word of command milta hai - No 1 line ban to seekhe hue tarike ke mutabik karyawahi ki jayegi. Isi tarah No 2 bhi No 1 ke piche line ban karega aur fir No 3, No 2 ke ek kadam piche jaakar tham karega aur - up bolega, milkar vishram karenge. Jab word of command milta hai "No 4 line ban" toh No 4 savdhan hokar march karke No 1 ke baen, baju bhar ka fasla rakhte hue tham karega, - up bolega aur milkar vishram karenge. No 5 savdhan aur march karke No 2 ke baen aur No 4 ko cover karke tham karega, - up bolega aur sabhi vishram karenge, No 5 line ban. Jab word of command milta hai No 6 line ban toh No 6 savdhan aur march karke No 3 ke baen aur No 5 ke cover karke tham karega, - up bolega aur milkar sabhi vishram karenge. Baki nafri ko line ban karne ke liye karyawahi isi tarah karte jayen.

(b)   Agar squad ki nafri 11, 14, 17, 20 ki ginti ki ho toh hamesha baen se No 2 file aur madhya line mein khaali jagah rakhi jayegi. Agar squad ki nafri 10, 13, 16, 19 ki ginti ki ho to baen se No 2 file madhya aur pichhli line mein khaali jagah rakhi jayegi. Agar squad 2 ko dahine baen ki taraf munh karna ho toh word of command - squad teenon teen mein dahine / baen chalega dahine / baen mud. Jab teen jawan age hon baki unke piche se cover kiye hon, use teenon teen kahte hain, baki word of command aur karyawahi usi tarah hai jaise ek file mein aapko bata diya hai.

Khuli Line Aur Nikat Line Chal

Khuli Line Chal

5.   **Zarurat.** Jab squad ko shastra qawaid karana ho, ya badi parade mein VIP ko nirikshan karana ho toh 'khuli line' ki karyawahi ki jaati hai.

6.   **Ginti aur Bayan se Namuna.**

(a)   Jab savdhan position se word of command milta hai - ginti se chalna khuli line chal – ek toh is word of command par baen paon ko 6 inch uthate hue 30 inch age dabaen aur bolen ek. Is position mein dekhne wali batein - baen paon 30 inch age poora laga hua, dahine paon ka panja zameen par, aaedi uthi hui, dono tange kasi hui baki position savdhan.

(b)   Jab word of command milta hai squad do. Toh dahine paon ko 6 inch uthate hue 15 inch age len aur baen paon ko teji se uthate hue dahine paon ke saath savdhan position mein milaen aur shout karen 'do'. Is position mein dekhne ki baten - pahle wali jagah se 45 inch ka fasla tai kiya hua aur position savdhan.

Nikat Line Chal

7.   **Zarurat.**Jab nirikshan ho jata to march karne se pahle 'nikat line' ki karyawahi ki jaati hai.

8.   **Ginti aur Bayan se Namuna.**

(a)   Jab savdhan position se word of command milta hai - ginti se chalna – 'nikat line chal ek' toh is word of command par baen paon ko 6 inch upar aur age se uthate hue 30 inch pichhe dabean aur badan ka bojh baen paon par le jayen aur bolen ek. Is position mein dekhne ki baten - baen paon 30 inch pichhe pura laga hua, badan ka bojh baen par, dahine paon ka aaedi lagi hui aur panja khara hua dono tange kasi hui baki position savdhan.

(b)   Jab word of command milta hai squad do. Toh dahine paon ko 6 inch upar uthate hue baen paon se 15 inch pichhe barhaen aur baen paon ko teji se uthate hue dahine paon ke saath savdhan position mein lagaen aur shout karen ek do. Is position mein dekhne ki baten - pahli wali jagah se 45 inch ka fasla tai kiya hua aur position savdhan.

9.   **Abhyas**.   Ustad squad ke sizing karake, khuli line aur nikat line ka abhyas karaye.

CHAPTER FD - IV

KHADE KHADE SALUTE KARNA, PARADE PAR, VISARJAN AUR LINE TOD

Khade Khade Salute Karna

1. **Zarurat.** Jab ham kisi jagah par khade hon aur hamare samne se koi bhi salute lene wale adhikari gujren to unhen izzat dene ke liye khade-khade samne salute ki karyawahi ki jaati hai. Isi tarah, dahine salute va baen salute ki karyawahi ki jaati.

2. **Ginti aur Bayan se Namuna**.

(a) Jab word of command milta hai - ginti se salute karna samne salute ek toh is word of command par dahine baju ko dahine taraf sidha uthate hue kandhe ke barabar layen aur kohni se modte hue anguliyon ko sidhe aur milate hue kalme wali anguli ko dahine ankh ki bhaown se 1 inch upar lagaen, shouting karen 'ek'. Is position mein dekhne ki baten - dahine haath ki anguliyon aur angutha seedha aur mile hue, kalme wali anguli dahine ankh ke bhown se 1 inch aur beech mein kalai se kohni tak 45 degree ke angle par, nigah samne, baki position savdhan.

(b) Jab word of command milta hai squad do toh dahine haath ko nazdik ke raste se teji se giraen, aur shout karen do. Is position mein dekhne ki baten - position savdhan.

Parade Par

3. **Zarurat**. Jab platoon ya troops kisi bhi formation mein drill ground ke kinare par khade honaur unhen parade mein hazir karne ke liye parade par'kiya jata hai. Platoon ko parade par lane se pahle dahina darshak mangwaya jata hai. Squad mein squad commander, platoon mein platoon Hav, company mein CHM dahina darshak hota hai. Darshak ko cover nahin kiya jata hai.

4. **Bayan se Namuna.**

(a) Jab vishram position se word of command milta hai dahina darshak to is word of command par savdhan hon, teen ka thahrao dete hue march karen aur 15 kadam par tham karen aur dahine se saj karen. Is position se word of command milta hai darshak hilo mat toh vishram karen.

(b) Abhi word of command, squad parade par, toh squad darshak ke baen aakar tham karen, baju uthakar dahine se saj ki karyawahi karen, bari-bari baju giraen aur bari bari vishram karen. Baen wale dono jawan milkar vishram karen.

Visarjan

5. **Zarurat**. Jab dubara fall in nahi karna ho aur officer parade par hazir hon toh visarjan ki karyawahi ki jaati hai.

6. **Bayan se Namuna.**Jab savdhan position se word of command milta hai—squad / platoonvisarjan to, dahine mud karke salute karen aur, teen kadam age lekar tham karen aur, sidhe age nikal jayen lekin, sikhlai mein squad ke upar control rakhne ke liye dubara baen mud karen aur savdhan position mein khade rahen.

Line Tod

7. **Zarurat**. Jab thodi der ke liye aaram dena ho aur dubara fall in karna ho toline tod'kikaryawahi ki jaati hai.

8. **Bayan se Namuna**. Line tod ki karyawahi usi tarah hai jaise visarjan mein seekh chukehain - lekin line tod par salute nahin kiya jayega.

9. **Abhyas**. Ustad ke word of command pe squad isi kayawahi ka ginti se abhyas Karens.

CHAPTER FD - V

TEZ CHAL AUR DHIRE CHAL

Tez Chal aur Tham

1.   **Zarurat.** Discipline ko kayam rakhte hue ek jagah se dusri jagah jane ke liye 'tez chal' kiyajata hai. Kadam ki lambai 30 inch hoti hai. Regimeint / units ki kadam ki raftaar ek minute mein 120 kadam, rifle units 140, NCC cadets 116 kadam aur NCC girls cadets 110 kadam per minute hoti hai. Lekin, shuru mein recruits 135 kadam ki raftaar se march karte hain.

2.   **Ginti aur Bayan se Namuna.**

    (a)   Jab savdhan position se word of command milta hai "ginti se chalna tez chal ek" toh is word of command per baen paon ki aaedi 30 inch par age lagaen, dahina baju age kandhe ki line mein, baen baju pura piche, mutthi kudrati taur par band rakhen, yahan tak ke movement ko dekhen. Is position mein dekhne ki baten - Baen paon ki aaedi zameen par lagi hui, panja khada, dahina paon pura zameen par, badan ka bojh, dahine paon par, dono tangen kasi hui, dahina baju age, kandhe ki line mein aur baen haath piche, mutthi kudrati taur par band, baki position savdhan.

    (b)   Jab word of command milta hai "squad do" toh is word of command par paon aur baju ki apas mein badli karen, shout karen 'do'. Is position mein dekhne ki baten dahine paon ki aaedi lagi hui, panja khada hua, bayan paon pura zameen par laga hua aur badan ka bojh baen paon par, bayan baju age dahina baju piche.

    (c)   Jab word of command milta hai "squad ek" toh paon aur bajuon ki phir badli karen. Is position mein dekhne ki baten jo isse pahle seekh chuke hain.

    (d)   Jab word of command "squad tham". Ye word of command us samay milta hai jab bayan paon zameen par ho ya, dahina paon baen paon ko cross kar raha ho to, dahine paon ko 30 inch par pura age rakhen, shout karen 'khaali', phir baen paon ko upar utha kar dahine paon ke saath dabaen aur dahine paon ko teji se 6 inch uthate hue baen paon ke saath savdhan position par lagaen, shout karen 'ek-do'. Is position mein dekhne ki baten - position savdhan.

3.   **Abhyas.**   Ustad ke word of command pe squad ginti se abhyas Karen.

Dhire Chal Aur Tham

4.   **Zarurat**.   Badi parade mein, parade ke nirikshan ke liye VIP ke age jo pilot chalte hain wohdhire chal se chalte hain. Kadam ki lambai 30 inch, kadam ki raftar, 1 minute mein 70 kadam hoti hai.

5.   **Kadam Tol Kar Bayan se Namuna**.

    (a)   Jab savdhan position se word of command milta hai, 'kadam tol kar dhire chalna - bayan paon aage', toh is word of command par baen paon ko 15 inch age teji se, kadam tol kar ruk jayen aur shout karen aage. Is position mein dekhne ki baten - dahina paon pura zameen par laga hua aur, badan ka bojh dahine paon par, bayan paon dahine paon se 15 inch aage, zameen se alag, panja zameen ki taraf kheencha hua, baki position savdhan.

    (b)   Jab word of command milta hai "age badh" to is word of command par baen paon ko 15 inch aur aage badha kar panja pahle zameen par lagaen aur shouting karen 'badho'. Is position mein dekhne ki baten bayan paon pura zameen par laga hua, badan ka bojh pura baen paon par, dahine paon ka panja zameen par, aaedi uthi hui, dono tangen kasi hui, baki position savdhan.

    (c)   Jab word of command milta hai "dahina paon aage" toh dahine paon ko 15 inch aage baen paon se nikalen aur shout karen 'age'. Is position mein dekhne ki baten jo aap baen paon aage mein seekh chuke hain uske ulta.

(d)   Jab word of command milta hai, "aage badh" toh dahine paon ko aur 15 inch aage badha kar panja pahle zameen par lagaen aur shouting karen badho'. Is position mein dekhne ki baten, baen paon ke ulta.

(e)   Jab word of command milta hai "bayan paon aage" toh baen paon ko aage len aur shout karen aage. Is position mein dekhne ki baten jo isse pahle seekh chuke hain.

(f)   Jab word of command milta hai 'tham', ya word of command us samay milta hai jab bayan paon dahine paon ko cross kar raha ho ya dahina paon zameen par laga ho toh baen paon ko 15 inch aage lekar, uthakar dabaen aur teji se dahine paon ko 6 inch uthakar baen paon ke saath milaen aur shout karen 'ek-do'.

6.   **Abhyas**.   Ustad ke word of command pe kadam tol kar abhyas karen.

CHAPTER FD - VI

DAHINE, BAEN, AAGE AUR PEECHE KADAM LENA

Dahine Baju Kadam Lena

1. **Zarurat.** Jab khade khade squad ka dahine wale squad se bagali fasla jyada ho, to uskopura karne ke liye "dahina baju kadam" lene ki karyawahi ki jaati hai. Kadam ki lambai 12 inch aur word of command se - 4 kadam tak dahina baju chal sakte hain. Lagatar word of command dekar 12 kadam tak. Agar isse jyada fasla ho toh dahine mud kar pura kiya jata hai.

2. **Ginti aur Bayan se Namuna.**

   (a) Jab savdhan position se word of command milta hai "ginti se chalna - ek kadam dahina baju chal - ek" toh is word of command par dahine paon ko 6 inch upar uthate hue 12 inch ke fasle par dahine taraf dabaen aur shout karen ek. Is position mein dekhne ki baten - aaedi se aaedi ka fasla 12 inch, badan ka bojh dono paon par baki position savdhan.

   (b) Jab word of command milta hai "squad do", to is word of command par baen paon ko 6 inch upar uthate hue dahine paon ke saath savdhan position mein dabaen aur shout karen 'do',. Is position mein dekhne ki baten - position savdhan.

Baen Baju Kadam Lena

3. **Zarurat**. Jab khade khade squad ka baen wale squad se bagali fasla jyada ho gaya ho tohusko pura karne ke liye baen baju kadam lene ki karyawahi ki jaati hai. Kadam ki lambai 12 inch aur word of command se 4 kadam tak, lagatar 12 kadam tak ja sakte hain.

4. **Ginti aur Bayan se Namuna.**

   (a) Jab savdhan position se word of command milta hai "ginti se chalna ek kadam baen baju chal - 'ek' toh is word of command par baen paon ko 6 inch upar uthate hue 12 inch ke fasle par baen taraf dabaen aur shout karen 'ek'. Is postion mein dekhne ki baten, aaedi se aaedi ka fasla 12 inch, badan ka bojh dono paon par, baki position savdhan.

   (b) Jab word of command milta hai "squad do" to, dahine paon ko 6 inch upar uthate hue baen paon ke saath savdhan position mein lagaen. Is position mein dekhne ki baten - position savdhan.

Aage Kadam Lena

5. **Zarurat.** Jab khade khade squad ka agle squad se thoda jyada fasla ho jaye toh fasle ko pura karne ke liye age kadam lene ki karyawahi ki jaati hai. Aage kadam lene ke liye kadam ki lambai 30 inch aur aakhiri kadam 15 inch. Word of command se age teen kadam tak ja sakte hain.

6. **Ginti aur Bayan se Namuna.**

   (a) Jab savdhan position se word of command milta hai "ginti se chalna ek kadam aage chal - ek" to, is word of command par baen paon ko 6 inch uthate hue 30 inch age lagaen aur agle paon par sawar ho jayen shouting karen 'ek'. Is position mein dekhne ki baten - baen paon 30 inch par pura age laga hua, badan ka bojh baen paon par, dahine paon ka panja zamin par aaedi uthi hui, baki position savdhan.

   (b) Jab word of command milta hai "squad do" to, is word of command par dahine paon ko 6 inch utha kar baen paon ke saath teji se savdhan postion mein dabaen aur shout karen 'do'. Is position mein dekhne ki baten - position savdhan.

Piche Kadam Lena

7.   **Zarurat.**   Jab khade khade squad ka pichhle squad se thoda jyada fasla ho gaya ho toh fasle ko pura karne ke liye piche kadam lene ki karyawahi ki jaati hai. Kadam ki lambai 30 inch aur kadam piche ja sakte hain.

8.   **Ginti aur Bayan se Namuna.**

       (a)   Jab savdhan position se word of command milta hai "ginti se chalna ek kadam piche chal - ek" toh is word of command par baen paon ko 6 inch upar uthate hue 30 inch par pura piche dabaen aur shouting karen 'ek'. Is position mein dekhne ki baten - baen paon 30 inch par pura piche laga hua aur badan ka bojh baen paon par, dahine paon ki aaedi lagi hui aur panja khada hua, baki position savdhan.

       (b)   Jab word of command milta hai "squad do" toh is word of command par dahine paon ko 6 inch upar uthate hue baen paon ke saath savdhan postion mein milaen, shout karen 'do'. Is position mein dekhne ki baten - postion savdhan.

9.   **Abhyas.**   Ustad ke word of command pe, squad

CHAPTER FD – VII

TEZ CHAL SE MUDNA

Tez Chal Se Dahine Mudna

1.   **Zarurat.**   Jab tej chal se march karte hue kisi simmat ko ja rahe hon aur 90 degree par apni simmat ya formation ko dahini taraf badli karni ho to, dahine mud ki karyawahi ki jaati hai.

2.   **Ginti aur Bayan se Namuna.**

   (a)   Tej chal se word of command milta hai "ginti se mudna dahine mud - ek", ye word of command us samay milta hai jab dahina paon baen paon ko cross kar raha ho ya, baen paon zameen par laga ho toh is word of command par dahine paon ko 15 inch age zameen par rakhen aur chalti halat mein ruk jayen aur shouting karen 'ek'.Is position mein dekhne ki baten - dahina paon zameen par, badan ka panja zameen par aur aedi uthi hui, baen baju age dahina baju piche chalti halat mein.

   (b)   Jab word of command milta hai "squad do" toh is word of command par baen paon ko dadam taal ki halat main age uthaen, aur baju savdhan ki halat mein le jayen shout karen 'do'. Is position mein dekhne ki baten, dahina paon pura zameen par, badan ka bajh dahine paon par, baen paon kadam taal ki halat mein baki position savdhan.

   (c)   Jab word of command milta hai "squad teen" toh dahine paon ki aaedi par dahine taraf 90 degree par ghoom jayen aur baen paon ko savdhan position mein lagaen aur dahine paon ko teji se 15 inch age kadam tol ki halat mein nikalen aur shouting karen teen. Is position mein dekhne ki baten baen paon pura zameen par laga hua badan ka bojh baen paon par dahina paon 15 inch age kadam tol ki halat mein baki position savdhan.

   (d)   Jab word of command milta hai "squad chaar" toh dahine paon ko 15 inch age aaedi lagate hue tej chal ko shuru karen aur shout karen 'badho'. Squad chaar badho tham khaali ek-do.

Tez Chal Se Baen Mudna

3.   **Zarurat.**   Jab tej chal se march karte hue kisi bhi simmat ko ja rahe hon, aur 90 degree parapni simmat ya formation ko baen taraf badli karni ho toh baen mud ki karyawahi ki jaati hai.

4.   **Ginti aur Bayan se Namuna**.

   (a)   Tej chal se word fo command milta hai "ginti se mudna baen mud ek", ye word of command us samay milta hai jab baen paon dahine paon ko cross kar raha ho ya dahine paon ki aaedi zameen par lag rahi ho toh baen paon ko 15 inch age zameen par rakhen aur chalti halat mein ruk jayen, shouting karen ek. Is position mein dekhne ki baten baen paon pura zameen par badam ka bojh baen paon par dahine paon ka panja jaimn par aedi uthi hui, dahina baju age baen baju piche chalti halat mein.

   (b)   Jab word of command milta hai "squad do" toh is word of command par dahine paon ko kadam taal ki halat mein age uthaen aur baju savdhan position mein layen, shoutkaren do'. Is position mein dekhne ki baten - baen paon pura zameen par laga hua badan ka bojh baen paon par, dahina paon kadam taal ki halat mein, baki position savdhan.

   (c)   Jab word of command milta hai "squad teen" toh baen paon ki aaedi par baen taraf 90 degree par ghoom jayen aur dahine paon ko savdhan position mein lagaen aur baen paon ko teji se 15 inch age kadam tol ki halat mein, baki position savdhan.

   (d)   Jab word of command milta hai "squad chaar" to, baen paon ko 15 inch age aedi lagakar tej chal shuru karen aur shout karen badho. Squad chaar badho - squad tham khaali ek-do.

Tez Chal Se Piche Mudna

5.   **Zarurat.**   Jab tej chal se march karte hue kisi bhi simmat ko ja rahe hon, aur 180 degreepar formation ko kayam rakhte hue simmat ki badli karni ho toh piche mud ki karyawahi ki jaati hai.

6.   **Ginti aur Bayan se Namuna**.

   (a)   Tej chal se word of command milta hai "ginti se mudna piche mud ek", ye word of command us samay milta hai jab baen paon dahine paon ko cross kar raha ho ya dahine paon ki aedi zameen par lag rahi ho toh baen paon ko khaali jane den, dahine paon ko 15 inch age lagate hi chalti halat mein ruk jaen, shout karen 'khaali ek'. Is position mein dekhne ki baten - dahine mud ke No 1 movement ki tarah.

   (b)   Jab word of command milta hai "squad do" toh dahine paon ki aaedi par 90 degree dahine taraf ghoom jayen aur baen paon ko dahine paon ke saath savdhan postion mein lagaen, shout karen 'do'. Is postion mein dekhne ki baten, 90 degree dahine turn kiya hua, baki postion savdhan.

   (c)   Jab word of command milta hai "squad teen" toh is word of command par baen paon ke panje par dahine taraf 90 degree par aur ghoom jayen, saath hi dahine paon ko 6 inch utharkar savdhan position mein lagaen aur shout karen teen. Is position mein dekhne ki baten - position savdhan.

   (d)   Jab word of command milta hai "squad chaar" toh postion aur direction ko durust karne ke liye baen paon ko 6 inch upar uthate hue dahine paon ke saath savdhan postion mein lagaen. Is position mein dekhne ki baten 180 degree piche turn kiya hua baki postion savdhan.

   (e)   Jab word of command milta hai squad panch to, dahine paon ko 30 inch age nikalkar tej chal ki karyawahi shuru karen aur shout karen 'badho'. Squad paanch badho tham kaho ek-do.

7.   **Abhyas.**   Ustad ke word of command pe, squad se ginti se abhyas karaen.

CHAPTER FD - VIII

TEZ CHAL SE SALUTE KARNA

Tez Chal Se Samne Salute Karna

1.   **Zarurat.**   Jab hamein kisi Officer ya, JCO se baat karni ho ya, unhone hamen apne paasbulaya ho to unhen izzat dene ke liye tej chal se samne salute ki karyawahi ki jaati hai.

2.   **Ginti aur Bayan se Namuna**.

   (a)   Tej chal se word of command milta hai "ginti se salute karna samne salute – ek" ye word of command usi tarah milta hai jaise tej chal mein tham karte hain.Is position mein dekhne ki baten - position savdhan.

   (b)   Jab word of command milta hai "squad do" toh is word of command par ek bar khade khade samne salute ki karyawahi karen.Squad do - ek-do-teen-ek. Is position mein dekhne ki baten, ek bar khade khade samne salute ki karyawahi ki hui, baki position savdhan.

   (c)   Jab word of command milta hai "squad teen" toh is word of command par dubara salute karen. Squad teen, ek-do-teen-ek. Is position mien dekhne ki baten - position No 2 ki tarah.

   (d)   Jab word of command milta hai "squad chaar" toh is word of command par piche mud karen. Squad chaar - ek-do-teen-ek, (dubare piche mud karen). Is position mein dekhne ki baten - 180 degree direction ki badli ki hui baki position savdhan.

   (e)   Jab word of command milta hai "squad panch" to, baen paon se tej chal shuru karen aur shout karen badho'. Squad panch - badho -squad tham khaali ek-do.

Tez Chal Se Dahine Salute Karna

3.   **Zarurat**.   Jab tez chal se march karte hue kisi bhi simmat ko ja rahe hon, dahine taraf koisalute lene wale adhikari milen to unhen izzat dene ki liye dahine salute ki karyawahi ki jaati hai.

4.   **Ginti aur Bayan se Namuna.**

   (a)   Tej chal se word of command milta hai "ginti se salute karna dahine salute ek" ya word of command us samay milta hai jab dahina paon baen paon ko cross kar raha ho ya baen paon ki aaedi zameen par lag rahi ho, toh dahine paon ko khaali aur baen paon ki aedi lagte hi dahine salute karen aur chalti halat mein ruk jaen, shout karen khaali ek'. Is postion mein dekhne ki baten - baen paon ki aaedi zameen par panja khada, dahina paon pura zameen par, badan ka bojh dahine paon par, dono tange kasi hui, salute seekhe hue tarike se kiya hua, nigh puri dahine taraf, baki position savdhan.

   (b)   Jab word of command milta hai "squad do" toh dahine paon se do ki ginti shuru karte hue paanch ki ginti tak march karen aur ruk jayen. Squad do - do-teen –char-paanch. Is position mein dekhne ki baten, panch kadam ka jamini faasla tai kiya hua baki position No 1 ki tarah.

   (c)   Jab word of command milta hai "squad teen" toh dahine paon ki aaedi ka lagna chehre ko aage lena salute ko girana ek saath karen aur shout karen 'down'. Squad teen-down. Is position mein dekhne ki baten, dahine paon ki aaedi 30 inch aagelagi hui panja khada badan do bojh baen paon par, salute giraya hua, baki position savdhan.

   (d)   Jab word of command milta hai "squad chaar" to baen paon se tej chal ki karyawahi shuru karen aur shout karen 'badho'. Squad chaar - badho squad tham - khaali ek-do.

Tez Chal Se Baen Salute Karna

5.   **Zarurat**.   Jab tej chal se march karte hue kisi bhi simmat ko ja rahe hon, baen taraf koisalute lene wale adhikari milen toh unhem izzat dene ki liye baen salute ki karyawahi ki jaati hai.

6. **Ginti aur Bayan se Namuna.**

(a)   Tej chal se word of command milta hai "ginti se salute karna baen salute – ek" ye word of command us samay milta hai jab dahina paon baen paon ko cross kar raha ho ya baen paon ki aaedi zameen par lag rahi ho, toh dahine paon ko khaali aur baen paon ki aedi lagte hi baen salute karen aur chalti halat mein ruk jaen, shouting karen khaali ek.Is postion mein dekhne ki baten - baen paon ki aedi zameen par panja khada, dahina paonpura zameen par, badan ka bojh dahine paon par, dono tangent kasi hui, salute seekhe hue tarike se mutabik kiya hua, nigah puri baen taraf, baki position savdhan.

(b)   Jab word of command milta hai "squad do" toh dahine paon se march ko jari karen aur paanch ki ginti karke ruk jayen. Squad do - do-teen –char-paanch. Is position mein dekhne ki baten, panch kadam ka jaimni fasla tai kiya hua baki position No 1 ki tarah.

(c)   Jab word of command milta hai "squad teen" toh dahine paon ki aaedi ka lagna chehre ko samne lana salute ko girana ek saath karen aur shouting karen down, Squad teen - down. Is position mein dekhne ki baten - dahine paon 30 inch age, aaedi lagi hui panja khada baen paon pura zameen par, badan ka bojh baen paon par, salute giraya hua, baki position savdhan.

(d)   Jab word of command milta hai "squad chaar" toh baen paon se tej chal ki karyawahi shuru karen aur shout karen 'badho'. Squad char - badho- squad tham -khaili ek-do.

7.   **Abhyas.**   Ustad ke word of command pe, squad se ginti se Tej Chal se samne salute, Tej chal se dahine salute aur Tej Chal se baen salute karne ka abhyas karaye.

CHAPTER FD - IX

TEZ KADAM TAAL AUR THAM

Tez Kadam Taal Aur Tham

1.   **Zarurat**.   Covering, dressing aur fasle ko pura karne ke liye khade khade Tej Kadam Taalaur Tham ki karyawahi ki jaati hai.

2.   **Bayan se Namuna**.

   (a)   Jab savdhan position se word of command milta hai "tej kadam taal" toh is word of command par baen paon ko teji se age aur upar uthane, aur teji se baen paon zamin par dabaen, aur aedi ko zamin par savdhan position mein layen, jab aedi jameen par lag jaati hai toh dahine paon ko teji se upar 12 inch uthate hue baen paon ki tarah jameen par lagaen. Isi tarah paon ki apas mein badli karte jayen.

   (b)   Jab word of command milta hai "squad tham", ye word of command us samay milta hai jab baen paon zamin par lag raha ho ya dahina paon pura utha hua ho toh dahine paon ko teji se savdhan position me dabaen aur shout karen 'up'.

Abhyas

3.   **Abhyas.**   Ustad ke word of command pe, squad se ginti se abhyas karaen.

CHAPTER FD - X

TEZ KADAM TAAL SE KADAM BADALNA

Tez Kadam Taal Se Kadam Badalna

1.   **Zarurat**.   Jab tez kadam taal kar rahe hon aur, agar kisi jawan ka dusre jawan se kadam tutjaye to, kadam badal ki karyawahi karke kadam milaya jata hai.

2.   **Bayan se Namuna**.

      (a)   Jab tez kadam taal se word of command milta hai "kadam badal", ya word of command us samay milta hai jab baen / dahina paon zamin par ho toh is word of command par jis paon ko do bar kadam taal karna ho us paon par kadam aur dusre paon par badal bola jayega (jis paon ko do bar kadam taal kiya ho us paon par shout karen baen, baen/dahina, dahina).

      (b)   Word of command - tej kadam taal, baen dahina kadam badal- baen baen dahina squad tham -ek-do. Is position mein dekhne ki baten, tej kadam taal se kadam badal ki karyawahi ki hui baki position savdhan.

Abhyas

3.   **Abhyas.**   Ustad ke word of command pe, squad se ginti se abhyas karaen

CHAPTER FD - XI

TEENON TEEN SE EK FILE AUR EK FILE SE TEENON TEEN BANANA

Teenon Teen Se Ek File Banana

1.   **Zarurat.**   Jab teenon teen mein march karke ja rahe hon toh kisi tang raste se ya pul yalecture hall mein jana ho toh ek file banane ki karyawahi ki jaati hai aur jab pul ya tang raste ko cross kar liya jata hai toh ek file se teenon teen banaya jata hai.

2.   **Bayan.** Jab teenon teen se word of command milta hai"ek file bana - agli line tej chal" toh agli line (sabse baen wali line) tej chal ki karyawahi shuru karti hai. Jab agli line ka baen wala (sabse aakhiri) jawan madhya line ke paas se gujarta hai toh madhya line tej chal ki karyawahi karti hai. Isi tarah pichhli line tej chal se karyawahi karti hai.

Ek File Se Teenon Teen Banana

3.   **Bayan**. Jab ek file se word of command milta hai "squad teenon teen banaye ga - madhya aur pichhli line tej chal" tohmadhya aur pichhli line dono tej chal karke apni apni jagah jayenge. Rifle ke bayonet stud par charhaen."Squad sangeen - ek-do-teen-char". Is position mein dekhne wali baten, baen haath ki chaaron angulian sidhe angutha mila hua, baen baju seedha, sangeen rifle mein laga hua. "Squad savdhan" toh is word of command par rifle ko piche khinchte hue savdhan postion mein layen. Is position mein dekhne ki baten, position savdhan.

4.   **Abhyas.**   Ustad ke word of command pe, squad se abhyas karaen.

CHAPTER AD - I

RIFLE KE SAATH SAVDHAN, VISHRAM AUR AARAM SE

Rifle Ke Saath Savdhan

1. **Zarurat.** Jab hamare pas rifle ho aur kisi senior se baat karni ho ya shastra qawaid ki koiharkat shuru karni ho toh savdhan position se shuru ki jaati hai.

2. **Bayan se Namuna**. Jab word of command milta hai"squad savdhan"toh is word ofcommand par sikhe hue tarike se paon ko harkat den. Dahine haath se rifle ko pura pichhe khenchte hue hel butt par sawar karen aur shout karen 'ek'. Is position mein dekhne ki baten position savdhan khali haath ki tarah, rifle ki position heel butt par dahine haath ki taraf point karta hua. Kalai rifle ke pichhe cover kiya hua.

Vishraam Aur Aaram Se

3. **Zarurat**. Senior ke saath bat khatm ho jane par vishram aur aram se kiya jata hai.

4. **Bayan se Namuna**. Jab savdhan position se word of command milta hai "vishram" toh sikhe hue tarike se baen paon ko baen taraf le jayen. Saath hi rifle ko dahine haath se aage ko dhakelen aur shout karen 'ek'. Is position me dekhne ki baten, baen paon ki position jaise khali haath mein seekh chuke hain. Dahine haath se rifle pura age dhakela hua, Dahini kohni ka kham nikala hua. Bayan baju savdhan position mein. Word of command milta hai "aaram se", to sikhe hue tarike se karyawahi karen. Is position me dekhne ki baten, jaise khali haath mein seekh chuke hain.

5. **Abhyas.** Ustad ke word of command pe, squad abhyas kare.

CHAPTER AD - II

RIFLE KE SAATH PARADE PAR AUR SAJ

1.   **Zarurat**.   Jab rifle ke saath thodi dur harkat karni ho ya, saj ki karyawahi karni ho toh samtol shastra ki karyawahi ki jaati jai.

2.   **Bayan se Namuna**.

   (a)   Jab savdhan position se word of command milta hai "Squad Parade Par" toh is word of command par dahine haath se rifle ko zamin se sidhe ek ya 1.5 inch upar uthate hue shout karen 'ek'. Is position mein dekhne ki baten. Rifle zamin se 1 ya 1.5 inch upar sidha uthaya hua, baki position savdhan. Is ke bad squad tej chal se rifle ko uthate hue parade par ata hai aur tham karta hai. Tham ke saath hi rifle ko zamin pe rakha jata hai.

   (b)   Is ke bad word of command milta hai 'saj' toh squad ki pehli line (rank) apna baen hat ko uthata hai, rifle ko samtol position me late hue, aur sikhe hue tarike se saj ki karwahi karta hai.(Jaise khali haath drill me ki jati hai).

3.   **Abhyas**.   Ustad ke word of command pe squad abhyas kare.

CHAPTER AD - III

RIFLE KE SAATH VISARJAN AUR LINE TOD

Rifle Ke Saath Visarjan Aur Line Tod

1.   Yeh karwahi usi tarah ki jati hai jaise, khali haath drill mein ki jati hai, sirf farak itna hai ki, Visarjan ya Line Tod se pehle, rifle ko bagal shastra ki position mein layi jaati hai.

2.   **Bayan se Namuna**.

   (a)   Jab savdhan position se word of command milta hai "squad / platoon visarjan" toh dahine mud karen, bagal shastra karen, salute karen aur, teen kadam aage lekar tham karen aur, sidhe aage nikal jayen.

   (b)   Line Tod ki karyawahi usi tarah hai jaise rifle ke saath visarjan mein seekh chuke hain - lekin line tod par bagal shastra position mein, salute nahin kiya jayega.

3.   **Abhyas.**   Ustad ke word of command pe squad isi kayawahi ka abhyas kare.

CHAPTER AD - IV

BHUMI SHASTRA AUR UTHAO SHASTRA

Bhumi Shastra

1. **Zarurat**. Jab rifle ko savdhan position se zamin pe rakhna ho to 'Bhumi Shastra' kikaryawahi ki jati hai.

2. **Bayan se Namuna**.

(a) Jab savdhan position se word of command milta hai "Bhumi Shastra" toh body ko savdhan position se sidha aage ko jhukao aur shout karo 'ek'. Is position mein dekhne wali baten, ghutne khule hue par aaedi judi hui, rifle dahine haath mein, barrel aage ki taraf aur magazine bahar ki taraf zamin par touch karti hui.

(b) Jab word of command milta hai 'do' toh rifle ko zamin pe chod do, aur savdhan position mein vaapis aajao aur shout karo 'do'.

'Ek'pe Position

'Do' pe Position

Uthao Shastra

3. **Zarurat**. Jab rifle ko savdhan position se zamin se uthana ho toh 'Uthao Shastra' ki karyawahi ki jati hai.

4. **Bayan se Namuna**.

(a) Jab savdhan position se word of command milta hai "Uthao Shastra" to, body ko savdhan position se sidha age ko jhukao aur shout karo 'ek'. Is position mein dekhne wali baten, ghutne khule hue par aedi judi hui, aur dahine haath, dahine toe ki line mein, barrel ko pakde hue, aur rifle zamin se thodi si uthi hui.

(b) Jab word of command milta hai 'do' to, rifle ko zamin se teji se utha kar savdhan position mein ajao aur shout karo'do'.

5. **Abhyas**. Ustad ke word of command pe squad isi karyawai ka abhyas kare.

CHAPTER AD - V

BAGAL SHASTRA AUR BAJU SHASTRA

Bagal Shastra

1.   **Zarurat**.   Rifle ke saath ek jagah se dusri jagah jana ho toh bagal shastra se march karkejaate hain. Iske alawa, badi parades mein regiment / unit contingent, bagal shastra se march past karte hain. Quarter guard mein khada sentry Nb/Sub se Captain tak ko, bagal shastra se salute karta hai.

2.   **Bayan se Namuna**.

   (a)   Jab savdhan position se word of command milta hai, ginti se "bagal shastra ek" to, is word of command par dahine haath se rifle ko thoda upar uchhalen aur saath hi baen haath se forehand guard aur dahine haath se pistol grip ko ek saath pakden aur shout karen 'ek'. Is position mein dekhne ki baten, bayan haath kohni se kalai tak kamar belt ki line mein zamin ke mutabiki, chaaron angulion bahar se angutha andar se pakda hua. Dahine haath se pistol grip ko mazbuti se pakda hua, dahine haath sidha, baki position savdhan.

    (b)   Jab word of command milta hai "squad do" toh baen haath ko teji se savdhan position mein layen aur shout karen 'do'. Is position mein dekhne ki baten, rifle bagal shastra baaki position savdhan.

Baju Shastra

3.   **Zarurat**.   Bagal Shastra se rifle ko niche lane ke liye Baju Shastra ki karyawahi ki jati hai.Parade samapti hone ke bad bhi Bagal Shastra se Baju Shastra ki karyawahi karte hain.

4.   **Bayan se Namuna**.

    (a)   Jab savdhan position se word of command milta hai, "ginti se Baju Shastra ek" toh is word of command par bayen haath se flash hider ke niche se barrel ko grip karen, aur shout karen 'ek'. Is position mein dekhne ki baten, baen haath se barrel ko mutthi bhar pakda hua, baen haath ki kalai chhaati ke saath mili hui, baaki position pahle ki tarah.

    (b)   Jab word of command milta hai "squad do" toh baen haath se rifle ko sidha niche le jayen, dahine haath ko chod kar dubara rifle ke forehand guard se savdhan position ki tarah pakden, aur shout karen 'do'. Is position mein dekhne ki baten, baen haath se flash hider U ke shape mein pakda hua, dahine haath se forehand guard ko pakda hua, chaaron angulian bahar se angutha andar se, savdhan position ki tarah pakda hua, rifle zamin se ek inch upar butt toe ke barabar.

    (c)   Jab word command milta hai "squad teen" toh is word of command par baen haath ko savdhan position mein layen aur ko dahine haath se zamin par savdhan position mein layen, aur

shout karen 'teen'. Is position mein dekhne ki baten, bagal shastra ki karyawahi ki hui, baki position savdhan.

Ek Pe Posn　　　　　　**Do Pe Posn**　　　　　　**Teen Pe Posn**

5.　　**Abhyas**.　　　Ustad ke word of command pe squad isi karyawahi ka abhyas kare.

CHAPTER AD - VI

SALAMI SHASTRA

Salami Shastra

1. **Zarurat.**   Rifle ke saath salami shastr, unche darje ka salute hai. Badi parades mein ya guard of honour mein VIP ko izzat dene ke liye aur quarter guard mein khara sentry, Major se upar wale Officer ko izzat dene ke liye Salami Shastra ki karyawahi karta hai.

2. **Bayan se Namuna.**

    (a)   Jab savdhan position se word of command milta hai, ginti se "Salami Shastra ek" toh is word of command par dahine haath se rifle ko sidha upar uchhalen aur baen haath se forehand guard aur dahine haath se small of the butt ko pakden aur shout karen 'ek'.Is position mein dekhne ki baten, baen haath fore hand guard par chaaron angulian bahar se aur angutha andar se pakra hua, charon angulian bahar se angutha andar se zameen ki taraf point karte hue, rifle badan ke dahini taraf 90 degree par. Baki position pahle ki tarah.

    (b)   Jab word of command milta hai "squad do" toh is word of command par dono haathon ki madad se rifle ko badan ke samne aur bich mein layen, saath hi baen haath ko chhor kar rifle ke baen bagal mein lagaen aur shout karen 'do'. Is position mein dekhne ki baten, rifle badan ke samne aur beech main 90 degree par khari magazine aage, kohni se kalai tak rifle se mili hui, baen haath ki chaaron angulian aur angutha mila hua aur cocking handle kalme wali anguli aur anguthe ke bich, baki position savdhan.

    (c)   Jab word of command milta hai "squad teen" toh is word of command par dahine haath se rifle ko niche khinchen aur sidha karen, baen haath se rifle ko samne se pakaren, dahina paon sidha saath hi chalti halat se, rifle ko samne se pakaren, dahina paon sidha saath hi chalti halat mein baen paon ki piche lagaen, shout karen 'teen'. Is position mein dekhne ki baten, rifle baen haath se forehand guard se pakre hue, angutha baen taraf khara, dahina haath butt par, charon angulian aur angutha zameen ki taraf point karta hua, barrel nak se 6 inch dur, dahina paon baen paon ke piche chalti halat mein laga hua. Baaki position savdhan.
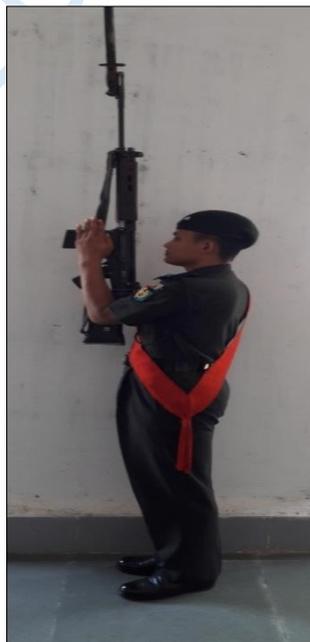
Ek Pe Posn   **Do Pe Posn**   **Teen Pe Posn**

Salami Shastra Se Baju Shastra

3.   **Zarurat**.   Salami Shastra se rifle ko niche lane ke liye Baju Shastra ki karyawahi ki jaati hai.

4.   **Bayan se Namuna**.

(a)   Jab Salami Shastra se word of command milta hai, ginti se "Baju Shastra ek' toh is word of command par dahine haath ko baen haath ke upar pakden aur dahine paon ko uthakar baen paon ke saath savdhan position mein lagaen aur shouting karen 'ek'.Is position mein dekhne ki baten, rifle usi position mein, dahine haath se baen haath ke upar hand guard pakra hua. Baaki position savdhan.

(b)   Jab word of command "squad do" toh is word of command par dahine haath se rifle ko dahine le jaen aur baen haath ko chhor kar flash hider se U shape mein pakaren, rifle zamin se 1 inch upar, dubara rifle ke hand guard se savdhan position ki tarah pakden, shout karen 'do'. Is position mein dekhne ki baten, baen haath se flash hider U shape mein pakra hua, dhaine haath ki chaaron angulian bahar se angutha andar se, savdhaan position ki tarah pakra hua, rifle zamin se ek inch upar butt toe ke barabar.

(c)   Jab word of command "squad teen" toh is word of command par baen haath ko teji se savdhan position mein layen aur dahine haath se rifle ko zamin par savdhan position mein layen, shout karen 'teen'. Is position mein dekhne ki baten, position savdhan.
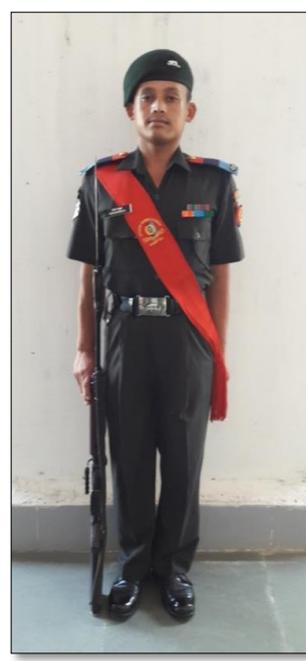
   Abhyas.   Ustad ke word of command pe squad isi kayawahi ka abhyas kare.

Ek Pe Posn   **Do Pe Posn**   **Teen Pe Posn**

CHAPTER AD - VII

SQUAD DRILL

Uddesh

1.   Squad Drill ka abhyas karana hai.

Tartib

2.   Ustad squad ko kadwar sizing karke sabak ko do bhagon me chalayega:-

(a)   Bhag I -   Word of Command pe Rifle ke saath khade khade squad drill ka abhyas karana hai.

(b)   Bhag II -   Word of Command pe Rifle ke saath Tej Chal se squad drill ka abhyas karana hai.

CHAPTER CD - I

GUARD MOUNTING

Guard Mounting Ka Tarika

1.   **Zarurat.**   Guard Mounting aam taur pe Quarter Guard ya kisi bhi authorized adhikari (General Officer) ke awaas pe ya visit ke dauran ki jaati hai.

2.   **Bayan va Tarika**.

(a)   Guard mounting ke liye 2+6 jawanon ki zarurat hoti hai. Is mein 6 jawan aur guard commander aur guard ka 2IC hota hai. Guard mount hone ke liye hamesha, do ranks mein 'fall in' hoti hai, jis mein guard commander sabse dahine hota hai aur, guard 2IC agli rank ke sabse baen hota hai.

(b)   Guard Mounting NCO guard ke saamne 12 kadam pe hota hai. Woh guard ko "fall in" karega aur inspect karega. Iska tarika is prakar se hai:-

(i)   Jab word of command milta hai "Guard-Parade Par" toh puri guard savdhan karegi, guard mounting ke sthan pe march karegi, tham karke saamne mud karegi aur 'khuli line' karegi aur vishram karegi.

(ii)   Jab word of command milta hai 'Guard Savdhan' toh guard savdhan hogi.

(iii)   Jab word of command milta hai "Guard Dahine Saj" toh guard commander dahine mud karega, 5 kadam march karega, tham aur piche mud karega. Phir pehle agli line ko saj karega, phir, pichli line ko saj karega aur word of command dega "samne dekh" aur phir apni position pe waapis aa jaega.

(iv)   Jab word of command milta hai "Guard Bagal Shastra" toh guard bagal shastra ki karywahi keregi.

(v)   Iske baad guard mounting NCO, Orderly Officer (Nirikshin Adhikari) ko repoprt dega "Guard nirikshan ke liye haazir hai' (Orderly Officer ka sthan guard mounting NCO se 6 kadam piche hota hai). Report dekar guard NCO, guard ke dahine, guard commander se 6 kadam ke fasle par march karke, saamne mud karke khada hojaega.

(c)   Orderly Officer. Orderly officer ab guard ko is tarike se nirikshan karega aur mount karega:-

(i)   Word of command dega "Guard-Baju-Shastra. Guard baju shastra karegi aur savdhan mein khadi hogi. Orderly Officer ek-ek karke guard ka nirikshan karega – pehle agli line phir pichli line. Nirikshan ke baad Orderly Officer waapis apne sthan pe aa jata hai.

(ii)   Word of command dega "Guard Nirikshan ke liye Janch Shastra" toh guard 'Nirikshan ke lie Janch Shastra' ki karyawahi karegi. Orderly Officer ab ek-ek karke haathiyar ka nirikshan karta hai, aur guard commander se shuru karta hai. Guard commander apne nirikshan ke baad "fall out" karta hai, aur Orderly Officer ke saath baaki guard ka nirikshan karwata hai. Nirikshan ke baad, Orderly Officer waapis apne sthan pe jata hai aur guard cmmander apne sthan pe.

(iii)   Word of command dega "Guard-Bolt Chalao" toh guard sikhe hue tarike se bolt ko dhire se aage chodti hai aur band karti hai.

(iv) Word of command dega "Guard-Baju Shastra" toh guard Baju Shastra ki karywahi karegi.

(v) Word of command dega "Number - Samne Ki line - stick orderly-stick orderly Line Tod" to niyukt kiya hua stick orderly line tod ki karywahi karega aur guard mounting NCO ke dahine jaakar khada ho jaega.

(vi) Word of command dega "Guard-Bagal Shastra" toh guard Bagal Shastra ki karywahi kerega.

(vii) Word of command dega "Guard - Apne Duty ke Liye Dahine Se-TejChal" to guard march off karti hai, orderly officer ko 'dahine dekh' ki karyewahi karti hai aur phir purani guard se takeover ki karyewahi karti hai.

(d) **Guard Room ki Karyawahi**.   Sentry jab nayi guard ko aate hue dekhta hai toh woh purani guard ko "Turn Out" karta hai. Nayi guard jab apne diye hue sthan pe khadi ho jaati hai toh purana guard commander, apni guard ko nayi guard ke saamne, 15 kadam pe "fall in" karta hai. Ab, purani guard, nayi guard ko "salami shastra" deti hai aur nai guard bhi purani guard ko "salami shastra" karti hai. Is ke bad, dono guard ek-ek karke, "baju shastra" karke "aram se" karte hain. Iske baad, nayi guard ka sentry, purane guard ke sentry ko 'relief' karta hai, jo purana guard 2IC karwata hai. Ab purani guard visarjan karti hai aur nayi guard unko "salami shastra" deti hai aur purani guard, nai guard ke samne se gujarti hui, "dahine dekh" karti hai.

(e) **Sentries ki Badli.**   Guard commander naye sentry ko sentry post tak march karte hue le jaega. Bagair kisi word of command ke, naya sentry, purane sentry ke baen position lega aur saamne mudega. Ab guard commander, dono sentry ke saamne 3 kadam pe khada hoga aur sentry ko uski duties ke bare mein bataega. Iske baad gaurd commander word of command dega "SentryBadli" toh purana sentry do kadam aage chalega aur naya sentry do kadam dahine lega. Ab naya sentry apni post lega aur guard commander purane sentry ko word of command dega"Purana sentry – Tej Chal" aur usko guard room mein lejae ga. Ab naya sentry bagal shastra karega aur apne sthan pe jaake khada ho jaega.

3.   **Abhyas**.   Ustad ke word of command pe squad isi kayawahi ka abhyas kare.

CHAPTER CD - II

GUARD OF HONOUR

Guard Of Honour Ka Tarika

1.   **Zarurat.**   NCC cadets dwara Guard of Honour nimnlikhit adhikarion ko pradaan ki jaati hai jab woh kisi NCC camp ka visit karte hain ya phir aise mauke hon jahaan pe uchh adhikari invite kiye gaye hon:-

    (a)   Rashtrapati, Up-Rashtrapati aur Pradhan Mantri.

    (b)   Governors and Lt Governors.

    (c)   Raksha Mantri aur Raksha Rajya Mantri.

    (d)   States ke Mukhya Mantri.

    (e)   Sena / Nau Sena / Vayu Sena Pramukh.

    (f)   The Defence Secretary.

    (g)   Command ka General Officer Commanding-in-Chief (Army Wing Ke liye)

    (h)   Nau Sena Command ke Flag Officer Commanding-in-chief (Naval Wing units only).

    (j)   Vayu Sena ke Air Officer Commanding-in-Chief (Air Wing Units only).

    (k)   Sena/Nau Sena/Vayu Sena ke Up Parmukh.

    (l)   The Dignitaries addressing the convocation of a University.

    (m)   University ke Chancellor.

    (n)   University ke Pro-Chancellor / Vice Chancellor as Chief guest.

    (o)   Director General NCC.

2.   **Bayan va Tarika**.

    (a)   Guard do ranks mein form up karegi, agli line aur pichli line mein 4 kadam ka faasla hoga. Guard Officer aur Colour JCO, agli line se 2 kadam aage aur centre mein honge. Guard commander agli line se 8 kadam aage hoga, cadet se cadet ka faasla 24 inch hoga.

    (b)   Band, guard ke agli line ki seedh mein uske dahine 7 kadam pe hoga.

    (c)   Do stick orderly dias ke dahine aur baen khade honge, dias ke agle kinare se 2 kadam dahine aur baen.

    (d)   Conducting adhikari, VIP ko receive karke, dias ke dahine aur 3 kadm piche khadahoga.

3.   **Guard ki Nafri.**   Guard of Honour ki nafri is prakar se hogi:-

    (a)   **For President.** 150 rank and file, 3 divisions mein.

    (b)   **For Vice President and Prime Minister**.   100 rank and file, 2 division mein.

4.   **Salutes**.

(a)   **Rashtriya Salute.**   Kewal Rashtrapati ya Governors ko apne rajya mein..

(b)   **General Salute.**   Major General aur uske upar ke rank ke adhikari.

(c)   **Salami Shastra.**   To all VIPs.

5.   **Inspection / Nirikshan.**   Iske liye tartib is prakar se hogi:-

    (a)   VIP ke aane ke samay, guard savdhan mein hogi.

    (b)   VIP ke dias pe pahuchne par, guard, VIP ke aude ke mutabik, Rashtriya / General Salute ya Salami Shastra karegi aur fir Baju Shastra karegi.

    (c)   Guard commander, aage badh kar VIP ko report dega "Unit Samman Guard - Aap ke Nirikshan ke liye haazir hai- Sriman (Srimati Ji)". Salute kar ke guard commander VIP ka wait karega.

    (d)   VIP dias se utar ke guard ki taraf bade ga. Guard commander VIP ko escort karega aur uske baen rahe ga. Band ke pahale jawan ki line mein aate hi, guard commander VIP ke dahine aur unki line mein ho jaye ga.

    (e)   Pilot - sirf President ke liye hi aage chalenge.

    (f)   Nirikshan ke dauran, sabhi ranks VIP ke taraf nazar milaen ge. Band nazar saamne rakhe VIP ke saath saath, sabhi ke sir bhi harkat karenge. Nirikshan khatam hote hi band band hojaega, aur isi pe sabhi ranks aage dekhne lagenge. Sirf agli line ka hi nirikshan hoga.

    (g)   Nirikshan ke baad, VIP ko waapis dias pe guard commander escort kare ga. Guard commander VIP ko salute karke apne sthan pe wapis aa jaega. VIP ke jaane ke baad guard ko 'vishram' diya jaega.

6.   **Abhyas**.   Ustad ke word of command pe squad isi karyawahi ka abhyas kare.

SUMMARY

Foot Drill

1.   Drill hume Discipline shikhati hai aur humare bearing, smartness, appearance aur turnout mein sudhar lati hai. Saath hi self-confidence ko badane mein madad karti hai. Drill hume order manna sikhati hai.

2.   Word of command ki loudness is baat pe nirbhar karta hai ki word of Command kitne logon ko diya jar aha hai ya unki duri kitni hai. Word of Command clarity (Safai), Pitch and Timing par nirbhar karta hai. Ek acha command sabhi ko achi tarah se samaj aana chahiye.

3.   Savdhan, Vishram, Aram se ya Khade khade mudhna drill ke sabse mehtavpuran movements hain.

4.   *Khuli line* - VIP ko nirikshan karana ho toh Khuli line karyawahi ki Jaati hai.

5.   *Nikat Line* – Jab nirikshan ho jata hai toh march karne se pehle 'Nikat Line' ki karyawahi ki jaati hai.

6.   *Khade Khade Salute* – Humare samne se koi bhi salute lene wale adhikari gujren toh unhen izzat dene ke liye khade-khade salute ki karyawahi ki jaati hai.

7.   Discipline ko kayam rakhte hue ek jagah se dusri jagah jane ke liye 'Tej Chal kiya jata hain. Dhire Chal parade ke nirikshan ke liye VIP ke aage jo pilot chalte hai who dhire chal se chalte hain.

8.   Jaise ki 'Ginti se Salute-dahine salute ek', 'Squad Do' (Squad two), 'Squad Chhe' (Squad six), 'Squad Saat' (Squad seven), yeh bahut hi mahatvapurn movements hai aur sabhi cadets ko iski jankari honi chahiye.

Arms Drill

9.   *Rifle ke Saath Savdhan* - savdhan khali haath ki tarah, rifle ki position heel butt par dahine haath ki taraf point karta hua. Kalai rifle ke pichhe cover kiya hua.

10.   *Rifle ke Saath Vishraam aur Aaram Se* – Baen paon ki position jaise khali haath mein seekh chuke hain. Dahine haath se rifle pura aage dhakela hua, Dahini kohni ka kham nikala hua. Bayan baju savdhan position mein.

11.   Word of command milta hai "aaram se", to sikhe hue tarike se karyawahi karen. Is position me dekhne ki baten, jaise khali haath mein seekh chuke hain.

12.   *Rifle ke saath Visarjan* - Jab savdhan position se word of command milta hai "squad / platoon visarjan" toh dahine mud karen, bagal shastra karen, salute karen aur, teen kadam aage lekar tham karen aur, sidhe aage nikal jayen.

13.   *Bhumi Shastra* - Jab rifle ko savdhan position se zamin pe rakhna ho to 'Bhumi Shastra' ki karyawahi ki jati hai.

14.   *Uthao Shastra* - Jab rifle ko savdhan position se zamin se uthana ho toh 'Uthao Shastra' ki karyawahi ki jati hai.

15.   *Bagal Shastra*:-

(a)   Rifle ke saath ek jagah se dusri jagah jana ho toh bagal shastra se march karke jaate hain.
(b)   Badi parades mein regiment / unit contingent, bagal shastra se march past karte hain.
(c)   Quarter guard mein khada sentry Nb/Sub se Captain tak ko, bagal shastra se salute karta hai.

16.   Bagal Shastra se rifle ko niche lane ke liye Baju Shastra ki karyawahi ki jati hai. Parade samapti hone ke bad bhi Bagal Shastra se Baju Shastra ki karyawahi karte hain.

17.   *Rifle ke saath salami shastra* - unche darje ka salute hai. Badi parades mein ya guard of honour mein VIP ko izzat dene ke liye aur quarter guard mein khara sentry, Major se upar wale Officer ko izzat dene ke liye Salami Shastra ki karyawahi karta hai.

18.   *Baju Shastra* - Salami Shastra se rifle ko niche lane ke liye Baju Shastra ki karyawahi ki jaati hai.

Ceremonial Drill

19.   Guard mounting aam taur pe Quarter Guard ya kisi bhi authorized adhikari (General Officer) ke awaas pe ya visit ke dauran ki jaati hai.

20.   **Guard ki Nafri**.   Guard of Honour ki nafri is prakar se hogi:-

(a)   *For President*.   150 rank and file, 3 divisions mein.
(b)   *For Vice President and Prime Minister*.   100 rank and file, 2 division mein.

21.   **Salutes.**

(a)   *Rashtriya Salute*.   Kewal Rashtrapati ya Governors ko apne rajya mein.
(b)   *General Salute*.   Major General aur uske upar ke rank ke adhikari.
(c)   *Salami Shastra*.   To all VIPs

CHAPTER WT - I

INTRODUCTION TO .22 RIFLE

Introduction

1.   Point 22 rifle ek halaka aur sadharan hathiyar hai. Aam tor par is hatiyar ka istemal NCC cadet ko firing me hone wali ghabrahat ko dur karne ke liye istemal karte hain. Isliye jaruri hai ki is hatiyar ka istemal karne se pehle iske bare mein jaankari honi chahiye taaki cadet iska sahi istemal kar saken

Point 22 Rifle ki Viseshtaen

Ser No	Details	Rifle Point 22" No II MK IV BA	Rifle Point 22" Delux BA
(a)	Length	45 inch	43 inch
(b)	Weight	3.93 Kg	2.78 Kg
(c)	Magzine Capacity	10 Rounds	05 Rounds
(d)	Muzzle Velocity	2700' per second	2700' per second
(e)	Grooves in the barrel	06 RH	06 RH
(f)	Effective Range	25 yards (23 meters)	25 yards (23 meters)
(g)	Max Range	1700 yds at 33^0 angle (1550 meters)	1700 yds at 33^0 angle (1550 meters)
(h)	Calibre	Point 22"	Point 22"
(j)	Ammunition	Point 22"	Point 22"
(k)	Rate of fire :-		
	(i) Normal	05 rounds per minute	05 rounds per minute
	(ii) Rapid	10-15 rounds/minute	10-15 rounds/ minute

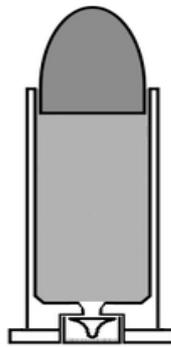
Rifle Point 22" MK IV

Rifle Point 22" DELUXE BA

Point 22 Ammunition Ki Viseshtaen

2.   **Point 22 Ammunition**.

(a)	Calibre		-	Point 22"
( )	Bullet		-	10 mm
( )	Bullet with Case		-	15 mm
( )			-	38/40 gm
( )	let			Lead / Copper
( )	Type of Ammunition		-	Rim / Rimless
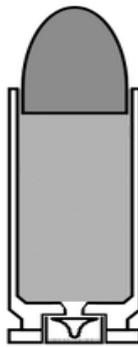
RIMLESS
CARTRIDGE

RIMMED
CARTRIDGE

Difference Between Rimlees and Rimmed Ammunition

Rifle point 22 ko Kholna – Jorna aur Sight Setting

3.   **Kholna.**   Rifle ko kholne ki tarkib mein sab se pahle bayonet, phir sling, bolt aur case collector ko khola jata hai. Sling ko utaren aur roll karte hue ground sheet par rakh den. Safety catch ki position 'S' par karen, bolt lever ko upar ki taraf uthate hue bolt ko piche ki taraf khichein aur rifle se alag karen. Aakhir mein case collector catch ko dabate huye case collector ko alag Karen aur saaf jagah pe rakhen.

4.   **Jorna.** Yakin Karen **safety catch ki position 'R'** par hai. Bolt ko uthaen aur bolt head ko tight karen.Uske baad bolt ko guide ke saath milate hue fit karein. Jorte samay yadi ek se jyada rifle khulahai to uske purzon ke registration number check karlen. Trigger dabaen, **safety catch** ki position **'S'** par Karen aur case collector ka chota mehrava age ki ore rakhte hue use fit karen. Sling ko rifle mein fit karen. Bayonet sabse baad mein fit karen.

5.   **Sight Setting.** Sight set karne ke liye thumb spring ko press karo aur sight ko set karo.Muzzle ki taraf le jane se range badhti hai.

Safai Karne Ka Tarika

6.   Point 22" rifle ko bhi Anaya hathiyar ki taraha Safaai kiya jata hai.

    (a)   **Aam Safai**.

        (i)   **Daily Safai**.   Aam taur par daily hathiyar training ke liye nikalte hain. Hathiyar ka dusting karke Kote mein jama karte hain.

        (ii)   **Weekly Safai**. Saptah me ek bar hathiyar ko bahar nikala jata hai aur sabhi hisse purjon mein oil badli kiya jata hain.

        (iii)   **Quarterly Safai**.

            (aa)   Quarterly ke douran pure hathiyar ko khola jata hai aur jaruri suda hathiyar oil aur greasing kiya jata hai.

            (ab)   Hathiyar ke hisse purjon ki tut- phut check ki jaati hai aur unhe marammat kiya jata hai.

    (b)   **Firing Ke Dauran Safai**.

        (i)   Firing se pahle hathiyar ki tut phut ko armourer dwara check karate hain.

        (ii) Lagaatar hathiyar ki safai karte hain aur armourer dwara   inspection karate hain.

        (iii)   Firing ke dauran jab bhi firer ko mauka milta hai to wah apne hathiyar ko saaf karta rehta hai.

    (c)   **Firing Ke Baad Ki Safai**.

        (i)   Firing ke baad firer kam se kam 07 din garm pani dalkar barrel ko saaf karte hain.

        (ii)   Uske baad armourer dwara inspection karaya jata hai.

Note: Safai ke liye Chindhi ka size 4x1.5 inch aur Oil ke saath chindi size 4x1 inch.

7.   **Abhyas**.   Squad ko groupon mein baanto aur .22 Rifle ko kholne aur jorne ke tarike ka abhyas class ko karwao.

Sankshep

8.   Point 22" Rifle ek bahut hi kargar aur sidha sadha hathiyar hai jiski madad se cadet ko durust fire karne ka tarika sikhaya jata hai. Iss hathiyaar ki achhi jankari hone se cadets ko achha firer banaya ja sakta hai.

CHAPTER WT - II

HANDLING OF .22 RIFLE

Introduction

1.   Ek acche firer ki khubi hoti hai ki who tezi se rifle ko bhare, load kare aur durust fire kare. Yeh tabhi sambhav ho sakta hai jab training ke dauran acchi sikhlai aur abhyas kara hua ho.

Point 22" Rifle Ko Bharna, Cock Karna Aur Khali Karne Ka Byan / Namuna

2.   **Rifle ko Bharne ki Karwahi**.   Point 22" Deluxe Rifle ke sath koi charger nahi diya jata hai. Ammunition ko siddha mag men ek ek karke bhara jata hai. Bharne se pehele ammunition ko saaf karlen.

3.   **Loading, Cocking aur Unloading**.

(a)   Loading, cocking aur unloading ki karwahi hamesha hokum pe hi ki jati hai. Karwahi hamesha tezi se aur sahi tartib se hi ki jati hai.

(b)   Is karwahi ko letke karne ke liye drill is parkar se hai:-

(i)   Letne ke liye, bayen paer se ek lamba kadam len, rifle ko bayen hanth men pakren, phir dahina hanth zamin pe rakhen, bayen paer ki line men aur let jaen. Let te sayam, dono tange khuli honi chahiye. Ab rifle ke bolt ko piche khinch ke, age push karo taki round chamber men load ho jaye.

(ii)   Unload karne ke liye, bolt ko piche kincho, taki fire kiya hua round bahar nikal jaye.

Lying Position Aur Holding Ka Byan Va Namuna

4.   Iss position mein badan ka khaka chhota banta hai, jis se larai ke maidan mein nichi se niche aar ke pichhe se dushman ki najar aur fire se bachte hue dushman ke upar kargar fire dal sakte hai.

5.   **Position Lene KaTarika**.   Sabse pehle target ki sidh mein khare ho jaen, chalti halat mein baen paon ko thora baen aur age len, sath hi rifle kobaen hath men pakren. Iske bad daen hath se zamin ka sahara lete hue, let jaen. Rifle ko dahine rakhen aur bayen haath ki kohni ko tab tak harkat den jab tak ki target, baen kohni, dahina kandha aur dahina paon ek seedh mein na aajae. Ab dahini kohni ko us jagah par rakhen jahan par kohni dahine aur thora kandhe ke niche ho. Dono haathon ki hatheli ko thudi ke neeche lagakar aankhen band Karen aur badan ke tanav ko mahsoos Karen, yadi badan mein tanav hai to kohni usi jagah rakhte hue badan ko aage peechhe karte hue tanav ko door Karen aur kohni ki jagah ko mark kar den.

6.   **Holding (Durust Pakar)**.   Rifle ki pakar haasil karne ke liye kandhe mein le jaen. Baen haath ki kalmen wali anguli aur anguthe ke beech jo 'V' banta hai wahan par rifle ko rakhen. Hand guard niche wali hatheli ke upar aajae. Charon angulian bahar se aur angutha andar se saath hi magazine ko kalai ke saath hona chahiye. Poori pakar ko majboot karne ke liye baen kohni ke loose mans ko zamin par jamate hue thora aage push Karen, dahine kohni ke loose mans ko kaabu rakhne ke liye kohni ko apni taraf khiche. Yadi rifle upar point karrahi ho to dahine hath koaage Karen. Agar niche point karrahi ho to dahine hath kopichhe Karen. Agar baen point karrahi ho to dahine pair ko baen kare. Agar dahine point karrahi ho to position thora dahine Karen. Khara hone ke

Durust Trigger Control Aur Fire

7.   **Trigger Control**.   Durust trigger control keliyet artib is parkar se hai :-

(a)   Durust trigger operation ke liye kalmiwali anguli (index finger) ka sahi istemal hai. Anguli ka pehla aur dusre jor ke beech ki jagah ko trigger ke upar rakhte hai.

(b)   Trigger ke do khichav hai, halka aur sakht khichav. Pahla khichav haasil karne ke baad dusra khichav hasil karen. Trigger dabate samay barrel harkat nahin karni chahiye.

(c)   Sahi trigger operation k ikarwai karne ke liye firer ko tin disk ex di jati hai. Is men rifle ko ready karo aur barrel par tin disk rakho aur trigger ko press karo. Agar tin disk niche nahin girti hai to trigger operation ki karwahi sahi hai.

8.   **Shot Fire Karne ki Tartib.**   Sahi shot fire karne ke liye sahi position aur pakar, sahi eyesight, aiming, dimag aur trigger control men durust tal-mel se hi hasil ho sakta hai. Is ke liye tartib is parkar se hai:-

(a)   Sahi position ikhtiyar karen. Kudrati seedhai ko check karen.

(b)   Rif ko bhar karen, Ready karen, sahi sight lagaen aur sahi alignment hasil karein. Dimagi taur par un angon ko check kare jinko rifle ko hold karne mein madad karte hain. Jaise baen hath ki kohni, kalai, dahina kandha, dahine haath ki pakar aur kalmewali anguli.

(c)   Ab saans ko normal chalne den aur, back sight aperture ka madhya se foresight tip ko POA se milao. Fore sight tip 6 baje aur 12 baje ki line mein harkat karni chahiye.

(d)   Trigger ka pahla khichav haasil karne ke baad kuch samay ke liye saans ko roken. Aur sight picture ko check karen. Uske baad poora dhyan fore sight tip par le jaen aur trigger dabayen to goli fire ho jaegi.

(e)   Goli fire ho jaane ke baad usi pakar, position aur sisht ko kayam rakhte hue foresight tip ki movement ko check karen foresight ki tip jahan point karegi goli usi jagah par lagegi.

(f)   Ab saans koc hhor den aur maar'ko pukaren. Goli fire hone se maar pukarane tak ki karwai ko follow through kahte hain.

CHAPTER WT - III

RANGE PROCEDURE AND THEORY OF GROUP

Introduction

1.   Shooting ke darje banaye rakhne ke lie, troops range par pistol, carbine rifle aur lmg fire mein abhyas karte hain. hamare desh mein short range to takriban har unit mein paaye jaate hain lekin classification range bahut kam jagah par hote hain. range allottment ka pura faide uthane ke lie fire se pahle samay se range fire ke lie tayar karna aur range par durust range drill par amal karne se sabhi trainees ko fire mein abhyas diya ja sakta hai.

Fire Se Pahle Ki Taiyariyan Aur Zaruri Baatein

2.   **Fire Se Pahle Ki Taiyariyan**.   Range per, range standing orders, pamphlet Inf training vol I aur range course ke mutabiq fire ke lie taiyar karna chahiye taaki, fire samay par shuru kiya ja sake aur fire ke dauran koi hadsa na ho. Range ki taiyari mein nimnlikhit baatein shamil ki jaen:-

(a)   Stop butt ke dahine kinare par 20' uncha staff pole jis par 6'x6' ka lal jhanda laga ho.

(b)   Stop butt ki mitti naram aur usmen pathar ya sikka na ho.

(c)   Target bahar wale kinare se 20' andar ki taraf ho.

(d)   Stop butt par 2'x3' chauri target number plate lagi ho.

(e)   Markers gallery ke bayen taraf 12' pole par 4'x4' ka lal jhanda laga ho.

(f)   Mantlet butt ki mitti naram aur usmen bhi koi pathar ya sikka na ho.

(g)   Firing point aur trenches par format ke mutabik naram mitti se bhara sand bag ho.

(h)   Area saaf ho.

(j)   Range ke ek taraf munasib jagah par nimnlikhit stand lagaye jaen.

(i)   Ammunition.

(ii)   Armour.

(iii)   Nursing Assistant.

(iv)   Sights kala karne ki jagah (Fore sight Blanking Point).

(k)   Milap ke liye telephone line lay kiya hua sath hi radio set kabandobast.

(l)   Sentries, nafri aur jagah range standing order ke mutabik, lal coat men ho.

3.   **Annya Taiyariyan**.

(a)   Range clearance.

(b)   Firers ka nominal roll taiyar karna.

(c)   Hathiyaron ki before firing inspection.

(d)   Ammunition ka bandobast.

(e)   Milap ke sadhan ka prabandh.

      (f)   Butt party bantna.

      (g)   Working party bantna.

      (h)   Coaches ka bandobast.

      (j)   Hathiyar safai ke lie saman.

      (k)   Warning boards taiyar karna.

      (l)   Armourer, Nursing Assistant aur bugler ka saman ke sath bandobast.

      (m)   Practice ke mutabik target taiyar karna.

      (n)   Temporary camp lagane ka bandobast yadi range unit se dur ho.

      (o)   <u>Documents</u>.

              (i)   Firing point register.

              (ii)   Butt register.

              (iii)   Range course SAO 12/S/85 (new RANGE course).

              (iv)   No damage certificate.

              (v)   Lead deposite certificate.

              (vi)   Ammunition aur fired case ka detail.

Practice Conduct Karna Aur Suraksha Sambandhi Baten

4.   **Practice Conduct Karna**.   Range par firer ko 2 groups mein baant diya jata hai, Firing Group aur Training Group.

5.   **Firing Group**.   Pure firers ko details mein bant diya jata hai aur ek samay par chaar (4) detail range par kaam kar rahi hoti hain yani ki.

      (a)   Firing Detail.

      (b)   Waiting detail – do (2).

      (c)   Ammunition collection detail.

6.   **Target Group.** Firing point se pichhe target group ko nimnlikhit abhyas ke lie lagaya jata hai.

      (a)   Aiming.

      (b)   Trigger operation.

      (c)   Holding.

      (d)   Roken dur karna.

      (e)   Firers ki jati galti ke lie sudharak exercise aur coaching.

      (f)   TsOET.

Suraksha Sambandhi Baatein

7. **Firing Point se Phele**.

    (a)   Hathiyar clear, magazine utra hua aur safety device laga hua.

    (b)   Muzzle hamesha surakshit disha mein.

    (c)   Drill cartridge ka istemal nahin.

    (d)   Ammunition practice ke mutabik issue.

    (e)   Harkat chal kar.

    (f)   Chamber hamesha khali.

    (g)   Dry exercise se pahle hathiyar ka nirikshan.

8. **Firing Point Par**.

    (a)   Ammunition ki safai aur damage check.

    (b)   Barrel surakshit disha.

    (c)   Bhar hukam se.

    (d)   Sahi khali kar.

    (e)   Barkhilap karwai par fire band.

    (f)   Roken dur karte samay savdhani.

Theory of Groups

9. **Group Aur Uski MPI**.   Firing ke dauran yeh janna zaruri hai ki jab hum kabhi bhi ek se jada goli fire karten hai, jin ki shiht, ammunition, weapon ya firing conditions sman hain, to sabhi goli target pe ek hi jagah nahi lagengi. Is men ek pattern banta hai, aur is ke kai karan ho sakte hain. Ek group banane ke liye, paanch goli jo ki ek sath aur ek hi aiming point par fire ki hon, ko liya jata hai. In paanch goliyon ke group ke Kendra Bindu (central point) ko group ka Mean Point of Impact (MPI) kehte hain.

10. **Grouping Capacity**.   Kisi bhi firer dwara fire ki gayi paanch golion ke circle ke diare (diameter) ko us firer ki Grouping Capacity kehte hain.

    (a)   Coaching ya scoring ke hisab se firers ko unki Grouping Capacity ke mutabik classify kiya jata hai, jaise 2 inch, 4 inch etc. Yeh grouping, 100 m ya 25 m pe napi jati hai.

    (b)   Yeh jaan lena chahiye ki, ek firer ki Grouping Capacity ka anuman tabhi sahi lage ga jab, usne har goli sahi shist leke fire ki ho. Agar kisi firer se, galti se, bagair durust shist ke, koi goli fire ho jaati hai toh us goli ko Grouping Capacity ke liye nzarandaz kar dena chahiye.

    (c)   Grouping ki ahmiyat, hathiyar ki zeroing ke liye bahut hi zaruri hai. Agar koi firer, ek hi point of aim (POA) ko lekar, paanch goli fire karta hai, aur uska MPI, point of aim se hatkar hai, toh iska matlab us weapon ko zero karna zaruri hai. Zeroing ke liye, foresight ya back sight, mein kuch tabdili ki jati hai taki, MPI aur POA ke bich ka fasla bilkul kam ho.

    (d)   Ek baar ksi firer ki grouping hojati hai toh, uske baad, us firer ki zimmewari hai ki woh, samay samay par apni grouping ko barkarar rakhe aur, ho sake toh usmein aur bhi improvement laye.

11. **Dhyan Mein Rakhne Wali Baten**.

   (a)   Accuracy' speed se jyada zaruri hai.

   (b)   POA ko bataya nahi jata.

   (c)   Butt hamesha kandhe pe hota hai, re-aiming ka samay bachane ke liye.

   (d)   Durust bolt ki karwahi taki reloading me samay barbad na ho.

Advance Shooting Competition

12.   The advance shooting is held at "National Rifle Association of India"(NRAI) Target. This target has five "Bulls". In this competition a cadet is supposed to fire at a distance of 25 yards, but, from three different positions.

   (a)   Lying Position.   In this position, first of all, the cadet will fire five bullets for "sight setting". After this he/she will set his/her sight, according to the bullets fired on the target.   Then the cadet will again fire five bullets, so that each bullet hits their respective bulls.

   (a)   Kneeling Position.   In this position, the cadet will fire five bullets and adjust his/her sight. After that, he/she will take the kneeling position and will fire 10 bullets in such a way that each bull takes 2 bullets.

   (a)   Standing Position.   In this position, 5 bullets are fired on the target while standing, after the sight is adjusted, 10 bullets will be fired in such a way that each bull gets two bullets.

13.   Therefore, in "Advance Shooting" each position requires '5' bullets for "Sight Setting" and 25 bullets more for firing are made available. Each "hit" gives a mark-status. Maximum marks in this shooting are 25.

Sankshep

14.   Ek achche firer ke liye durust grouping aur zeroing karna bahut hi zaruri hai. Is se target pe durust firing ki ja sakti hai. Snap shooting ke liye durust zeroing ke alawa, durust shist aur trigger operation ki zarurat hai. Hamesha 'ek goli ek dushman' ka buniyadi usul yaad rakhe.

CHAPTER WT - IV

SHORT RANGE FIRING

Introduction

1.   Jis tarah bimar ke lakshan ko dekh kar bimari ka pata chalta hain, usi tarah, target par goliyon ki maar ya group ka vishleshan karne se, hone wali galtiya ka pata chalta hain. Group me goliyon ki maar aur unke failav ko dekh kar firer ki kabliayat ka asani se pata lagaya ja sakta hai.

Short Range Firing (Point 22 Rifle)

Practice	Target Type	Range in Yards	Rounds	Instructions	Scoring
Deliberate	1' x 1'	25	10	(a) Position lying supported (b) One practice of 5 rounds	Bull & Inner – 03 points Magpie – 02 points Outer – 01 points HPs – 15 points

Note:- Out of 12 rounds authorized per cadets, 2 rounds will be pooled for zeroing and re-classification of failures.

Aiming and Alteration of Sight

2.   **Zarurat.**   Firing ke dauran agar yeh pata chalta hai ki, durust aim aur firing ke babzood goli POA se upar ya niche lagti hai to, back sight ko adjust karke setting karna zaruri hai.

3.   **Elevation.**   Back sight ko jo adjustment karni hai who niche diye table ki madad se ki ja sakti hai jis men, 100 yds pe jo change karte hain, us se MPI kitni badalti hai.

Range Target	Rise or Drop of MPI on Target
200 Yards	6 inches
300 Yards	12 inches
400 Yards	18 inches
500 Yards	24 inches

4.   Sight men 50 yards ki alteration se, upar diye hue effect adhe ho jate hain, aur agar sight men 200 yards ki alteration ki jati hai to, upar diya hua effect double ho jatahai.

Sankshep

5.   Range pe durust firing karna sabhi ka kartavya hai. Is liye agar goli target pe nahi lagti hai to turant sight men alteration karke goli target pe marna zaruri hain.

SUMMARY

1.   Range mein firing karne se ek cadet weapon training ke kala mein maharat hasil karne mein madat karta hain aur saath hi hathiyar ko self protection mein istemal karna seekh ta hain.

2.   Rifle .22 No MK-II, MK IV and Deluxe BA kialag-alag visheshtaen hain jaise ki; wazan, lambai, magazine ki capacity, velocity, range, calibre, ammunition and rate of fire.

3.   Rifle ko kholte aur jodhte waqt dhayn rakhna chahiye ki rifle ke hisse purje mix na ho jaye. Saath hi Sight setting ka bhi dhyan rakhna chahiye.

4.   Rifle ki efficiency uske saaf safai aur dekh bhal par nirbhar karti hai aur saath firer ki skill par bhi nirbhar karti hai.

5.   Ladai ke samay mein ek soldier ko jald se jald rifle ko load karna aur accurate fire karna aana chahiye. Lying position firing ke liye sabse achi position hoti hain. Firing ke teen basic usul hai, Majboot pakad, Sahi aiming aur durust trigger operation.

6.   Firing ko safe aur sahi tariqe se karane ke liyes ahi range procedure follow karna bahut zaruri hain. Firing ki taiyari bahut hi detail mein karni chahiye aur teen bhago mein baant na chahiye; before firing, during firing and after firing. Sabhi orders aur instructions ko follow karke hi firing ko suru karna chahiye.

7.   Short range firing 25 yardse figure 1'x1' target par karayi jaati hain.

8.   Sight alteration ya zeroing bullets ko Point of Aim mein lane ke liye karai jaati hain. Sight alteration back sight ko adjust karke kiya jaata hain.

CHAPTER PD - I

PERSONALITY DEVELOPMENT CAPSULE

Introduction

1.   An individual's personality is the complex of mental characteristics that makes them unique from other people. It includes all patterns of thought and emotions that cause us to do and say things in particular ways. Personality development is, developing a personality so as to create a strong positive impression about self with the targeted group. It is very important to maintain one's personality to prove in a long run.

The Concept of Life Skills

2.   Skills are acquired through practice and patience. A skilled person uses less time, energy and resources to do a job and produces quality results. Enhancing Life Skills enables us to adapt to situations and people and helps us to lead a healthy and positive life.

3.   WHO has defined life skills as "abilities for adopting positive behaviour that enable individuals to deal effectively with the demands and challenges of everyday life."

4.   There are ten core Life skills which help in enhancing the personality of an individual. They are as follows:-

        (a)   **Self Awareness**.   Recognition of self, our character, strengths and weaknesses, desires, likes and dislikes, and skills. Being aware of the good points about oneself helps young people build a sense of self-esteem and self-confidence. Being aware of their weaknesses will make young people willing to learn more. This also helps them utilize the opportunities available to them in relation to their abilities. Self-awareness is necessary for developing a positive attitude towards life.

        (b)   **Empathy.**   Is the ability to be sensitive to another person's situation, to understand his/her concerns, worries, fears and needs and how they feel. Empathy works wonders when we apply it to our relationships – with our loved ones, classmates, parents, friends, cousins and colleagues. It helps us move closer to solutions, to resolve conflicts, and enhance our quality of life.

        (c)   **Critical Thinking**.   Is the ability to analyse information and experience in an objective manner. It can help us recognize and assess the factors that influence our attitude and behaviour, such as media and peer pressure influences.

        (d)   **Creative Thinking.**   Creativity is the ability to generate new ideas by combining, changing, or reapplying existing ideas. It helps us to look beyond our direct experience, and to respond adaptively and with flexibility to situations in our daily lives.

        (e)   **Problem Solving Skills**.   Enable us to deal with problems in our lives in a constructive manner. The process of problem solving involves various steps. They are identifying the problem, exploring the available alternative and deciding on the best possible solution.

        (f)   **Decision Making**.   Decision making is to choose from the varied options based on the existing knowledge of the topic under consideration keeping in mind the positive or negative consequences of each of the option.

        (g)   **Interpersonal Relationship**.   Ability to establish positive relationships helps us to relate in positive ways with the people we interact with. This means being able to make and maintain friendly relationships, which can be of great importance to our mental and social well-being. It may also mean being able to end relationships constructively. Positive relationships help in the growth of the individuals involved.

(h)   **Effective Communication**.   This is the ability to express, verbally through spoken or written language and non-verbally through gestures and body movements, in ways that are culturally acceptable.

(j)   **Coping with Emotions**.   Being aware of the predominant emotion that preoccupies the mind at any point of time, knowing how emotions influence behaviour, and being able to respond to emotions appropriately.

(k)   **Coping with Stress**.   Means recognizing the source of stress in our lives, recognizing how this affects us physically and emotionally, and acting in ways that help us control our levels of stress, by changing our environment or life style and learning how to relax.

FACTORS INFLUENCING / SHAPING PERSONALITY

5.   Traditionally, modern psychological studies suggest that factors such as the ones below have a lasting effect on an individual's personality.

6.   **Hereditary**.   Your personality can be influenced by the genes you may have inherited from either your mother's or your father's side or a combination of both.   Apart from inheriting physical attributes, like height, weight and skin/hair colour, psychologists have ascertained that our mental aptitudes and temperaments which have the potential for influencing our personality are to a certain extent, hereditary.

7.   **Self-Development**.   Of the other factors, self-development is the most important factor that can influence one's personality.   Self-awareness is the key; it entails believing in oneself and one's capabilities. It implies that despite one's family and environmental background or one's current circumstance, one remains in control/charge of moulding his/her personality.   Such a person is aware that personality is a changing, evolving process and does everything possible to enhance his/her personality.

8.   **Environment**. Our environment can also play a significant role on our personality.   Right from early childhood through all the stages of development, our home and family, our school and teachers, our friends and colleagues at work, all exert influence on the development of our personality.   Besides these, the location where we live and the society we associate with, the country of our birth and the culture we have adopted, are all critical factors that influence our personality.

9.   **Education**.   Education falls into two categories; school smarts and street smarts.   Thus, the most effective way of shaping one's personality is to have a taste of both types and experience both worlds. School smarts are the knowledge gained from school while street smarts are the learning that came from even the most unlikely sources.

10.   **Life-situations**.   Our situations in life are constantly changing and these can affect our personality in varying degrees.   Some have greater opportunities in life like better amenities, better schools and greater advantages than others.   Learning skills, life skills, communicative skills and language skills although partially latent in some, can only be acquired through personal effort and gained through practice and experience.   Hence it is our competence in handling life-situations that can positively influence our personality.

11.   **Past Experiences**.   Experience is one of the major determinants of personality, it could affect a person either positively or negatively.   For instance, a person who has harsh experiences of say, being left behind, may display characteristics of distrust and may isolate himself from others.   On the other hand, good experiences can fuel us either consciously or subconsciously to be motivated to work towards achieving the same results.   People respond depending upon their experiences whether good or bad.

12.   **Dreams and Ambitions**.   Dreams and ambitions shape our personality in a way that it facilitates our goals. We start to set priorities and change the way we are in order for such priorities to be fulfilled.   Hence, these aspirations are perhaps the strongest factors that develop our attitude towards work and career.

13.   **Self-Image**.   Each person views himself quite different from how other people perceive him. Thus, one's self-image usually breeds personality characteristics that stick within the self-image.   People

who feel highly with their selves display a certain aura of confidence and make it always seem that they are a cut above the rest.

14.   **Values**.   Personality of an individual is greatly influenced by the values a person strongly believes in.   A person who adheres to high moral standards is a well-respected member of the society. He is known for his integrity and is trusted by not only his family members, but also by his colleagues and friends.   The characteristics of such a person having a strong moral fibre ingrained into his character can have a significant influence on the personality of an individual.

SELF AWARENESS

Dimensions of Self Awareness

15.   Self-awareness involves knowing ourselves and our personality, and accepting oneself inspite of our imperfection. It includes all aspects of our selves- our thoughts, emotions, likes, dislikes, strengths, and weakness, knowledge the fact that though I am imperfect, but still I like myself since I am a good human being and possess many qualities. To have complete self-awareness one needs to concentrate on two aspects the first being how we perceive ourselves our strengths, weakness, abilities etc. and secondly how others perceive us. Both the views together give a person a complete picture about one self.

16.   Every person perceives oneself in three aspects as:-

(a)   The perceive self - the way we see that part of ourselves.

(b)   The real self - the way we truly are.

(c)   The ideal self - the way we would like to be in that area.

17.   Unhappiness and poor adjustments in persons are mainly because of discrepancies between the perceived and the real or ideal self. These unhappiness and poor adjustments are due to misperceptions of self which there by leads to discontentment.

EMPATHY

Empathy

18.   Empathy is the ability to imagine what life is like for another person. Without empathy our communication with others will be one sided and is bound to face problems in relationship as we will be indifferent to emotions of others. We have many relationships to nurture with; parents, brothers, sisters, aunt, uncle, cousins, friends and neighbours etc.

19.   Empathy has the following components:-

(a)   Putting oneself in the other's shoes.

(b)   To see things from the other's point of view.

(c)   Understanding and feel the other person' feelings.

(d)   Being able to communicate this understanding to the person, in action or by words.

(e)   Being non-judgmental and not agreeing or disagreeing with the person, but accepting the person and their behaviour.

(f)   Not taking the issue on one's own shoulders.

CRITICAL AND CREATIVE THINKING

Critical Thinking

20.   Critical Thinking is the process of determining the authenticity, accuracy or value of something; Critical thinking involves logical thinking and reasoning. It also includes skills such as comparison, classification, cause/effect, deductive reasoning, and planning and is characterized by the ability to:-

      (a)   Seek reasons and alternatives.

      (b)   Perceive the total situation.

      (c)   Change one's views based on evidence.

21.   Critical thinking requires skills in:-

      (a)   Analyzing the information and examining it in detail.

      (b)   Thinking about different perspectives and possibilities

      (c)   Problem solving - considering available information before making an appropriate decision.

      (d)   Reasoning - thinking logically; making links between ideas and information.

      (e)   Evaluating - examining information, to assess whether it is useful, relevant, and reliable.

22.   Critical thinking is about following attitudes:-

      (a)   Open-mindedness - willing to examine multiple points of views.

      (b)   Flexibility - able to change your point of view.

      (c)   Persistence - able to follow a line of reasoning.

      (d)   Interpersonal sensitivity - willing to respect the opinions of others.

      (e)   Intercultural sensitivity - respecting diversity of culture, socio-economic variations, etc.

Creative Thinking

23.   Creativity encompasses the following:-

      (a)   <u>An Ability</u>.   Creativity is the ability to imagine or invent something new. Creativity is not the ability to create out of nothing, but the ability to generate new ideas by combining, changing or reapplying existing ideas. Some creative ideas are astonishing and brilliant, whiles others are just simple, good, practical ideas that no one seems to have thought of yet. Everyone has substantial creative ability. Often all that's needed to be creative is to make a commitment to creativity and to take the time for it.

      (b)   <u>An Attitude</u>.   Creativity is also an attitude: the ability to accept change and newness, a willingness to play with ideas and possibilities, a flexibility of outlook, the habit of enjoying the good, while looking for ways to improve it.

      (c)   <u>A Process</u>.   Creative people work hard continuously to improve ideas and solutions, by making gradual alterations and refinements to their work. Contrary to the mythology surrounding creativity, very few works of creative excellence are produced with single stroke of brilliance. The creative person knows that there is always room for improvement.

24.   **Characteristics of the Creative Person**.   A creative person has the following characteristics:-

(a) Curious.

(a) Seeks problems.

(b) Enjoys challenge.

(c) Optimistic.

(d) Able to suspend judgment.

(e) Comfortable with imagination.

(f) Sees problems as opportunities.

(g) Sees problems as interesting.

(j) Problems are emotionally acceptable.

(k) Challenges assumptions.

(l) Doesn't give up easily: perseveres, works hard.

DECISION MAKING AND PROBLEM SOLVING

Decision Making

25. **Decision Making**. We make decisions every day. Examples of minor decisions which we take very often are - what to eat, what to wear or how to reach a place. Examples of major decisions which we take once in a life time are – what career to choose, when and whom to marry, where to buy a house, which college to go to etc.

26. Decision making is a complex process. Some decisions are made after careful deliberation, some are made more hastily; some are made through our own will, some under the pressure of others. Our past experiences determine many of the decisions we make. Sometimes due to the past experiences we are afraid of doing things differently.

27. Good decision making depends on understanding the situation well, being aware of our choices and, above all visualising the consequences of our choices.

28. Some of the major steps to be followed while making a decision are – define the problem, gather and analyse the relevant data, postulate solutions to the problem, analyse the implications of each alternative, select and act on the best alternative, follow-up and modify the approach if necessary.

Problem Solving

29. Most of the people refuse to identify the problem, once we write down the problem on a piece of paper, it will be easy to solve it with suitable solutions.

30. Usually, we always think about only problem not solutions. Once we define the problem clearly on paper, we analyse the problem and find the ways to solve it. We have to adopt logical thinking instead of routine through the environment around us.

31. In general, every problem has many solutions. So, we should always find all alternatives and take the best one.

32. Problems are often opportunities in disguise. When we escape from problems, we give up the opportunity to develop our skills and potentials. Once we resolve our problems, we will find ourselves

happier, more fulfilled, and more ready to confront new issues. Tackling problems involves the use of our mind. The process enhances our capacity to solve greater problems.

Conclusion

33.   Problems are not to be avoided or feared. Problems are part of life, and are there for us to solve, not evade. Problems left unsolved can bring mental stress and eventually affect our health. Problem solving skills empower us not only to confront our problems, but in fact turn them into opportunities. Whenever required cadets can take help from their trusted adults and friends in understanding their problem better and working at appropriate solution.

SUMMARY

1.   There are ten core Life skills which help in enhancing the personality of an individual. They are as follows: -

    (a)   Self Awareness.
    (b)   Empathy.
    (c)   Critical Thinking.
    (d)   Creative Thinking.
    (e)   Problem Solving Skills.
    (f)   Decision Making.
    (g)   Interpersonal Relationship.
    (h)   Effective Communication.
    (j)   Coping with Emotions.
    (k)   Coping with Stress

2.   **Factors Influencing / Shaping Personality.** The following factors influence/ shape personality:

    (a)   Hereditary.
    (b)   Self-Development.
    (c)   Environment.
    (d)   Education.
    (e)   Life-situations.
    (f)   Past Experiences.
    (g)   Dreams and Ambitions.
    (h)   Self-Image.
    (j)   Values.

3.   Empathy is the ability to imagine what life is like for another person. Empathy has the following components: -

    (a)   Putting oneself in the other's shoes.
    (b)   To see things from the other's point of view.
    (c)   Understanding and feel the other person' feelings.
    (d)   Being able to communicate this understanding to the person, in action or by words.
    (e)   Being non-judgmental and not agreeing or disagreeing with the person, but accepting the person and their behaviour.
    (f)   Not taking the issue on one's own shoulders.

4.   Critical Thinking is the process of determining the authenticity, accuracy or value of something; Critical thinking involves logical thinking and reasoning. Critical thinking requires skills in: -

    (a)   Analyzing the information and examining it in detail.
    (b)   Thinking about different perspectives and possibilities
    (c)   Problem solving - considering available information before making an appropriate decision.

(d)   Reasoning - thinking logically; making links between ideas and information.
(e)   Evaluating - examining information, to assess whether it is useful, relevant, and reliable.

5.   **Characteristics of the Creative Person**.   A   creative   person   has   the   following characteristics: -

(a)   Curious.
(a)   Seeks problems.
(b)   Enjoys challenge.
(c)   Optimistic.
(d)   Able to suspend judgment.
(e)   Comfortable with imagination.
(f)   Sees problems as opportunities.
(g)   Sees problems as interesting.
(j)   Problems are emotionally acceptable.
(k)   Challenges assumptions.
(l)   Doesn't give up easily: perseveres, works hard.

6.   **Decision Making**.   Decision making is a complex process. Good decision making depends on understanding the situation well, being aware of our choices and, above all visualising the consequences of our choices.Some of the major steps to be followed while making a decision are – define the problem, gather and analyse the relevant data, postulate solutions to the problem, analyse the implications of each alternative, select and act on the best alternative, follow-up and modify the approach if necessary.

7.   **Problem Solving.**   Problems are often opportunities in disguise. When we escape from problems, we give up the opportunity to develop our skills and potentials. Once we resolve our problems, we will find ourselves happier, more fulfilled, and more ready to confront new issues. Tackling problems involves the use of our mind. The process enhances our capacity to solve greater problems.

CHAPTER PD - II

COMMUNICATION SKILLS

Introduction

1.   Communication is sharing ideas, opinions, thoughts, feeling and understanding through speech, writing, gestures or symbols between two or more persons.   We are communicating all the time with others.

Understanding Basics of Communication

2.   Communication is conveying a message – verbally, written or through the use of signs. If we do not talk with others, then they will not know what we are thinking and they will not be able to understand us. One will feel terribly lonely this way.

3.   For some people, it is the problem of not knowing how to communicate.   For others, it may be that they are too afraid to talk about their problems, share their views, and let others know what is going on in their mind.

4.   In fact, without communication, our relationships with others are likely to be dominated by suspicion, guess work, misunderstandings and false assumptions. Empathy creates wonderful results only when we are willing to let others know how we feel.

5.   Lack of communication breeds problems in our relationships.   We tend to assume that others know what we want or how we feel.   Then when they do not react as we expect they should, we get upset. We expect people to understand us.   The truth is they do not understand us, if we choose to believe that ideas can get across at the unspoken level!   All too often, the communication between us and our loved ones, is merely functional – out of necessity. We waste many opportunities to enhance our understanding of each other and improve our relationship.

Different Ways of Communication

6.   There are three ways of communication as under:-

(a)   **Aggressive.**   They believe that everyone should like them; I am never wrong I`ve got rights but you don`t.   They have a closed mind and are poor listeners.   They have difficulty in seeing the other person's point of view, they interrupt and monopolize.   They tend to dominate and put down others.   They are bossy.   While communicating they frown, stare, talk loudly or have a yelling tone of voice.

(b)   **Passive**.   The persons do not express their true feelings; they do not disagree and think that others have more rights than they do.   Their communication style is indirect, they always agree and do not speak out and are very hesitant. While communicating they often lack facial expression and stand with down cast eyes.

(c)   **Assertive**.   The person believes he/she as well as others are valuable.   They know that if they have rights then others also have rights.   They are active listeners and check on others feelings.   They are action oriented, attentive, vocal, expressive, good listeners, aware, supportive, persuasive, fair, open and consistent in behaviour.   Their expectations are realistic.   They have open and natural gestures.   They maintain an eye contact while communicating.

Components of Effective Communication

7.   Effective Communication involves:-

(a)   **Verbal Communication**.   One person talks and the other listen to be able to react. The conversation can be informative, in the form of questions, a negotiation, and statement or open-ended questions, instruction, etc.   And the situation can be formal or informal. In relationships, communication is usually informal.   Speech problem, too long sentences, mumbling,

speaking too softly, hearing problems, listeners interrupting the speaker, loud external noises, etc. all hamper proper communication.

(b)   **Non-Verbal Communication**.   Non-verbal communication is that gives meaning to what is said and may communicate both appreciation and rejection.   It includes such things as tone of voice, a nod of head, using silence, frowning, smiling, body posture, touch, shaking of the head to communicate approval or disapproval, lifting of the eyebrows to show surprise, distance between persons, playing with something in hand instead of focusing.   Make use of body language to communicate effectively.   Ensure that you appreciate others through body language.   React to what others say by nodding, smiling and generally showing you are listening.

(c)   **Listening**.   During communication, one person talks and another person listens.   The listeners must give attention to all that is said, without interrupting the speaker and react later in a relevant manner.   Many people may listen but know what the full message is.   Some people react to when only half is said.   There are people who listen selectively, who miss much of the message and only focus on points relevant to him or her.   Sometime we do not listen to our friends and other people; sometimes they do not listen to us.   In either situation, there will be a problem in communication and understanding.

Common Barriers to Effective Communication

8.   No matter how good and effective a communicator one may be, yet the fact is that one does face certain barriers, from time to time, which forces them to work on becoming even more effective in their skills to communicate. Given here are the communication barriers that occur while listening, speaking and in the case of non- verbal communications.

9.   **Listening Barriers**.

(a)   Interrupting the speaker.

(b)   Not maintaining eye contact with the speaker.

(c)   Rushing the speaker to complete what he has to say.

(d)   Making the speaker feel as though he is wasting the listener's time.

(e)   Being distracted by something that is not part of the ongoing communication.

(f)   Getting ahead of the speaker and completing his thoughts.

(g)   Ignoring the speaker's requests.

(h)   Topping the speaker's story with one's own set of examples.

(j)   Forgetting what is being discussed.

10.   **Barriers While Speaking**.

(a)   Unclear message.

(b)   Lack of consistency in the communication process.

(c)   Incomplete sentences or mumbling words and sentences.

(d)   Not understanding the receiver.

(e)   Poor eye contact.

11. **The Other Barriers Include**.

(a) Assumptions, for instance assuming others see a situation same as you or have same feelings as yours.

(b) Patterns / reverting to type.

(c) Language - different level of meaning.

(d) Erroneous transition, value judgment.

(e) Use of negative words.

(f) Perceptions - depending on mood, the receiver may misinterpret the message.

12. **Reducing the Communication Gap**. The following steps will help in reducing the communication gap:-

(a) Plan ahead.

(b) Involve others to contribute to planning.

(c) Listen to the suggestions made by others.

(d) Speak with purpose and be specific.

(e) Justify your stand without upsetting others.

(f) Have sense of humour.

(g) Have empathy.

(h) Do not be judgmental.

(j) Do not underestimate the ability of others to contribute.

(k) Observe the body language or the non-verbal communication of others.

(l) Be transparent to inform others of the planned activities and get feedback.

(m) Make modification in the plan to suit the need.

(n) The words 'yes' and 'no' are very powerful. Learn to use them appropriately.

SUMMARY

1. Communication is sharing ideas, opinions, thoughts, feeling and understanding through speech, writing, gestures or symbols between two or more persons. We are communicating all the time with others. Communication is conveying a message – verbally, written or through the use of signs. If we do not talk with others, then they will not know what we are thinking and they will not be able to understand us. One will feel terribly lonely this way.

2. There are three ways of communication as under: -

(a) Aggressive.
(b) Passive.
(c) Assertive.

3.   Effective Communication involves: -

    (a)   Verbal Communication.
    (b)   Non-Verbal Communication.
    (c)   Listening.

4.   **Reducing the Communication Gap**.   The following steps will help in reducing the communication gap:-

    (a)   Plan ahead.
    (b)   Involve others to contribute to planning.
    (c)   Listen to the suggestions made by others.
    (d)   Speak with purpose and be specific.
    (e)   Justify your stand without upsetting others.
    (f)   Have sense of humour.
    (g)   Have empathy.
    (h)   Do not be judgmental.
    (j)   Do not underestimate the ability of others to contribute.
    (k)   Observe the body language or the non-verbal communication of others.
    (l)   Be transparent to inform others of the planned activities and get feedback.
    (m)   Make modification in the plan to suit the need.
    (n)   The words 'yes' and 'no' are very powerful. Learn to use them appropriately.

CHAPTER PD - III

GROUP DISCUSSIONS

COPING WITH STRESS AND EMOTIONS

Introduction

1.   Stress is a very common phenomenon and is universal in nature.   It is our body's reaction to people and events and to our own thoughts.   Some level of stress is normal, such as before a test, stage performance or an athletic event.   Coping with stress means recognizing the source of stress in our lives, recognizing how this affects us physically and emotionally, and acting in ways that help us control our levels of stress, by changing our environment or life style and learning how to relax.

Understanding Stress and its Impact

2.   Stress is unique and personal to each of us. What is relaxing to one person may be stressful to another. But too much stress can have physical and psychological effects that interfere with the health and well-being of an individual. Overtime repeated stress can lower self-esteem, decrease academic performance and create a cycle of self-blame and self-doubt.

3.   The key to reducing stress is to find strategies that help you as an individual. The best way to cope with unhealthy stress is to recognize when your stress levels are building. While we often think of stress as the result of external events, the events themselves are not necessarily stressful. It is the way we react to an event that causes stress.

Stress Management Techniques

4.   There are many ways to manage negative stress. Everyone needs to find ways that work best for them.

(a)   Take Deep Breath.   Stress often causes us to breathe quickly and this almost always causes more stress.   Try to take deep slow breaths.   Breathe in through your nose and count as you breathe out through mouth. Inhale enough so your lower abdomen rises and falls.

(b)   Talk It Out.   When you feel stressed, try to express your feelings.   Bottling of feelings can increase stress.   Share your feelings.   Perhaps a friend, family members, teacher can help you see your problem in a new way.   Talking with someone else can help clear your mind of confusion so that you can focus on problem solving.   Even if it is slightly embarrassing, asking for help after a problem occurs may avoid serious problems later.   Writing down thoughts and feeling can help clarify the situation and give a new perspective.

(c)   Take A Break. Recognize when you are most stressed and allow yourself some reasonable break. When things seem especially difficult, take a walk or otherwise change your scenery.

(d)   Create A Quiet Place in Your Mind.   You cannot always run away, but you can dream. Imagining a quiet place can take you out of a stressful situation.   When you have the chance, take a moment to close your eyes and imagine a place where you feel relaxed and comfortable.   Notice all the details of your chosen place, including pleasant sounds, smells and temperature.

(e)   Pay Attention to Physical Comfort.   Be as physically comfortable as the situation will allow.   Wear comfortable clothing.   If it`s too hot, go somewhere where it`s not.   If chair is uncomfortable, move.   Do not wait until your discomfort turns into a real problem.

(f)   Move.   Physical activity can help reduce and prevent stress.   When you feel nervous, angry or upset, release the pressure through exercise or physical activity.   Try to find something you enjoy and make regular time for it.   Running, stretching, walking or dancing can be done anywhere.   Working in the garden, cleaning or playing with your younger children can relieve stress, make you relax and energize you.

(g)   Take Care of your Body.   Healthy eating and adequate sleep fuels your mind as well as your body.   Avoid eating too much caffeine and sugar.   Well-nourished bodies are better able to cope with stress.

(h)   Laugh. Maintain your sense of humour, including the ability to laugh at yourself.   Share jokes and funny stories with your friends.   Laughter is good for you.

(j)   Manage your Time.   Plan ahead and make a realistic schedule for yourself and include time for stress reduction as a regular part of your schedule.   Trying to take care of everything at once can seem overwhelming and may keep you from accomplishing anything. Instead, make a list of what you have to do, then do one at a time, checking them off as you finish.   Do the most important ones first.   If a particularly unpleasant task faces you, do it early in the day and get over with it; the rest of your day will be less stressful.

(k)   Know your Limits.   When in a stressful situation, ask yourself is this my problem?   If it isn`t, leave it alone.   If it is, can I resolve it now?   Once the problem is settled, leave it alone. Do not agonize over the decision, and try to accept situation you cannot change.   There are many circumstances in life beyond your control.   If problem is beyond your control and cannot be changed at the moment, learn to accept as it is, for now, until such time when you can change things.

(l)   Do you have to be Right Always?   Do you get upset when things don`t go your way? Consider cooperation or compromise rather than confrontation. It may reduce the strain and help everyone feel more comfortable.

(m)   Have a Good Cry.   It is normal for people of all ages to cry.   A good cry during stressful times can be a healthy way to bring relief to your stress, and may prevent a headache or other physical consequences of stress.   However, crying daily can be sign of depression.

(n)   Look for the Good Things around You.   It is easy to see only the negative side when you are stressed.   Your thoughts can become like a pair of very dark glasses, allowing you to see very little light or joy in your life.   Decide to notice five good things around you.   These can be positive or enjoyable moments or interactions.   These may seem like small events but as these good things add they can often provide a big lift to energy and spirits and help you begin to see things in a new, more balanced way.

(o)   Talk Less, Listen More.   Listening banishes stress, makes you more popular, more knowledgeable, more sensitive.

CHANGE YOUR MINDSET

What is Mind Set

5.   Most people keep a running account of what's happening to them, what it means, and what they should do. In other words, our minds are constantly monitoring and interpreting.   That's just how we stay on track.   But sometimes the interpretation process goes awry.   Some people put more extreme interpretations on things that happen—and then react with exaggerated feelings of anxiety, depression, anger or superiority.   Your mindset is the sum of your knowledge, including beliefs and thoughts about the world and yourself in it.   It is your filter for information you get in and put out.   It determines how you receive and react to information.

6.   In a growth mindset, people believe that their most basic abilities can be developed through dedication and hard work. Brains and talent are just the starting point. This view creates a love of learning and a resilience that is essential for great accomplishment.   Virtually all great people have had these qualities.   Teaching a growth mindset creates motivation and productivity in the worlds of business, education, and sports. It enhances relationships.

How to Change Your Mindset

7.   **Get the Best Information Only**.   Try to find the very best information in your field.   Then focus on learning this information only. In any worthwhile field there is more information available as needed, especially in the internet.   You have to narrow down the information input to the most effective. One of the critical personal skills today is not to find information, but to select the best information and avoid the rest.

8.   **Role Model the Best People**.   Look for the best people in your field and try to model what they did right.   Adopt their kind of thinking and mindset.   Follow them.   Of course, keep and only add what you think is right for you.   That way you can actually improve and personalize their mindset to fit perfectly for you.   It's never copying, it's taking what works for you by getting inspiration and quality input.

9.   **Examine Your Current Beliefs**.   Examine your mindset by looking at your current belief-system.   Are these beliefs supporting you or are there self-limiting beliefs?   You have to identify those possible blocks and turn them around, because whether you know about limiting beliefs or not, they are working in your subconscious mind.   To uncover your beliefs ask yourself the right questions about where you want to go and what is standing in your way right now.   The key then is to turn those beliefs around by declaring supportive statements on the same belief.   To internalize these new supportive beliefs you can make use of affirmations.

10.   **Shape Your Mindset with Vision and Goals**.   A proactive approach to build your mindset is to clearly see where you want to go.   Seeing a vision, images describing your end result clearly in your mind's eye, will create a strong pull towards this end result.   Then go on and break your vision into goals. It will shape your mindset to conform to your vision.   Learn and adapt from your own experience and always try to look deeper for the real reasons why you get the results you are getting.

11.   **Find Your Voice**.   One of the most beautiful things is when you find your very own way, something what you could call finding your voice.   To help you find this, answer these four questions**.**

(a)   What are you good at? That's your mind.

(b)   What do you love doing? That's your heart.

(c)   What need can you serve? That's the body.

(d)   And finally, what is life asking of you?   What gives your life meaning and purpose?   What do you feel like you should be doing?   In short, what is your conscience directing you to do?   That is your spirit.

12.   **Protect Your Mindset.**   One thing you have to do is to protect your mindset against the nay sayers and people who want to drag you down. You also have to protect it against bad information and against overload. Keeping your confidence is a big thing. So please stay on the right path, look to improve yourself and to help others along the way. You can't go wrong with that.

13.   **Let Go of Comparisons**.   Where you are at this very moment is all that matters.   Try to stay focused on your own situation, needs and dreams without worrying about what other people are doing.   A lot can be said for the gratitude movement – focusing on your own successes and what you have in your life is the path to true joy.   When you switch that focus to what others may have or be doing you take a detour that will not end well.   The reality of other people's situations is not transparent so your desires and jealousies are not even based on the full picture.   The family with two luxury cars and a large house may be deeply in debt.   The woman who seems to have it all may be lonely while her husband works 90-hour weeks so they can have those material possessions.   What are your values and goals?   Those are the key questions you can use to direct your path.

14.   **Put an End to Perfectionism**.   Perfectionism is often the biggest roadblock we face.   Too many people feel that if they can't deliver 100% with everything right and "just so", then they should abandon the idea completely.   Learn to take one step at a time, build on things (skills, tasks, writing) and accept that it will never be perfect.   It is important to look at growth over time and accept that putting

something imperfect out there in the universe is better than staying safe and never attempting anything new.

15. **Look at the Evidence**. When you hear yourself saying you can't do something or are not good enough force your own hand and demand the evidence to back up the negative thoughts. Most of what you are thinking can be counter argued and disproved when you look at what you have done in the past, the feedback you received, etc. You may tell yourself you are not as good a blogger as someone else who is in the limelight, no one comments or cares about what you write. When you challenge that thought and look for evidence you see you do receive some comments and positive feedback. You may feel alone and like you are "never" included in social events, but when questioning this you admit you have been to a party last month and had coffee with a friend last week. You may not be as busy as you wish, but you are actually included and can make the decision to organise a social event yourself.

16. **Redefine What Failure Means**. Fear of failing holds many of us back, especially high achievers who may be afraid to deviate from their comfort zones. If you go through life afraid to fail you often end up living a life where you never try anything new. When you re-define "fail" to mean "lessons learned" you can start to see how every step you take brings you closer to your dreams. When an idea or project fails to take off it offers you an opportunity to learn. What could you do differently? What did not work and why? Is there a better path for you to travel down?

17. **Stop Worrying about What "People" Think**. You will never please everyone so basing your decisions on what other people will think of what you do or say is an exercise in frustration. This is true whether it is business where you cannot have everyone as your target market or your personal life where your friends and family have their own ideas separate to your own. Most people are not even thinking about you and your actions on a day to day basis so why hand over power to them and let their potential reactions influence your actual actions.

TIME MANAGEMENT

Essentials of Time Management

18. Time management is a set of skills, tools, and systems that work together to help you get more value out of your time and use it to accomplish what you want. Successful people use time management to achieve outstanding results, both personally and professionally. The key to time management is to realize that you cannot possibly do everything that there is to do; instead, you have to prioritise what you are going to do with the limited time that you have at your disposal. Look in a mirror and you will see your biggest time waster. Until you come to grips with that reality, your personal time problems will remain.

19. Time management helps you to: -

    (a) Reduce or eliminate wasted time and effort so you'll have more productive time each day.

    (b) Improve your productivity so you can accomplish more with less effort.

    (c) Focus your time and energy on what is most important and make time for the things you want and value. Thus, help you find greater balance and fulfilment.

    (d) Improve your performance while reducing stress.

    (e) Set and achieve your long-term goals.

PRINCIPLES OF TIME MANAGEMENT

20. There are some basic principles of time management. These are given in the subsequent paragraphs.

21. **Develop a Personal Sense of Time**. Make sure you know where your time goes. Don't depend on memory, it's treacherous. Put time under the microscope. You cannot manage time that is past. But you can examine how you managed it in an objective and realistic way.

22.   **Identify Long-Term Goals**.   The foundation of good time management is to first, find out what matters deeply to you – what it is you really want to achieve in life. Spend time on considering what are your own personal values? What really matters to you at this stage of your life? Remember, they must be your values no-one else's. In this, concentrate on four key areas of your life - Self and Well-being, Community and Humanity, Home and Family and Business and Career.

23.   **Concentrate on High Return Activities**.   In any organisation there are a few basic functions, which are central to its effective functioning. For a classroom teacher the high-return activity will be enabling the children to learn well. For a principal it will be empowering staff to be effective teachers by having a smoothly running school. Therefore, identify which activities are going to give you the highest return and concentrate on them.

24.   **Weekly and Daily Planning**.   Traditional time management teaching talks of daily planning, so why change?   If we mainly focus on our daily scheduling, we're looking at what's under our nose and we tend to become immersed in the urgent. Hence, from our monthly goals and objectives, plan a weekly focus. Planning on a weekly basis helps us to take better control of our lives.

25.   **Make the Best Use of Your Best Time.**   The quality of your attention or concentration varies at different times. You may notice that you habitually tend to be more mentally alert, at certain times of the day. 20% of your time produces 80% of your high-quality output.   The most important tasks in a day only take about 20 percent of our time and will make 80 percent of the difference to the smooth running of things.   So, make sure that you manage well that critical 20% of your time.   Learn to focus on the vital few things which will make a long-term difference.

26.   **Make Use of Committed Time**.   You may sometimes complain that you lack time.   But you have all the time there is for you.   At work there is time which you can choose to spend as, committed time.   If you are alert you may find portions of it, which are actually free time.   Think of an example of committed time in the last week, where you found unexpectedly that you had at least half an hour to spare. What did you do with it?   Could you have put that time to better use?   What would you need to have had with you in order to do so?

27.   **Manage Your Health**.

        (a)   Even a few weeks off, being ill is going to involve you in a major waste of productive time. Depending on the nature of your illness, you may be able to use it in some constructive way. To give to your work and to others high quality time you must top up your energy levels.

        (b)   Do you get enough sleep? The norm is eight hours, slightly less as you grow older. You can function on much less, but your creativity is 15% down. Do you apply common sense to diet? The Golden rule is moderation in all things. Do you take exercise? Do you take holidays? Remember that you can do a full year's work in 11 months, but you cannot do it in 12 months. It is a good idea to spend some time just meditating.

SOCIAL SKILLS

Types of Etiquette

28.   Etiquette is a code of behaviour that delineates expectations for social behaviour according to contemporary conventional norms within a society, social class, or group. Rules of etiquette encompass most aspects of social interaction in any society. The various types of etiquettes are discussed below:-

29.   **Types of Etiquettes**.

        (a)   **Social Etiquette**.   Social etiquette is how to behave in the society.

        (b)   **Bathroom Etiquette**.   Bathroom etiquette refers to the set of rules which an individual need to follow while using public restrooms or office toilets.   Make sure you leave the restroom clean and tidy for the other person.

(c)   **Corporate Etiquette**.   Corporate Etiquette refers to how an individual should behave while he is at work. Each one needs to maintain the decorum of the organisation.   Don't loiter around unnecessary or peep into other's cubicles.

(d)   **Wedding Etiquette.**   Wedding is a special event in every one's life. Individuals should ensure they behave sensibly at weddings.   Never be late to weddings or drink uncontrollably.

(e)   **Meeting Etiquette.**   Meeting Etiquette refers to styles one need to adopt when he is attending any meeting, seminar, presentation and so on.   Listen to what the other person has to say.   Never enter meeting room without a notepad and pen.   It is important to jot down important points for future reference.

(f)   **Telephone Etiquette**.   It is essential to learn how one should interact with the other person over the phone.   Telephone etiquette refers to the way an individual should speak on the phone.   Never put the other person on long holds.   Make sure you greet the other person.   Take care of your pitch and tone.

(g)   **Eating Etiquette**.   Individuals must follow certain decorum while eating in public. Don't make noise while eating. One should not leave the table unless and until everyone has finished eating.

(h)   **Business Etiquette**.   Business etiquette includes ways to conduct a certain business. Don't ever cheat customers. It is simply unethical.

30.   **Need for Etiquette**.

(a)   Etiquette makes you a cultured individual who leaves his mark wherever he goes.

(b)   Etiquette teaches you the way to talk, walk and most importantly behave in the society.

(c)   Etiquette is essential for an everlasting first impression. The way you interact with your superiors, parents, fellow workers, friends speak a lot about your personality and up- bringing.

(d)   Etiquette enables the individuals to earn respect and appreciation in the society. No one would feel like talking to a person who does not know how to speak or behave in the society. Etiquette inculcates a feeling of trust and loyalty in the individuals. One becomes more responsible and mature. Etiquette helps individuals to value relationships.

Manners

31.   Some of the manners we've learned from our parents and teachers who try and implant us the importance of being well-mannered. At some point, our manners are categorized as good or bad depending on the society we live in and on the environment, we grew in.

32.   Having good manners is not just about blending with the best; rather it is more about considering the feelings of others and taking responsibility.   Take for example when you eat in the restaurant or in public places, try not to chew with one's mouth open.   The unpleasant sound and scene are repelling for others. In public speaking, we must not interrupt when he/she is talking.   It is considered highly ill-mannered if you do not allow him/her to complete his/her sentence.   These are just some of the things we should avoid doing.

How to Improve Your Social Skills

33.   They say, a human being is a social animal, but the question is, does everyone possess social skills?   Most of the people do not know the art of speaking.   While some are just inept and incompetent, there are others who lack confidence and yet others who do not have mannerism and etiquettes.   Having sound social skills is extremely important in the present times, given to the fact that interaction and conversation forms the basis for everything we do.   If you also face difficulty in interacting, remember, it is not the end of the world.   You can improve your social skills by just putting in a little effort.   However, you

cannot be perfect overnight. It would take some time. Following are few tips on how to improve social skills.

34. **Improving Social Skills.**

(a) <u>Be Yourself</u>. Only when you are your own self do you feel comfortable and it is when you are in utmost comfort that you indulge in free conversation and interaction. Do not change your inner self for anything in the world. Remember, humans have this innate quality of discovering whether a person is real or fake. In case you pretend to be someone you are not; you would be lonelier than ever before.

(b) <u>Be Responsible</u>. One of the vital components of social interaction is to know the art of carrying yourself. It is very important for you to know what to do and how to behave in a social gathering. A person behaving in an undesirable and unacceptable manner is usually avoided by people. So, be responsible for your actions and act according to the situation.

(c) <u>Be Open & Approachable</u>. Imagine talking to a person who is an absolute introvert or extrovert! Extremes of personality often turn off people. Ideally, you should have a fusion of both the characters. While being too shy and withdrawn is enough to repel people immediately, being too loud and outgoing would not do much good either. Just strike a delicate balance between both the personalities and you would be the star of the social gathering.

(d) <u>Be Attentive</u>. The art of listening is a stepping stone for conversation and interaction. Alas! Not many have it in them. If you would have attended a social gathering, you will know that everyone wants to talk, but no one is ready to listen. So, the trick is to be an attentive listener and people would definitely talk to you. Also, do not interrupt or chip in a piece of advice or suggestion just when the other person is in the middle of a subject.

(e) <u>Be Polite</u>. Being humble and down-to-earth is an excellent way to break the ice. It sheds off all the apprehensions and nervousness and gives a good impression. It would speak miles about your manners, personality and confidence. Apart from being polite, it is also advisable to be diplomatic. While being honest and forthright definitely pays, one should be tactful also.

(f) <u>Be Aware</u>. It is very important to be aware and observant of people's behaviour instance, watch if the person you are talking to is comfortable with the specific topic. If he looks uncomfortable or is simply disinterested, just move on to the next topic. In case he/she is not interested in talking to you completely, the best bet would be to move out of the scene.

(g) <u>Be Cautious</u>. It is advisable to keep your senses active. Do not shut your eyes, close your ears and numb your senses at the time of interacting. Keep a keen eye on who are your friends and who are your enemies. Do not confide everything to someone you have just met.

IMPORTANCE OF GROUP/TEAM WORK

Types and Characteristics of Groups

35. **Definition of a Group.** A group can be defined as any number of people who share goals, often communicate with one another over a period of time, and are few enough, so that each individual may communicate with all the others, person-to-person. Two or more people interacting to achieve a common objective is also called a group.

36. **Classification / Types of Groups.** Groups can be following types:-

(a) <u>Friendship Group</u>. It evolves informally to meet its members' personal security, esteem and belonging needs.

(b) <u>Task Group</u>. It is created by the management to accomplish certain organisation goals. Task group can further be classified as under:-

(i) <u>Formal Groups</u>. They are established by an organisation to facilitate the achievement of the organisation goals.

(ii) <u>Informal Group</u>. It is one that develops out of the day-to-day activities, interactions and sentiments of the members for the purpose of meeting their social needs.

(iii) <u>Effective Group</u>. An effective group is one which has the following characteristics:-

(aa) Its members know why the group exists; they have shared goals.

(ab) Its members support agreed upon guidelines procedures for and making decisions.

(ac) Its members communicate freely among themselves.

(ad) Its members have learned to receive help from one another and to give help to one another.

(ae) Its members have learned to deal with conflict within the group.

(af) Its members have learned to diagnose individual and group processes and improve their own and the group's functioning.

37. **Importance of a Group.**

(a) In a group people come together to achieve some common objectives for which they work in a structured fashion and utilise resources to reach pre-determined goals and targets.

(b) A group carries a lot of power in it. One work which seems impossible, can be done by a group strength very easily. We have a number of examples of group work around us. India is itself a great example of group work. India is probably the only country in the world where people belong to different languages, having different cultures, modes of living, clothing, feeding habits and even different Gods and deities. In spite of all these differences, they live together in harmony and even believe to be the children of one mother called "Mother India".

(c) We are one large nation with one central authority. In India we have unity in diversity and we work together to make our country a developed country. It is because of the strength of the nation as a group only that India could achieve freedom in 1947.

Types and Characteristics of a Team

38. **Definition of a Team.** When two or more people who are interdependent, who share responsibility for outcomes, who see themselves and are seen by others as an intact social entity in a larger social system are called as "Teams". When teams are formed, its member must have (or quickly develop) the right mix of complementary competencies to achieve the team's goals.

39. **Types of Teams.**

(a) **Functional Teams**. They usually represent individuals who work together daily on a cluster of ongoing and independent tasks. Functional teams often exist within functional departments, marketing, production, finance, auditing, human resources and the like.

(b) **Problem Solving Teams**. They focus on specific issues in their areas of responsibility, develop potential solutions and are often empowered to take actions within defined limits.

(c) **Cross - Functional Teams**. They bring together the knowledge and skills of people from various work areas to identity and solve mutual problems.

(d)   **Self - Managed Teams**.   They normally consist of employees who must work together effectively daily to manufacture entire product (or major identifiable component) or service.

40.   **Importance of a Team.**

(a)   A team is a small number of employees with complementary competencies (abilities, skills and knowledge) who are committed to common performance, goals and working relationship for which they hold themselves mutually accountable.

(b)   A key aim of teamwork is group synergy, namely the achievement of high quality as a result of combined individual contributions. Synergy can help you solve complex problems because you will be working with people who have a wide range of skills and perspective. Students working in teams benefit particularly from brainstorming and bouncing ideas of each other, learning from each other, discussing work in teams outside contact times and checking results.

(c)   In a team we can establish an agreed set of team guidelines. We know team members, their strengths, and preferred ways of working and preferred roles. We can discuss the task problems to arrive at a shared understanding and summarise this shared understanding of any project.

Conclusion

41.   Working in groups and teams requires a lot of tolerance and time to come to conclusions and make decisions. Cooperation and respect for group / team norms are important in group / team work. Some group / team members may be able to do tasks alone, but success for one group / team member does not mean success for the entire group / team. Group / team members should accomplish a shared task or goal together.

SUMMARY

1.   While under stress we may experience the following feelings, thoughts, behaviours or physical symptoms: -

(a)   **Feelings.**   Anxiety, irritability, fear, moodiness, embarrassment.
(b)   **Thoughts.**   Self-criticism, difficult in concentrating or making decisions, forgetfulness, pre-occupation with the future, repetitive thoughts, fear of failure.
(c)   **Behaviour.**   Stuttering, difficulty in speaking, crying, acting impulsive, do not feel like talking to anyone, nervous laughter, yelling at friends and family, grinding teeth, jaw clenching, increased smoking, alcohol or drug use, increased or decreased appetite.
(d)   **Physical Symptoms.**   Tight muscles, cold or sweaty hand, headache, back or neck problems, sleep disturbance, abdominal pain, more colds and infections, fatigue, rapid breathing, pounding heart, trembling, dry mouth.

2.   **Stress Management Techniques.**

(a)   Take Deep Breath.
(b)   Talk It Out.
(c)   Take A Break.
(d)   Create A Quiet Place in Your Mind.
(e)   Pay Attention to Physical Comfort.
(f)   Move.
(g)   Take Care of your Body.
(h)   Laugh
(j)   Manage your Time.
(k)   Know your Limits.
(l)   Do you have to be Right Always?
(m)   Have a Good Cry.
(n)   Look for the Good Things around You.
(o)   Talk Less, Listen More.

3.   **How to Change Your Mindset.**

 (a) Get the Best Information Only.
 (b) Role Model the Best People.
 (c) Examine Your Current Beliefs.
 (d) Shape Your Mindset with Vision and Goals.
 (e) Find Your Voice.
 (f) Protect Your Mindset.
 (g) Let Go of Comparisons.
 (h) Put an End to Perfectionism.
 (j) Look at the Evidence.
 (k) Redefine What Failure Means.
 (l) Stop Worrying about What "People" Think.

4.   Time management helps you to: -

 (a) Reduce or eliminate wasted time and effort so you'll have more productive time each day.
 (b) Improve your productivity so you can accomplish more with less effort.
 (c) Focus your time and energy on what is most important and make time for the things you want and value. Thus, help you find greater balance and fulfilment.
 (d) Improve your performance while reducing stress.
 (e) Set and achieve your long-term goals.

5.   There are some basic principles of time management which are as follows: -

 (a) Develop a Personal Sense of Time.
 (b) Identify Long-Term Goals.
 (c) Concentrate on High Return Activities.
 (d) Weekly and Daily Planning.
 (e) Make the Best Use of Your Best Time.
 (f) Make Use of Committed Time.
 (g) Manage Your Health.

6.   **Need for Etiquette**.

 (a) Etiquette makes you a cultured individual who leaves his mark wherever he goes.
 (b) Etiquette teaches you the way to talk, walk and most importantly behave in the society.
 (c) Etiquette is essential for an everlasting first impression. The way you interact with your superiors, parents, fellow workers, friends speak a lot about your personality and up- bringing.
 (d) Etiquette enables the individuals to earn respect and appreciation in the society.

7.   Having sound social skills is extremely important in the present times, given to the fact that interaction and conversation forms the basis for everything we do. Following are few tips on how to improve social skills.

 (a) Be Yourself.   (e) Be Polite.
 (b) Be Responsible. (f) Be Aware
 (c) Be Open & Approachable. (g) Be Cautious
 (d) Be Attentive.

8.   A group can be defined as any number of people who share goals, often communicate with one another over a period of time, and are few enough, so that each individual may communicate with all the others, person-to-person.

9.   When two or more people who are interdependent, who share responsibility for outcomes, who see themselves and are seen by others as an intact social entity in a larger social system are called as "Teams".   When teams are formed, its member must have (or quickly develop) the right mix of complementary competencies to achieve the team's goals.

<u>**CHAPTER PD - IV**</u>

<u>**CAREER COUNSELLING, SSB PROCEDURE AND INTERVIEW SKILLS**</u>

<u>**CAREER COUNSELLING**</u>

<u>**Introduction**</u>

1.   Career development is a lifelong process that actually starts when an individual is born.   There are a number of factors that influence career development, including one's interest, abilities, values, personality, background, and circumstances.   Career Counselling is a process that will help you to know and understand yourself and the world of work in order to make career, educational, and life decisions with more and more diverse career options and professional opportunities emerging.   Choosing a career is not a serious affair until 12th grade.   However, once you are done with 12th, it is necessary to choose a definite career and decide a career goal.   Choosing the right career option keeping one's interest in mind is necessary.   In addition to this, selecting the right education institution is equally important.

<u>**Career Counselling**</u>

2.   Career counselling is counselling or mentoring/coaching on issues related to an individual's career. Career counselling helps individuals make the right choice about their career paths, career development and career change.   Career Counselling is a process that will help you to know and understand yourself and the world of work in order to make career, educational, and life decisions.   Career development is more than just deciding on a subject and what job you want to get when you graduate.   Career counselling or career guidance includes a wide variety of professional activities which help people deal with career-related challenges.

<u>**Career Counsellor**</u>

3.   The Career Counsellor holds a master's degree and has expertise in career development theory, counselling techniques, administration and interpretation of assessments and career information resources.   He gives information about education and work opportunities to children and youth.   He gives information about opportunities, as well as helping with competencies and help with CVs and application forms.   Career counsellors' help individuals with the task of self-assessment and self-analysis.   They then match the aptitude, skills and interests of the individuals with various job types. They also help identify the various job options available and provide clarity on different job roles.   Overall, they help individuals make informed career choices and help them define their career paths to maximize the success in their chosen careers.

<u>**NEEDS FOR CAREER COUNSELLING**</u>

<u>**Who Needs Career Counselling?**</u>

4.   Since career development is a lifelong process, Career Counselling can be appropriate for anyone, including freshmen, sophomores, juniors, seniors, and even alumni. The earlier you get started making intentional decisions about your future, the better prepared you will be! We recommend that all freshmen should visit a Career Counsellor.

<u>**Benefits of Career Counselling**</u>

5.   Approaching a career counsellor is essential when you are not sure about choosing a suitable career option. Selecting a career option determines your course of life. While a good decision at the right point of time can make your life pleasant, a wrong one can ruin it. Remember that these decisions are irreversible. In case of dilemma, it is always better to take professional help. Career counselling is probably the best option in this case. Benefits of career counselling are as follows:-

        (a)   **Helps in Determining a Student's True Potential**.   There are students who are clear as to what they want to become.   On the other hand, there are others who are either confused or have no idea about their career preferences.   Regular aptitude tests and counselling sessions conducted by career counsellors can help students in finding out the right career options and the

fields that interest them. On the basis of these counselling results, students make the right choice regarding what course they want to enrol into in order to accomplish their career goals.

(b) **Clear Doubts.** Despite having a clear idea of what they want to achieve in life, some students do not know the career path they need to follow to have the requisite academic qualification to join a particular course. Career counselling can help students clear these doubts by giving them a clear-cut view of what they can expect from various educational courses. Some students might also have preconceived beliefs about certain fields. Career counselling also helps students overcome these by knowing the true facts.

(c) **Support and Motivation.** A career counsellor also provides essential support and boosts the morale of a student by understanding the kind of requirements. Building the motivational level of a student is necessary for long term success. This aids in improving overall performance of a student. In addition to this, career counselling also teaches how to expand your network which in turn enhances emotional support.

(d) **Guidance to Students**. Career counselling is the guidance given to a student on the road he/she should take to achieve his/her goals. The advice and counselling provided is based on three deciding factors — personality, aptitude and interest.

Options Available After 12th Standard

6. There are hundreds of career options available after your 12th depending on your backgrounds like Science, Commerce and Arts. Not everyone wants to be a doctor, engineer or a dentist. Today, young students are ready to explore various other career options. You could choose one of them according to your inclination and background. But before choosing a career you should contemplate seriously on the faculty of interest, your aptitude, educational qualifications, and ability to cope with the subject and above all the financial commitments that is necessary during the course.

SSB PROCEDURE

7. The SSB Procedure has two stages of testing over a period of 05 days. The details are as enumerated in succeeding paras.

8. **Reporting Day.** The day of reporting at the SSB board is followed by document check and form filling. You are supposed to report at the place mentioned in the call letter, mostly you are asked to report at MCO [Movement Control Office]. You will not find any difficulty in doing so because there are many other candidates who report on the same day.

9. **Stage-1 Testing**.

(a) Screening. Screening process is to pick up some potential candidates from all those who have reported for the particular entry.

(b) Verbal and Non-verbal Test. Nothing hard, to be true, doesn't need any preparation too. But it is always good to go well prepared; you can check some verbal and non-verbal sample questions here. After this test you will get some rest, and later proceed for PPDT.

(c) PPDT. You will be shown a picture for 30 secs, later you have to write a story based on the picture you have seen in 3 mins, after that, you will be divided into sub groups of 14-15 members, firstly each candidate will narrate his/her story which is followed by the group discussion on the picture, among the group members. Keep in mind that PPDT is the most important part which helps you to clear screening and takes you to stage-2 testing.

(d) Results of Screening. After the completion of PPDT, you will get some rest for 2-3 hours and lunch too. Your screening results will be declared after it, selected candidates are allotted with new chest numbers. Rest of the candidates gets their TA and dropped backed to the railway station or bus stand.

10. **Stage-2 Testing**.

(a) <u>Psychological Test</u>.   It is a battery of projective tests; all tests are used to check the psychological suitability of the candidate to be an officer.   Candidates are required to write their responses based on the particular test.   Here the time limit is very crucial, so you are required to write your first response in time.

(b) <u>Battery of Test</u>.

       (i) Thematic Appreciation Test [TAT]

       (ii) Word Association Test [WAT]

       (iii) Situation Reaction Test [SRT]

       (iv) Self-Description Test [SD]

(c) **TAT.**   You will be shown 11 pictures in which last picture is a blank slide, each picture will come just for 30 seconds and then disappear, after that you will get 4 minutes time to write the story based on that picture. After 4 mins another picture will come for 30 seconds and same process will be followed till last slide.

(d) **WAT**.   You will be shown 60 words back to back, each word remains on the screen for 15 seconds, you are required to write a sentence in 15 secs which comes in your mind first after reading that word. Likewise, you have to write 60 words continuously without any pause in between.

(e) **SRT**.   You will get a booklet with 60 situations written on it, you are required to write your responses based on those 60 situations, time allotted will be 30 mins.

(f) **SD**.   You are required to write opinion about you from your parents, friends, teachers, yourself and things you would like to develop in future. Time allotted will be 15 mins. It's all about your speed of thinking and writing, do not manipulate much because it may create problem for you in later stage. Write legible and correct.

11. **GTO**.   This also has a series of outdoor task, the main aim of this task is to judge your qualities during group performance, remember most of the task in this series are group task, you are required to support the group with best of your qualities and not to compete with them in any manner.

(a) <u>GD</u>.   Back to back group discussion (GD) on two topics, mostly current affairs.

(b) <u>GPE</u>.   Group Planning Exercise (GPE), each candidate has to write his planning for the mentioned problem and map given, later group members are required to discuss on the problem and have to come with a common plan with common consensus. Later one of the group members has to explain the common planning with the help of pointer and map.

(c) <u>PGT</u>.   Progressive Group Task (PGT), you are required to cross some obstacles with the help of supporting materials like rope, plank, wood log etc. Some rules are required to be followed during this task, it a full group activity.

(d) <u>HGT</u>.   Half Group Task (HGT), mostly same as PGT but the number of group members will be half, you may get more chance to show your potential.

(e) <u>IOT</u>.   Individual Obstacles Task (IOT), you are required to attempt 10 obstacles individually, each obstacle consist of some points from 1 to 10.

(f) <u>Command Task</u>.   You will be a commander in this task; you are required to cross some obstacles with the help of 2-3 subordinates. You can choose 2-3 candidates from your own group whom you think can help you to clear the obstacles.

(g)   <u>Snake race/Group Obstacle Race</u>.   All group members will be competing with other groups, members will be holding a snake like rope, and they are required to cross certain obstacles with the snake. There are certain rules like all other tasks. It is kind of race amongst different groups.

(h)   <u>Individual Lecturette</u>.   Each candidate will be giving lecture for 3 mins on a topic selected by him/her. You will get 4 topics out of which you have to select one topic.

(j)   <u>FGT</u>.   Final Group Task (FGT), same like PGT, just like another chance to show your potential.

12.   **Personal Interview**.   It is a main key which decides your recommendation in the SSB Interview, SSB Interview questions and answers play vital role in the assessment of the candidate.

13.   **Conference**.   Each candidate will be facing all SSB board members, he/she will face few general questions like how was your stay or what did you learn from this, conference is just to decide whether or not to recommend you as an officer in Indian defence forces.   All assessors collectively decide your suitability, for some candidates those who are in border line, may face certain questions, which can be decisive one. It hardly goes for 1-2 mins.

INTERVIEW SKILLS

Curriculum Vitae

14.   **Curriculum Vitae (CV)**. An outline of a person's educational and professional history, it is usually prepared for job applications. Another name for a CV is a resume.

15.   A CV is the most flexible and convenient way to make applications. It can convey your personal details in the way that presents you in the best possible light and can be used to make multiple applications to employers in a specific career area.   There is no "one best way" to prepare a CV. It is your document and can be structured and presented as you wish within the basic framework.

The Interview

16.   **Interview Skills**.   The interview is the final test most people have to clear in getting a job. Some colleges and scholarship committees also require interviews.   Being chosen for an interview means someone is interested in your skills, knowledge and experience.   However, a great application or resume can quickly find its way into the garbage if you do not do well in an interview.   You now must become a sales person.   The interviewer is the buyer.   They want to see if your talents meet their needs for the job or for admission to the college.   Sell yourself.

17.   The interview is when you want to tell the employer or admissions representative about your strengths, skills, education, and work experience. Knowing yourself - positively selling your strong points - is what is going to get you the job or admission to the college.

18.   **Before the Interview**.

(a)   Do your homework!   Learn as much as you can about the company or college before the interview.

(b)   Do some research: ask people who work there, go to the library, look on the internet, and make an anonymous call to the secretary. Find out what services/products the company provides, how long they have been in business, whether the company is growing or downsizing.

(c)   Reputation, etc. An interviewer will be impressed that you have made an effort to learn about the company or college. Read any material they send you!

(d)   Know where you are going. Drive by the site of the interview a day or two before the interview.

(e)   Arrive 5 - 15 minutes early.

(f)   Be prepared when you go to the interview. Bring extra copies of your resume, your portfolio, a notepad with some questions prepared for the interview, and a pen.

(g)   Dress for Success! Hair should be clean, properly cut and combed. Fingernails must be clean with no gaudy polish. Keep perfume, cologne and aftershave to a minimum. Brush your teeth and don't forget deodorant.

    (i)   **Women**.   Dress, skirt (not too short), or dress pants with a nice blouse or blazer. No excessive jewellery, make-up, or "big hair."

    (ii)   **Men**.   Pants (not jeans!), collared shirt, tie, sports coat and shoes. A suit may be worn.

19.   **Conducting Yourself during the Interview**.   The major points that are important will include the following:-

(a)   Try to remember persons' names, and call each person by his or her name.

(b)   Always focus on the person asking the question, but use your peripheral vision to observe the facial and other nonverbal expressions of others involved in the interview.
(c)   If you don't have an answer to a specific question, respond honestly that you don't know much about that topic.

(d)   Be aware of your tone of voice and your body language. Do not, for example, slouch and put your arms on a table. Also, do not display nervous mannerisms or speak with a strained voice.

(e)   Don't try to answer a question immediately; if you want to, take a little time to provide a more complete answer.

(f)   Always answer each question honestly, because you will probably have to live with what you present. Being dishonest in your answers may occasionally assist you in obtaining the position you desire, but you will have to live with the dishonesty. If you have presented a false image and you behave differently on the job, you may soon be on your way out.

(g)   Display a good knowledge of the subject, based upon all the homework you have done. However, do not bury the interviewers with your knowledge, as you may very well turn them off. Also, if you display greater knowledge of a variety of subjects than the interviewers, you may scare them off from your candidacy.

(h)   Don't argue if you disagree with the opinion of an interviewer.   If you can, avoid it.

(j)   At the end of the interview, you will often be asked whether you have any questions for the interviewer(s).   It is wise, at this point, to respond:-

    (i)   That the interviewers and your homework have provided you with all the information that you feel you need, but ask permission to call to obtain additional information if you think of something important that you missed.

    (ii)   Ask if you can take a few minutes to stress why you desire the specific job, emphasizing strengths that you will bring to the position.

(k)   If you have materials that you would like the interviewers to review, do not hand them out prior / during the interview. If you do this, the interviewers many times will be reading your handout materials rather than paying attention to what is being discussed during the interview.

(l)   At the end, make certain to express your gratitude for being given the opportunity for the interview.

(m)   At the very end, provide an additional copy of your resume to each person conducting the interview. This will probably be taken home and will remind them of you when they think about a final employment decision. This is especially important if you were fortunate enough to obtain the final interview.

(n)   Throughout the entire interview, respond with sincerity, tact, and a high degree of interest.

(o)   Engage in active listening. Pay attention to the emotional tone of the interviewer, not just the words he or she utters.

(p)   Most important, throughout the entire interview situation, display life, pep, enthusiasm. Let your personality shine and display a high interest for the job for which you are interviewed.

Conclusion

20.   Interviewing is one of the most important skills one can have in the workplace. You cannot move in or up without passing the interview. Yet as important as it is, few people ever take the time to study material on the skills needed to master that process. They go in to an interview, answer the questions as best as they can and hope for the best. However, there is a technique to interviewing. It's just as important as your CVs', skills, experience, and accomplishments.

SUMMARY

1.   Career counselling is counselling or mentoring/coaching on issues related to an individual's career. Career counselling helps individuals make the right choice about their career paths, career development and career change.   Career Counselling is a process that will help you to know and understand yourself and the world of work in order to make career, educational, and life decisions. The Benefits of Career Counselling are ;-

(a)   Helps in Determining a Student's True Potential.
(b)   Clear Doubts.
(c)   Support and Motivation.
(d)   Guidance to Students.

SSB Procedure

2.   The SSB Procedure is over a period of 05 days.

3.   **Stage-1 Testing.**

(a)   Screening.
(b)   Verbal and Non-verbal Test.
(c)   PPDT.
(d)   Results of Screening.

4.   **Stage-2 Testing.**

(a)   Psychological Test
(b)   Battery of Test.

(i)   Thematic Appreciation Test [TAT]
(ii)   Word Association Test [WAT}
(iii)   Situation Reaction Test [SRT]
(iv)   Self-Description Test [SD]

5.   **GTO Tests.**

(a)   GD.
(b)   GPE.

  (c) PGT

  (d) HGT.

  (e) IOT

  (f) Command Task

  (g) Snake race/Group Obstacle Race.

  (h) Individual Lecturette

  (j) FGT.

6. **Personal Interview**

7. **Conference**

Interview Skills

8. The interview is when you want to tell the employer or admissions representative about your strengths, skills, education, and work experience. Knowing yourself - positively selling your strong points - is what is going to get you the job or admission to the college. The interview is the final hurdle most people have to cross in getting a job. Some colleges and scholarship committees also require interviews.   Being chosen for an interview means someone is interested in your skills, knowledge and experience.

CHAPTER PD - IV

PUBLIC SPEAKING

1.   Public speaking skills are valuable both in your personal life and in your career. Even if you don't regularly engage in public speaking, developing skills in this area will increase your confidence and reduce anxiety about situations in which you may be called upon to speak in public.

2.   The following points should be kept in mind to improve public speaking skills:

(a)   Stage Presence.   Good public speakers appear confident, friendly, enthusiastic and energetic. Confidence comes from choosing a topic you like and researching it well. Friendliness can be conveyed simply by smiling at your audience.   Enthusiasm and energy will naturally follow when you enjoy your topic and are well prepared.

(b)   Voice Control.   Your voice is the most important tool you will use as a public speaker. Improve the quality of your voice through diaphragmatic breathing; breathing from your diaphragm instead of your chest.   This is how professional singers breathe.   It is what helps to make their voices sound fabulous and enables them to hold notes long after most people would be out of breath.   Doing so also reduces feeling of breathlessness caused by speech anxiety.   This type of breathing will allow you to better control the following aspects of your voice:

   (i)   Tone (quality)

   (ii)   Pitch (high or low)

   (iii)   Volume of your voice

(c)   Body Language.   Practice standing with a relaxed upright posture. Place your hands at your sides or clasped in front of you, unless you are making a gesture to emphasize a point. Become aware of your facial expressions as well; they should match the message you are delivering. If you're giving an upbeat speech, try to have a relaxed and joyful look on your face.

(d)   Delivery.   When it comes to public speaking, delivery is everything. Even if you have a great voice and good body language, your message will get lost if the audience can't easily follow what you say. Below are some tips for developing good delivery skills.

   (i)   Speak slowly and deliberately.   Here's a tip: it will probably seem too slow for you.

   (ii)   Pause between ideas to give the audience time to digest what you are saying.

   (iii)   Carefully articulate and pronounce your words. A mumbling public speaker is hard to understand.

   (iv)   Avoid filler sounds like "Um" and "ah." It detracts from what you are saying and is distracting to the audience.

   (v)   Vary the pitch and volume of your voice to add interest. Speaking in a monotone is a surefire way to lose the interest of your listeners.   Listen to podcasts of upbeat public speakers and try to imitate how they talk.

(e)   Audience Relations.   Good public speakers are in tune with their audience. Public speaking is more than standing in front of a group and talking.

   (i)   Acknowledge your audience right away and begin talking as soon as all eyes are on you. This helps to make you seem more like a "real" person and keeps a conversational tone.

   (ii)   If you need to set up equipment, converse with your audience at the same time to keep their attention.

(iii)   Make eye contact and watch for communication from the audience. Smiles and nodding are good; fidgeting or confused looks may mean that you need to adjust what you are doing.   However, if you live with social anxiety, be careful not to focus too much on negative faces. It could be that they are just having a bad day, and their facial expressions have nothing to do with what you are saying.   A good rule of thumb is to find a friendly face at the start of your talk. If that person seems to be confused or bored, that is when you know it is time to address issues with your public speaking.

3.   Some recommended topics for Public speaking are enlisted below:

India's Foreign Policy	The metropolitan cities of India	Insurgency – A Phenomenon Needs Understanding
You-tube	Terrorism/Naxalism/Maoism	E Governance
Censorship Issues	Population problem	Health Tourism
Religious Tolerance in India	Adult Education	Govt Schools vs Private Public School
Women Safety	Indo US Relations	
Sachin Tendulkar	Beauty Pageants	Indian Railways
Bharat Ratna	Cable TV	National Anthem
Lobbying in Medical World	Personality – Secret of Success	G 20
Sports in India	Dog Man's Best Friend	Volcano
Football in India	Ragging	Secularism
Cricket in India	IT	Ambition in Life
Computer Hacking	Students Union	Internet Education
China India Relationship	IT Industry	Internet
Kashmir Issue	Your Favorite Day	Rattan Tata – A Business Personality
Narendra Modi on the World Front	Role of Discipline in Life	
Role of President in India	Smart Card	Should Article 370 be Abrogated?
Modern means of Transportation	G 8 Nations	
E-Commerce	Article 376 is an Insult to Indian Democracy	
IT industry in India	Cyber Crime	
Brain Drain	Sports in India	Democracy v/s Dictatorship
Role of Women in Nation Building	Role of Opposition in Indian Politics	Aviation Industry in Developing India
Women Safety	BPO vs KPO	Security Industry in Present Day
NOTA	Why Youth Hesitate to Join Defense Forces	IT is a Boon for Society
Delhi Elections	Peaceful use of Nuclear Energy	Water Shall be the Cause of World War –III
Democracy in India	Globalization	
India-Pakistan Relations	India's Agricultural Problem	Bribery- A Cancer of Indian Society
India 's relation with her neighbors	Favorite Actress India	
USA in Changing World	Should India go for war with Pakistan	
Criminalization of politics	Criminalization in Politics	
Social Media's role in society	Child Labor	Constitution of India – As I see it
Youth and social media	USA – A Policeman of Unipolar World	
Role of youth in nation building	Mutual Funds	
Internet revolution	Education is a Modern Day Industry	Higher Education in India
Arab Spring	Election Commission	
Israel Palestine Issue	Religion – A Secular View in Indian Society	Life Insurance Industry in India
US-Russia Relationship	Indian Cinema Industry (Bollywood)	
Rivers in India	Page 3 – A Way of Life	
AGNI V	Indian Society – Turning to Western Way of Life	Electronic Media And Print Media
Emerging India Writers		
Pollution and its prevention	Infrastructure of India	Policing in Our Country – Requires Review
What Indian Military needs	Rain Water Harvesting	
Modernization in Military	Favorite Cricketer	Which is the Most Neglected Sector in Our Country ?
Books Versus E-Books	Democracy in Pakistan – A Joke	
Education System in India	Status of Women in India	Girl Child in Indian Society – Misunderstood Aspect
Judicial System in India		

SUMMARY

1. Public speaking skills are valuable both in your personal life and in your career. Even if you don't regularly engage in public speaking, developing skills in this area will increase your confidence and reduce anxiety about situations in which you may be called upon to speak in public. The following point should be kept in mind to improve public speaking skills:

  (a) Stage Presence.
  (b) Voice Control.

    (i) Tone (quality)
    (ii) Pitch (high or low)
    (iii) Volume of your voice

  (c) Body Language.
  (d) Delivery.
    (i) Speak slowly and deliberately
    (ii) Pause between ideas
    (iii) Carefully articulate and pronounce your words.
    (iv) Avoid filler sounds like "Um" and "ah."
    (v) Vary the pitch and volume of your voice
  (e) Audience Relations.

CHAPTER L - I

LEADERSHIP CAPSULE

Important Leadership Traits

1.   A study of great military leaders reveal that none possessed all the leadership traits in the maximum degree but their weakness in one trait was compensated by the strength in the other. A good leader will capitalize on his strong traits and at the same time take steps to improve his weak traits. It would, however, be recognized that the leader's goal, the personalities of the people with whom he is working and the circumstances of the specific situation, all will have a profound effect on which particular trait needs most emphasis.

2.   Traits that are of paramount importance to a leader are given below:-

(a)   **Alertness**.   In a given situation a leader is always offered number of fleeting opportunities, which if seized and exploited can bring decisive result to his team. Alertness of mind is what helps a leader to pick up these opportunities at the right time and exploit the situation to his/her own advantage.

(b)   **Bearing**.   Denotes desirable physical appearance, dress and deportment. A leader and more so an officer should, therefore remember that his personal bearing will exercise a dominating and permeating influence not only with his own team but with the general public too.

(c)   **Courage**.   Courage is a mental state. It gets its strength from spiritual and intellectual sources. The way in which these spiritual and intellectual elements are blended, produces roughly two types of courage. The first is emotional state which urges a man to risk injury or death and is physical courage. The second, a more reasoning attitude which enable him coolly to stake career, happiness, his whole future on his judgment of what he thinks either right or worthwhile is moral courage. A leader must possess both forms of courage.

(d)   **Decisiveness**.   A logical thought process is essential for solving a problem or making a plan. Thereafter the leader's intention and his proposed method of execution must be made perfectly clear to all taking part. He must therefore acquire the ability to make decisions promptly when required and announce them authoritatively, concisely and clearly. The leader's power of decision results from his ability to remain unperturbed in a crisis. His greatest assets are the ability to think rationally when his men have ceased to think, to be decisive in action when they are paralyzed by fear.

(e)   **Dependability**.   You cannot get very far in any sphere of activity without reliability. Set yourself high standards both for the amount of worry you get through and the quality of work irrespective of supervision. Make a practice of carrying out all instructions and plans of your superiors to the best of your ability, and always on time. Always be ready to help out in an emergency even if it interferes considerably with your personal conveniences. 'Business before self' should be the rule. Whatever has to be done, take it in your stride, and never allow yourself to appear moody. Dependability has to be built up slowly by deliberate effort. It can be lost overnight if not guarded zealously.

(f)   **Endurance**.   In a military setting, a time comes in battle when both the opposing forces feel that probably they are fighting a losing battle. It is a time when battles are won or lost. The side which has that little extra endurance wins. It is the leader who has that extra endurance both of mind and body that can inspire his team to produce that extra endurance required to win battle or accomplish the assigned task. Mental and physical endurance are complementary. The old adage "A healthy mind in a healthy body" still holds good and both are essential for a leader.

(g)   **Enthusiasm**.   It is the display of genuine interest and zeal in the performance of duties. Enthusiasm comes from liking your job, having a living interest in all facets of your work and seeing the possibilities for development of new ideas and techniques. However mundane an occupation may seem to some people there is nearly always some feature in it which inspires the imagination.

Jobs only appear dull, routine or mechanical when they are looked at with dull eyes and a dull mind.

(h)   **Initiative**.   Initiative is the willingness to act or offer well considered recommendations in the absence of orders. It should always be done right away what you might have done later. In other words, initiative means one should not wait for things to happen but one has the ability to see quickly what needs to be done, making up one's mind to do it and accomplishing it. When a choice between two courses is available, one cautious and other bold and daring, the trait required is daring initiative.

(i)   **Integrity**.   As a leader one has to be honest, not only to oneself but to the men one leads and the people with whom one works. Honesty and integrity are absolute qualities that one cannot compromise or alter. Any loss or weakness in moral character will result in losing the confidence of our superiors, contemporaries and subordinates.

(j)   **Judgment**.   This is the power of the mind to assess various factors and values quickly and often under difficult circumstances and arrive at a wise decision. It is learned by experience and practice. At times a mistake or error of judgment may result, but it is more positive to learn from the mistake or error, rather than fight for exercising the power of judgment.

(k)   **Justice**.   The quality of being impartial and consistent in exercising command. Dispense justice quickly. "Justice delayed is justice denied".

(l)   **Knowledge**.   A leader must know more than the men he commands. Until he does, he has no business to be called their leader. Any profession requires a great deal of study, practice and experience not only of the organisation and tasks but more importantly of characteristics and capabilities of the team he leads. The process of acquiring knowledge never ends. There is always something new to learn even from re-reading or re-thinking of the same material or problem.

(m)   **Loyalty**.   The quality of being faithful to the country, the organisation, subordinates, colleagues and superiors. It is given by subordinates to a leader, in the manner in which the leader gives the same to them and to his own leaders. A leader must never take shelter behind the shortcomings or mistakes of his subordinates. When plans for which he is responsible go wrong he must take the blame, correcting the mistakes of subordinates himself. Every leader has the right to express his views to his superiors on any question under consideration but once a decision has been reached, he must act on it as if it were his own decision.

(n)   **Sense of Humour**.   The ability to appreciate the many amusing or lighter moments in everyday, life especially those which pertain to the leader himself. It is also the ability to remain cheerful under stress. At times when things go wrong and tensions mount, humour if it comes naturally at the appropriate time can go a long way in defusing a situation or raising sagging spirits. This together with a sense of balanced optimism, are useful traits to develop. However, attempts at artificial coarseness and sarcasm do more harm than good.

Indicators of Leadership and Evaluation

3.   Morale, team spirit, discipline and competence are the four indicators of leadership. All indicators of leadership contribute to the effectiveness of a group and are to some extent interdependent. The absence of one indicator could negatively affect or destroy the others.

Morale

4.   Morale may be defined as the positive state of mind. It gives a feeling of confidence and well being that enables a person to face hardship with courage, will power and determination. Morale depends upon the attitude towards everything that affects him and his fellow members of the group.

Team Spirit

5.   Team spirit is the loyalty to, pride in, and enthusiasm for the group shown by its members. It is the common spirit of the group. It implies devotion and loyalty to the group. The spirit is the group's personality and expresses the team's will to try and win even in difficult situations.

6.   Following are some of the factors to be considered for evaluation of team spirit:-

      (a)   Expressions of individual members showing enthusiasm in the activities they do.

      (b)   A good reputation among peers and others.

      (c)   A strong competitive spirit.

      (d)   Willing participation by the members in group activities.

      (e)   Readiness on the part of the members to help one another.

      (f)   The belief that their group is better than any other group.

Discipline

7.   Discipline means quick and willing obedience to instructions. Taking appropriate action without wasting time when instructions are absent. Voluntary or self-discipline among the members of the group brings in better results in the long run.

8.   Following are some of the factors to be considered for evaluation of discipline in a group:-

      (a)   Proper attention to instructions.

      (b)   Harmonious relations between group and its members.

      (c)   Devotion to duty.

      (d)   Good senior- junior relationship.

      (f)   Standards of cleanliness, dress and courtesy.

      (h)   Ability and willingness to perform effectively with little or no supervision.

Competence

9.   Competence is the technique, tactics and physical ability of the individual members as well as group to perform the task. A good leader brings together different members with varying skills as a team for smooth functioning.

10.   Following are some of the factors to be considered in evaluating competence in a group:-

      (a)   Personal appearance and physical fitness of members.

      (b)   Group leading ability of individual members.

      (c)   Level of skill shown by members while doing the tasks.

Motivation and Factors Which Motivate

11.   "Motivation is the commitment and urge within a member which   makes him accomplish his task under all situations without thinking about the cost"

12.   A study of human history has given us three factors which help motivate any person. These are:-

   (a) Material Factors.

   (b) Intellectual Factors.

   (c) Spiritual Factors.

Material Factors

13.   Material Factors are resources which are required to establish, maintain and enhance the basic quality of the life of the team and furtherance of their goals. A football team will require good and sufficient quantity of football boots, quality grounds, funds, kits for players etc. Once the team is provided with the resources, the motivation level of members goes up.

Intellectual Factors

14.   These factors make an individual proud of his/her group and motivate other members to perform better in difficult situations. Leadership by personal example is one of the elements which motivate soldiers to perform better.

Spiritual Factors

15.   Our soul offers the highest inspiration for our extra ordinary feats. It is the only factor which sustains a man when all hope is lost. The spiritual factor stems from group identity, pride in the group, team spirit, history and positive aspects of religion.

16.   Religion has played an important role in motivating men. Alexander's men imagined they were playing the role of their many gods during his conquests. Krishna's advice to Arjun on the battlefield of Kurukshetra is a soul-stirring speech. Even today it inspires and motivates men to war. It is the victory of the spirit which has led many physically and mentally challenged persons to take part and excel in various sports and other physical activities.

Moral Values

17.   Moral values consist of acts, well and honourably performed. Our habits, behaviour and conduct are reflections of our values. NCC cadet must conduct himself / herself such that his/her personal habits are not open to criticism. Tendencies toward selfishness and self-indulgence in luxuries are to be avoided strictly. As per Greek philosopher, Plato, there are four cardinal virtues or human values. They are:-

   (a)   Prudence   -   To make right decision.

   (b)   Courage   -   To stay course and resist temptation of all kind.

   (c)   Self control   -   To subordinate passion, emotion and feelings to fulfill mission at hand.

   (d)   Justice -   To give every individual his due.

18.   **Prudence**.   In order to make the right decision one has to go through three steps:-

   (a)   Gather all the information pertaining to subject

   (b)   Now evaluate each of the information and it's pro and cons

   (c)   Finally deciding on the best course of action after weighing various options.

19.   **Courage**.   It is both physical as well as mental courage. Persisting with the path or decision taken involves:-

        (a)   Sacrificing self-interest for realizing the prudent and just goals.

        (b)   Enduring trials, challenges and opposition courageously.

        (c)   Being consistent and precise.

        (d)   Resisting going along with the ongoing trends.

        (e)   Facing obstacles but persisting with it.

        (f)   Capacity to take risks.

20.   **Self-Control**. This is something every leader is required to attain; mastery of his/her heart and mind. For that he or she has to:-

        (a)   Subordinate his/her passions, emotions and feelings to the human spirit.

        (b)   Influence his/her sphere of activity like time management etc.

        (c)   Not get too much attracted by worldly things.

        (d)   Be wise with his/her reactions like anger, meekness etc.

21.   **Justice**.   Every fellow citizen needs to give his/her due. It involves striving for common good or good of others. A sense of equality, equity and fairness should be the bench mark.

22.   **An Inner Urge for Excellence**. It is the virtue of striving for excellence by challenging self and challenging others too. Such a person:

        (a)   Is a dreamer; like a parent for children or teacher for a student.

        (b)   Has an exciting vision of life which can be easily communicated and shared with others.

        (c)   Cultivates a sense of mission in their studies, profession and family.

        (d)   Challenges people to strive for higher personal excellence.

23.   **Selfless Service**.   It means:

        (a)   Overcoming selfishness

        (b)   Serving others like friends, family, society or country habitually.

        (c)   The consistent practice makes it a habit of service.

24.   Thus, a leader must possess these virtues or values in good measure to become a good leader. These are not inborn qualities but acquired through constant effort and practice.

Character Traits

25.   **What is Character?**   Each individual is a bundle of virtues and weaknesses, of head and heart. The resulting individuality of a person, from this balance sheet of good and bad qualities is his character; it is reflected in his conduct.

26.   Character traits are all the aspects of a person's behavior and attitude that makes up a person's personality. It is the proudest possession of any person. Character is not inborn, but developed over period of time.

27.   There are certain character qualities which have been listed below and their observance will go a long way in day to day interaction with others.

        (a)   **Speak Truth**. The consequences of speaking a lie are enormous and cannot be taken back. Hence speak truth always.

        (b)   **Be Honest**.   It means total honesty in thought, word and behavior.

        (c)   **Keep Your Word**.   Always keep the word once given. You will be recognised for this and will gain respect for the same.

        (d)   **Own Up Your Mistake**. Have the moral courage to admit to mistakes, however unpleasant the results may be.

        (e)   **Be Your Own Judge**.   Be honest when not under supervision.

        (f)   **Do Not Seek Cheap Popularity**.   A person of character is always loved for his qualities of honesty, self-sacrifice and attention to duty.

        (g)   **Resist Temptation**.   Temporary gain leads to long term pain. Hence, a person should not be attracted towards immediate pleasure and control his mind from all kinds of temptations by keeping in view his future life.

        (h)   **Set an Example**.   By doing this one inspires others to act like self. You should not do things which you do not expect others to do.

        (j)   **Sense of Responsibility**.   Take responsibility for one's actions.

        (k)   **Self Sacrifice**.   Interests of others and the society above one's own are always appreciated.

        (l)   **Be Impartial**.   Be just and impartial in all your dealings with others. You should not show favouritism.

        (m)   **Discipline**.   One's personal discipline must be of highest standards and it should be followed strictly.

Honour Code

28.   The directions of the honour code are:-

        (a)   You shall not lie, steal, cheat or tolerate those who do so.

        (b)   You shall not do anything selfish or mean including letting down a fellow cadet for self-interest.

        (c)   You shall not, by any actions bring the name of your institution to disgrace.

        (d)   You shall accept voluntarily your responsibility for any violation of this code.

Tenets of Honour Code

29.   Tenets of Honour Code are given below:-

        (a)   Good conduct to enhance your own self respect, honour and image of institution.

        (b)   Give priority to group interest over personal interest.

        (c)   Stand up for what is right and accept responsibility.

(d)　　Answer questions fully and truthfully to the honour code committee even if it results in action against you or your friends.

(e)　　Own up to the committee any breach of discipline or honour code, whether intentional or unintentional.

(f)　　Give all help and encouragement to fellow cadets who are weak.

(g)　　Participate in all competitions and sports in the true spirit of sportsmanship. Accept defeat with grace and victory with humility.

(h)　　Treat all fellow cadets with love and affection.

(j)　　Be secular, truthful, honest and straight forward in your dealings.

Conclusion

30.　　The honour code is the foundation for each cadet's ethical behavior for the rest of his life. It is hoped that this basic foundation provided to cadets will help to build better character qualities to make them ideal citizens of the country.

SUMMARY

1.　　**Traits** that are of paramount importance to a leader are given below: -

(a)　　Alertness.
(b)　　Bearing.
(c)　　Courage.
(d)　　Decisiveness.
(e)　　Dependability
(f)　　Endurance.
(g)　　Enthusiasm.
(h)　　Initiative.
(j)　　Integrity
(k)　　Judgment.
(l)　　Justice.
(m)　　Knowledge.
(n)　　Loyalty.
(o)　　Sense of Humour.

2.　　Morale, team spirit, discipline and competence are the four indicators of leadership. All indicators of leadership contribute to the effectiveness of a group and are to some extent interdependent. The absence of one indicator could negatively affect or destroy the others.

3.　　"**Motivation** is the commitment and urge within a member which makes him accomplish his task under all situations without thinking about the cost". A study of human history has given us three factors which help motivate any person. These are: -

(a)　Material Factors.
(b)　Intellectual Factors.
(c)　Spiritual Factors.

4.　　**Moral values** consist of acts, well and honourably performed. Our habits, behaviour and conduct are reflections of our values. NCC cadet must conduct himself / herself such that his/her personal habits are not open to criticism. Tendencies toward selfishness and self-indulgence in luxuries are to be avoided strictly. As per Greek philosopher, Plato, there are four cardinal virtues or human values. They are: -

(a)　　Prudence　　-　　To make right decision.
(b)　　Courage　　-　　To stay course and resist temptation of all kind.

(c)   Self control   -   To subordinate passion, emotion and feelings to fulfill mission at hand.

(d)   Justice   -   To give every individual his due.

5.   **Character traits** are all the aspects of a person's behavior and attitude that makes up a person's personality. It is the proudest possession of any person. Character is not inborn, but developed over period of time. Important traits are listed below: -

(a)   Speak Truth
(b)   Be Honest.
(c)   Keep Your Word.
(d)   Own Up Your Mistake.
(e)   Be Your Own Judge
(f)   Do Not Seek Cheap Popularity.
(g)   Resist Temptation.
(h)   Set an Example.
(j)   Sense of Responsibility.
(k)   Self Sacrifice.
(l)   Be Impartial.
(m)   Discipline.

6.   **Tenets of Honour Code** are -

(a)   Good conduct to enhance your own self respect, honour and image of institution.

(b)   Give priority to group interest over personal interest.

(c)   Stand up for what is right and accept responsibility.

(d)   Answer questions fully and truthfully to the honour code committee even if it results in action against you or your friends.

(e)   Own up to the committee any breach of discipline or honour code, whether intentional or unintentional.

(f)   Give all help and encouragement to fellow cadets who are weak.

(g)   Participate in all competitions and sports in the true spirit of sportsmanship. Accept defeat with grace and victory with humility.

(h)   Treat all fellow cadets with love and affection.

(j)   Be secular, truthful, honest and straight forward in your dealings.

CHAPTER L - II

CASE STUDIES

SHIVAJI

1.   **Shivaji Bhonsle** was an Indian warrior king and a member of the Bhonsle Maratha clan. Shivaji carved out an enclave from the declining Adilshahi sultanate of Bijapur that formed the genesis of the Maratha Empire. In 1674, he was formally crowned as the chhatrapati (monarch) of his realm at Raigad.

Early life

2.   Shivaji was born in the hill-fort of Shivneri, near the city of Junnar in what is now Pune district. Scholars disagree on his date of birth. The Government of Maharashtra lists 19 February as a holiday commemorating Shivaji's birth (Shivaji Jayanti). Shivaji was named after a local deity, the goddess Shivai. Shivaji's father Shahaji Bhonsle was a Maratha general who served the Deccan Sultanates. His mother was Jijabai, the daughter of Lakhuji Jadhavrao of Sindhkhed, a Mughal-aligned sardar claiming descent from a Yadav royal family of Devagiri. At the time of Shivaji's birth, power in Deccan was shared by three Islamic sultanates: Bijapur, Ahmednagar, and Golkonda. Shahaji often changed his loyalty between the Nizamshahi of Ahmadnagar, the Adilshah of Bijapur and the Mughals, but always kept his jagir (fiefdom) at Pune and his small army.

Coronation

3.   Shivaji was crowned king of Satara in a lavish ceremony on 6 June 1674.] Gaga Bhatt officiated, holding a gold vessel filled with the seven sacred waters of the rivers Yamuna, Indus, Ganges, Godavari, Narmada, Krishna and Kaveri over Shivaji's head, and chanted the Vedic coronation mantras. After the ablution, Shivaji bowed before Jijabai and touched her feet. Nearly fifty thousand people gathered at Raigad for the ceremonies. Shivaji was entitled Shakakarta ("founder of an era") and Chhatrapati ("paramount sovereign").

Conquest in Southern India

4.   Beginning in 1674, the Marathas undertook an aggressive campaign, raiding Khandesh (October), capturing Bijapuri Ponda (April 1675), Karwar (mid-year), and Kolhapur (July). In November the Maratha navy skirmished with the Siddis of Janjira, but failed to dislodge them.[95] Having recovered from an illness, and taking advantage of a conflict between the Afghans and Bijapur, Shivaji raided Athani in April 1676.

5.   In the run-up to his expedition Shivaji appealed to a sense of Deccani patriotism, that Southern India was a homeland that should be protected from outsiders. His appeal was somewhat successful, and in 1677 Shivaji visited Hyderabad for a month and entered into a treaty with the Qutubshah of the Golkonda sultanate, agreeing to reject his alliance with Bijapur and jointly oppose the Mughals. In 1677 Shivaji invaded Karnataka with 30,000 cavalry and 40,000 infantry, backed by Golkonda artillery and funding. Proceeding south, Shivaji seized the forts of Vellore and Gingee; the latter would later serve as a capital of the Marathas during the reign of his son Rajaram I.

Death and succession

6.   In late March 1680, Shivaji fell ill with fever and dysentery,[105] dying around 3–5 April 1680 at the age of 52, on the eve of Hanuman Jayanti. Putalabai, the childless eldest of the surviving wives of Shivaji committed sati by jumping into his funeral pyre. Another surviving spouse, Sakwarbai, was not allowed to follow suit because she had a young daughter. Rumours followed Shivaji's death, with some Muslims opining he had died of a curse from Jan Muhammad of Jalna, as punishment for Shivaji's troops attacking merchants who had taken refuge in his hermitage. After Shivaji's death, Soyarabai made plans with various ministers of the administration to crown her son Rajaram rather than her stepson Sambhaji. On 21 April 1680, ten-year-old Rajaram was installed on the throne. However, Sambhaji took possession of Raigad Fort after killing the commander, and on 18 June acquired control of Raigad, and formally ascended the throne.

A. P. J. ABDUL KALAM

1.   **Avul Pakir Jainulabdeen Abdul Kalam** (15 October 1931 – 27 July 2015) was an aerospace scientist who served as the 11th President of India from 2002 to 2007. He was born and raised in Rameswaram, Tamil Nadu and studied physics and aerospace engineering. He spent the next four decades as a scientist and science administrator, mainly at the Defence Research and Development Organisation (DRDO) and Indian Space Research Organisation (ISRO) and was intimately involved in India's civilian space programme and military missile development efforts. He thus came to be known as the Missile Man of India for his work on the development of ballistic missile and launch vehicle technology. He also played a pivotal role in India's Pokhran-II nuclear tests in 1998, the first since the original nuclear test by India in 1974.

2.   Kalam was elected as the 11th President of India in 2002 with the support of both the ruling Bharatiya Janata Party and the then-opposition Indian National Congress. Widely referred to as the "People's President", he returned to his civilian life of education, writing and public service after a single term. He was a recipient of several prestigious awards, including the Bharat Ratna, India's highest civilian honour.

Early life and education

3.   In his school years, Kalam had average grades but was described as a bright and hardworking student who had a strong desire to learn. He spent hours on his studies, especially mathematics. After completing his education at the Schwartz Higher Secondary School, Ramanathapuram, Kalam went on to attend Saint Joseph's College, Tiruchirappalli, then affiliated with the University of Madras, from where he graduated in physics in 1954. He moved to Madras in 1955 to study aerospace engineering in Madras Institute of Technology. He narrowly missed achieving his dream of becoming a fighter pilot, as he was placed ninth in qualifiers, and only eight positions were available in the IAF.

Career as a scientist

4.   After graduating from the Madras Institute of Technology in 1960, Kalam joined the Aeronautical Development Establishment of the Defence Research and Development Organisation as a scientist after becoming a member of the Defence Research & Development Service (DRDS). He started his career by designing a small hovercraft, but remained unconvinced by his choice of a job at DRDO. Kalam was also part of the INCOSPAR committee working under Vikram Sarabhai, the renowned space scientist. In 1969, Kalam was transferred to the Indian Space Research Organisation (ISRO) where he was the project director of India's first Satellite Launch Vehicle (SLV-III) which successfully deployed the Rohini satellite in near-earth orbit in July 1980; Kalam had first started work on an expandable rocket project independently at DRDO in 1965. In 1969, Kalam received the government's approval and expanded the programme to include more engineers.

5.   In 1963 to 1964, he visited NASA's Langley Research Center in Hampton, Virginia; Goddard Space Flight Center in Greenbelt, Maryland; and Wallops Flight Facility. Between the 1970s and 1990s, Kalam made an effort to develop the Polar Satellite Launch Vehicle (PSLV) and SLV-III projects, both of which proved to be successful.

6.   His research and educational leadership brought him great laurels and prestige in the 1980s, which prompted the government to initiate an advanced missile programme under his directorship. R Venkatraman was instrumental in getting the cabinet approval for allocating ₹388 crores for the mission, named Integrated Guided Missile Development Programme (IGMDP) and appointed Kalam as the chief executive. Kalam played a major part in developing many missiles under the mission including Agni, an intermediate range ballistic missile and Prithvi, the tactical surface-to-surface missile, although the projects have been criticised for mismanagement and cost and time overruns.

7.   Kalam served as the Chief Scientific Adviser to the Prime Minister and Secretary of the Defence Research and Development Organisation from July 1992 to December 1999. The Pokhran-II nuclear tests were conducted during this period in which he played an intensive political and technological role. Kalam

served as the Chief Project Coordinator, along with Rajagopala Chidambaram, during the testing phase. Media coverage of Kalam during this period made him the country's best-known nuclear scientist.

8.   In 1998, along with cardiologist Soma Raju, Kalam developed a low cost coronary stent, named the "Kalam-Raju Stent". In 2012, the duo designed a rugged tablet computer for health care in rural areas, which was named the "Kalam-Raju Tablet".

Presidency

9.   Kalam served as the 11th President of India, succeeding K. R. Narayanan. He won the 2002 presidential election with an electoral vote of 922,884, surpassing the 107,366 votes won by Lakshmi Sahgal. His term lasted from 25 July 2002 to 25 July 2007. Kalam was the third President of India to have been honoured with a Bharat Ratna, India's highest civilian honour, before becoming the President. Dr Sarvepalli Radhakrishnan (1954) and Dr Zakir Hussain (1963) were the earlier recipients of Bharat Ratna who later became the President of India. He was also the first scientist and the first bachelor to occupy Rashtrapati Bhawan.

Death

10.   On 27 July 2015, Kalam travelled to Shillong to deliver a lecture on "Creating a Livable Planet Earth" at the Indian Institute of Management Shillong. While climbing a flight of stairs, he experienced some discomfort, but was able to enter the auditorium after a brief rest. At around 6:35 p.m. IST, only five minutes into his lecture, he collapsed. He was rushed to the nearby Bethany Hospital in a critical condition; upon arrival, he lacked a pulse or any other signs of life. Despite being placed in the intensive care unit, Kalam was confirmed dead of a sudden cardiac arrest at 7:45 p.m IST.

11.   Following his death, Kalam's body was airlifted in an Indian Air Force helicopter from Shillong to Guwahati, from where it was flown to New Delhi on the morning of 28 July in an air force C-130J Hercules. His body was then placed on a gun carriage draped with the Indian flag and taken to his Delhi residence at 10 Rajaji Marg; there, the public and numerous dignitaries paid homage.

12.   On the morning of 29 July, Kalam's body, wrapped in the Indian flag, was taken to Palam Air Base and flown to Madurai in an air force C-130J aircraft, arriving at Madurai Airport that afternoon. On 30 July 2015, the former president was laid to rest at Rameswaram's Pei Karumbu Ground with full state honours. Over 350,000 people attended the last rites, including the Prime Minister, the governor of Tamil Nadu and the chief ministers of Karnataka, Kerala and Andhra Pradesh.

DEEPA MALIK

1.   **Deepa Malik** was born on 30 September 1970. She is an Indian athlete. She is the first Indian woman to win a medal in Paralympic Games and won a Silver medal at the 2016 Summer Paralympics in the shot put.[3] She has also won gold in F-53/54 Javelin event at the para athletic grand Prix held in Dubai in 2018. She currently is the world number one in the F-53 category. She won accolades for her participation in various adventure sports. She is associated with Himalayan Motorsports Association (H.M.A.) and Federation of Motor Sports Clubs of India (F.M.S.C.I.). She has undertaken an 8-day, 1700-km drive in sub-zero temperatures which included a climb to 18000 feet. It was – Raid De Himalaya. This journey covers many difficult paths including remote Himalayas, Leh, Shimla and Jammu. She was previously honored with the Arjuna award in 2012, at the age of 42 yrs. She has also been conferred the prestigious Padma Shri award in 2017. She created a New Asian Record in Asian Para Games 2018 and is the only Indian woman to win medals in 3 consecutive Asian Para Games (2010, 2014, 2018). She has won 58 national & 23 International medals across all disciplines to date.

2.   Malik is the wife of Colonel Bikram Singh and daughter of Colonel BK Nagpal. She is the mother of two adult daughters.

3.   Her aim of joining motor sports is to spread awareness towards the fact that physically challenged individuals can obtain an official license and attain independence and self-reliance through driving. Deepa Malik has undertaken numerous rallies to promote this cause.

Records and rankings

4.   Holds an Official IPC Asian Record In Javelin F-53 Category – Felicitated by Milkha Singh and P.T. Usha.

5.   Holds All Three National Records In Throws {Discus, Javelin, Shot-put} In F-53 Category

6.   Holds All Three National Records In S-1 Swimming Category {Back Stroke, Breast Stroke, Free Style}

7.   World Ranking 2010–12 – 2nd Shot-put, 3rd -Discus, 3rd Javelin

8.   Asian Ranking 2010–12 – 1st In All Three Throws

LIMCA World Records

9.   Longest Pan-India drive done by a paraplegic woman. Chennai-Delhi 3278 km – 2013

10.   Driving Across Nine High Altitude Passes in Nine Days on Leh-Ladakh Highest Motorable Roads. (First Woman in the world in her disability to attempt a journey like this – 2011)

11.   Riding Special Bike −2009

12.   Swimming in River Yamuna Against the Current For 1 km. Allahabad-2008

MAHARANA PRATAP

1.   **Pratap Singh I** (9 May 1540 – 19 January 1597) popularly known as **Maharana Pratap**, was the 13th Rajput king of Mewar, a region in north-western India in the present day state of Rajasthan.

Early life and accession

2.   Maharana Pratap was born in a Rajput family. He was born to Udai Singh II and Jaiwanta Bai.   He was married to Ajabde Punwar of Bijolia. He belonged to the Royal Family of Mewar, which was also related to the Royal Family of Saurashtra, Gujarat.

3.   After the death of Udai Singh in 1572, Rani Dheer Bai wanted her son Jagmal to succeed him but senior courtiers preferred Pratap, as the eldest son, to be their king. The desire of the nobles prevailed.

Battle of Haldighati

4.   The bloody Siege of Chittorgarh in 1568 had led to the loss of the fertile eastern belt of Mewar to the Mughals. However, the rest of the wooded and hilly kingdom was still under the control of the Rana. The Mughal emperor Akbar was intent on securing a stable route to Gujarat through Mewar; when Pratap Singh was crowned king (Rana) in 1572, Akbar sent a number of envoys entreating the Rana to become a vassal like many other Rajput leaders in the region. When the Rana refused to personally submit to Akbar, war became inevitable.

5.   The Battle of Haldighati was fought on 18 June 1576 between Maharana Pratap and Akbar's forces led by Man Singh I of Amer. The Mughals were victorious and inflicted significant casualties among the Mewaris but failed to capture Maharana. The site of the battle was a narrow mountain pass at Haldighati near Gogunda, modern day Rajsamand in Rajasthan. Maharana Pratap fielded a force of around 3000 cavalry and 400 Bhil archers. The Mughals were led by Man Singh of Amber, who commanded an army numbering around 5000-10,000 men. After a fierce battle lasting more than three hours, Maharana found himself wounded and the day lost. The mughal were unable to capture him. He managed to escape to the hills and lived to fight another day. The casualties for Mewar was far more, 1600 men to 100 men of the Mughal army with another 350 wounded.

6. Haldighati was a futile victory for the Mughals, as they were unable to capture Maharana Pratap, or any of his close family members in Udaipur.

7. As soon as the empire's focus shifted north-west, Pratap and his army came out of hiding and recaptured the western regions of his dominion.

Resurgence

8. Mughal pressure on Mewar relaxed after 1579 following rebellions in Bengal and Bihar and Mirza Hakim's incursion into the Punjab. In 1582, Maharana Pratap attacked and occupied the Mughal post at Dewair (or Dawer). In 1585, Akbar moved to Lahore and remained there for the next twelve years watching the situation in the north-west. No major Mughal expedition was sent to Mewar during this period. Taking advantage of the situation, Pratap recovered Western Mewar including Kumbhalgarh, Udaipur and Gogunda. During this period, he also built a new capital, Chavand, near modern Dungarpur.

Death

9. Reportedly, Pratap died of injuries sustained in a hunting accident at Chavand on 19 January 1597, aged 56. He was succeeded by his eldest son, Amar Singh I.

10. Rana Pratap's defiance of the mighty Mughal empire, almost alone and unaided by the other Rajput states, constitute a glorious saga of Rajput valour and the spirit of self sacrifice for cherished principles. Rana Pratap's methods of sporadic warfare was later elaborated further by Malik Ambar, the Deccani general, and by Shivaji Maharaj.

RATAN TATA

1. **Ratan Tata** was born in Bombay, now Mumbai, on 28 December 1937, and is the son of Naval Tata (born in Surat). His biological maternal grandmother had been the sister of Hirabai Tata, wife of group founder Jamshedji Tata. His biological father, Hormusji Tata, had belonged to the broader Tata family; Ratan therefore was a Tata by birth. Parents Naval and Sonoo separated in 1948 when Ratan was 10, and he was subsequently raised by the widow of Sir Ratanji Tata, his grandmother, Navajbai Tata, who formally adopted him through the J. N. Petit Parsi Orphanage.

2. He studied at the Campion School till the 8th class, followed by Cathedral and John Connon School and at Bishop Cotton School in Shimla, and in 1955, graduated from Riverdale Country School in New York City. In 1959, he then received a B. Arch. degree in Architecture with Structural Engineering from Cornell University, and in 1975, attended the seven-week Advanced Management Program of Harvard Business School — an institution which he has since endowed.

3. In 1961, Tata began his career in the Tata Group, working on the shop floor of Tata Steel, shovelling limestone, and handling the blast furnace. Promoted to management during the 1970s; he then endured trial by fire and was able to turn Group company National Radio and Electronics (NELCO) around, only to see it collapse during an economic slowdown. In 1991, J. R. D. Tata stepped down as chairman of Tata Sons, naming him his successor. When he settled down into the new role, he faced stiff resistance from many companies heads, some of whom had spent decades in their respective companies and rose to become very powerful and influential due to the freedom to operate under JRD Tata. He began replacing them by setting a retirement age, and then made individual companies report operationally to the group office and made each contribute some of their profit to build and use the Tata group brand. Innovation was given priority and younger talent was infused and given responsibilities. Under his stewardship, overlapping operations in group companies were streamlined into a synergised whole, with the salt-to-software group exiting unrelated businesses to take on globalisation.

4. He was the interim chairman of Tata Sons. He continues to head the main two Tata trusts Sir Dorabji Tata Trust and Sir Ratan Tata Trust and their allied trusts, with a combined stake of 66% in Tata Sons, Tata group's holding company.

5. He has served in various capacities in organizations in India and abroad. He is a member of Prime Minister's 'Council on Trade and Industry' and the 'National Manufacturing Competitiveness Council'. He is

on the jury panel of Pritzker Architecture Prize– considered to be one of the world's premier architecture prizes.

6.   Ratan Tata received the Padma Bhushan in 2000 and Padma Vibhushan in 2008, the third and second highest civilian honours awarded by the Government of India.

<h2 style="text-align:center">KIRAN MAZUMDAR-SHAW</h2>

1.   **Kiran Mazumdar-Shaw** (born on 23 March 1953) is an Indian billionaire entrepreneur. She is the chairperson and managing director of Biocon Limited, a biotechnology company based in Bangalore, India and the chairperson of Indian Institute of Management Bangalore. In 2014, she was awarded the Othmer Gold Medal, for outstanding contributions to the progress of science and chemistry. She is on the Financial Times' top 50 women in business list. In 2015, she was listed as the 85th most powerful woman in the world by Forbes. Forbes again listed her in 2016 and 2017 - the most powerful women in the world at 77th and 71st position respectively.

Early Life

2.   Kiran Mazumdar was born to Gujarati parents in Bangalore, India. She went to school at Bangalore's Bishop Cotton Girl's High School, graduating in 1968. She then attended Mount Carmel College, Bangalore, a women's college offering pre-university courses as an affiliate of Bangalore University. She studied biology and zoology, graduating from Bangalore University with a bachelor's degree in zoology in 1973. Mazumdar hoped to go to medical school, but did not obtain a scholarship.

3.   Her father, Rasendra Mazumdar, was the head brewmaster at United Breweries. He suggested that she study fermentation science, and train to be a brewmaster, a very non-traditional field for a woman. Mazumdar went to Federation University (formerly University of Ballarat) in Australia to study malting and brewing. In 1974 she was the only woman on the brewing course, and came top of her class. She earned the degree of master brewer in 1975.

4.   She worked as a trainee brewer in Carlton and United Breweries, Melbourne and as a trainee maltster at Barrett Brothers and Burston, Australia. She also worked for some time as a technical consultant at Jupiter Breweries Limited, Calcutta and as a technical manager at Standard Maltings Corporation, Baroda between 1975 and 1977. However, when she investigated the possibility of further work in Bangalore or Delhi, she was told that she would not be hired as a master brewer in India because "It's a man's work." She began to look abroad, and was offered a position in Scotland.

Biocon

5.   Before Mazumdar could move, she met Leslie Auchincloss, founder of Biocon Biochemicals Limited, of Cork, Ireland. Auchincloss's company produced enzymes for use in the brewing, food-packaging and textile industries. Auchincloss was looking for an Indian entrepreneur to help establish an Indian subsidiary. Mazumdar agreed to undertake the job on the condition that if she did not wish to continue after six months she would be guaranteed a brewmaster's position comparable to the one she was giving up.

Expanding into biopharmaceuticals

6.   Mazumdar spearheaded Biocon's evolution from an industrial enzymes manufacturing company to a fully integrated bio-pharmaceutical company with a well-balanced business portfolio of products and a research focus on diabetes, oncology and auto-immune diseases. She also established two subsidiaries: Syngene (1994) which provides early research and development support services on a contract basis and Clinigene (2000) which focuses on clinical research trials and the development of both generic and new medicines. Clinigene was later merged with Syngene. Syngene was listed on BSE/NSE in 2015 and has a current market cap of US$1.15 billion.

7.   Mazumdar is responsible for establishing Biocon's direction. As early as 1984, she began to develop a research and development team at Biocon, focusing on discovery of novel enzymes and on development of novel techniques for solid substrate fermentation technology. The company's first major expansion came in 1987, when Narayanan Vaghulof ICICI Ventures (Industrial Credit and Investment

Corporation of India) supported creation of a venture capital fund of US$250,000. The money enabled Biocon to expand its research and development efforts. They built a new plant featuring proprietary solid substrate fermentation technology based on a semi-automated tray culture process, inspired by Japanese techniques. In 1989, Biocon became the first Indian biotech company to receive US funding for proprietary technologies.

8.   In 1990, Mazumdar incorporated Biocon Biopharmaceuticals Private Limited (BBLP) to manufacture and market a select range of biotherapeutics in a joint venture with the Cuban Center of Molecular Immunology.

9.   As of 2014, Biocon directed about 10% of its revenue into research and development, a much higher proportion than most Indian pharmacological companies. Biocon has filed at least 950 patent applications as a result of its research activity. Mazumdar-Shaw has actively engaged in acquisitions, partnerships and in-licensing within the pharmaceuticals and bio-pharmaceutical area, entering into more than 2,200 high-value R&D licensing and other deals between 2005 and 2010.

RANI OF JHANSI

1.   **Lakshmibai**, the **Rani of Jhansi**; (19 November 1828 – 18 June 1858), was the queen of the princely state of Jhansi in North India currently present in Jhansi district in Uttar Pradesh, India. She was one of the leading figures of the Indian Rebellion of 1857 and became a symbol of resistance to the British Raj for Indian nationalists.

Early Life

2.   Rani Lakshmibai was born on 19 November 1828 in the town of Varanasi into a Marathi family. She was named Manikarnika Tambe and was nicknamed Manu. Her father was Moropant Tambe and her mother Bhagirathi Sapre (Bhagirathi Bai). Her parents came from Maharashtra. Her mother died when she was four years old. Her father worked for a court peshwa (one of 8 ministers under Chhatrapati) of Bithoor district. The peshwa called her "Chhabili", which means "playful". She was educated at home and was more independent in her childhood than others of her age; her studies included shooting, horsemanship, fencing and mallakhamba with her childhood friends Nana Sahib and Tatya Tope.

3.   Rani Lakshmibai was accustomed to riding on horseback accompanied by a small escort between the palace and the temple although sometimes she was carried by palanquin. Her horses included Sarangi, Pavan and Baadal; according to historians she rode Baadal when escaping from the fort in 1858. The Rani Mahal, the palace of Rani Lakshmibai, has now been converted into a museum. It houses a collection of archaeological remains of the period between the 9th and 12th centuries AD.

History of Jhansi, 1842 - May 1857

4.   Manikarnika was married to the Maharaja of Jhansi, Raja Gangadhar Newalkar, in May 1842 and was afterwards called Lakshmibai (or Laxmibai) in honour of the Hindu goddess Lakshmi and according to the traditions. She gave birth to a boy, later named Damodar Rao, in 1851, who died after four months. The Maharaja adopted a child called Anand Rao, the son of Gangadhar Rao's cousin, who was renamed Damodar Rao, on the day before the Maharaja died. The adoption was in the presence of the British political officer who was given a letter from the Maharaja instructing that the child be treated with respect and that the government of Jhansi should be given to his widow for her lifetime.

5.   After the death of the Maharaja in November 1853, because Damodar Rao (born Anand Rao) was an adopted son, the British East India Company, under Governor-General Lord Dalhousie, applied the Doctrine of Lapse, rejecting Damodar Rao's claim to the throne and annexing the state to its territories. When she was informed of this she cried out "I shall not surrender my Jhansi" (Main meri Jhansi nahi doongi). In March 1854, Rani Lakshmibai was given an annual pension of Rs. 60,000 and ordered to leave the palace and the fort.

Siege of Jhansi

6.   From August 1857 to January 1858, Jhansi under the Rani's rule was at peace. The British had announced that troops would be sent there to maintain control but the fact that none arrived strengthened the position of a party of her advisers who wanted independence from British rule. When the British forces finally arrived in March they found it well-defended and the fort had heavy guns which could fire over the town and nearby countryside. Hugh Rose, commanding the British forces, demanded the surrender of the city; if this was refused it would be destroyed. After due deliberation the Rani issued a proclamation: "We fight for independence. In the words of Lord Krishna, we will if we are victorious, enjoy the fruits of victory, if defeated and killed on the field of battle, we shall surely earn eternal glory and salvation." She defended Jhansi against British troops when Sir Hugh Rose besieged Jhansi on 23 March 1858.

Flight to Gwalior

7.   The leaders (the Rani of Jhansi, Tatya Tope, the Nawab of Banda, and Rao Sahib) fled once more. They came to Gwalior and joined the Indian forces who now held the city (Maharaja Scindia having fled to Agra from the battlefield at Morar). They moved on to Gwalior intending to occupy the strategic Gwalior Fort and the rebel forces occupied the city without opposition. The rebels proclaimed Nana Sahib as Peshwa of a revived Maratha dominion with Rao Sahib as his governor (subedar) in Gwalior. The Rani was unsuccessful in trying to persuade the other rebel leaders to prepare to defend Gwalior against a British attack which she expected would come soon. General Rose's forces took Morar on 16 June and then made a successful attack on the city.

Death

8.   On 17 June in Kotah-ki-Serai near the Phool Bagh of Gwalior, a squadron of the 8th (King's Royal Irish) Hussars, under Captain Heneage, fought the large Indian force commanded by Rani Lakshmibai, who was trying to leave the area. The 8th Hussars charged into the Indian force, slaughtering 5,000 Indian soldiers, including any Indian "over the age of 16".They took two guns and continued the charge right through the Phool Bagh encampment. In this engagement, according to an eyewitness account, Rani Lakshmibai put on a sawar's uniform and attacked one of the hussars; she was unhorsed and also wounded, probably by his sabre. Shortly afterwards, as she sat bleeding by the roadside, she recognised the soldier and fired at him with a pistol, whereupon he "dispatched the young lady with his carbine". According to another tradition Rani Lakshmibai, the Queen of Jhansi, dressed as a cavalry leader, was badly wounded; not wishing the British to capture her body, she told a hermit to burn it. After her death a few local people cremated her body. Her tomb is in the Phool Bagh area of Gwalior.

N. R. NARAYANA MURTHY

1.   **Nagavara Ramarao Narayana Murthy** was born 20 August 1946 he commonly referred to as **Narayana Murthy**, he is an Indian IT industrialist and the co-founder of Infosys, a multinational corporation providing business consulting, technology, engineering, and outsourcing services. Murthy studied electrical engineering at the National Institute of Engineering, University of Mysore, and MTech at the Indian Institute of Technology Kanpur.

2.   Before starting Infosys, Murthy worked with Indian Institute of Management Ahmedabad as chief systems programmer and Patni Computer Systems in Pune (Maharashtra). He started Infosys in 1981 and served as its CEO from 1981 to 2002 and as chairman from 2002 to 2011. In 2011, he stepped down from the board and became chairman Emeritus. On 1 June 2013, Murthy was appointed as Additional Director and Executive Chairman of the board for a period of five years.

3.   Murthy has been listed among the 12 greatest entrepreneurs of our time by Fortune magazine. He has been described as the "father of the Indian IT sector" by Time magazine due to his contribution to outsourcing in India. Murthy has also been honoured with the Padma Vibhushan[14] and Padma Shri awards.

4.   Murthy first served as Research Associate under a faculty at IIM Ahmedabad and then later served as chief systems programmer There he worked on India's first time-sharing computer system and designed and implemented a BASIC interpreter for Electronics Corporation of India Limited. He started a company named Softronics. When that company failed after about a year and a half, he joined Patni Computer Systems in Pune.

5.   Murthy and six software professionals founded Infosys in 1981 with an initial capital injection of Rs 10,000, which was provided by his wife Sudha Murthy. Murthy served as the CEO of Infosys for 21 years from 1981 to 2002 and was succeeded by co-founder Nandan Nilekani. At Infosys he articulated, designed and implemented the Global Delivery Model for IT services outsourcing from India. He was chairman of the board from 2002 to 2006, after which he became Chairman of the board and Chief Mentor. In August 2011, he retired from the company, taking the title chairman Emeritus.

PRAKASH PADUKONE

1.   **Prakash Padukone** (born on 10 June 1955) is a former Indian badminton player. He was ranked World No. 1 in 1980; the same year he became the first Indian to win the All England Open Badminton Championships. He was awarded the Arjuna award in 1972 and the Padma Shri in 1982 by the Government of India. He is one of the co-founders of Olympic Gold Quest, a foundation dedicated to the promotion of Olympic sports in India.

Background and early life

2.   Padukone was born on 10 June 1955 in Padukone village near Kundapura, Udupi. His surname, Padukone, is the name of the village Padukone from where his family originates.

3.   Padukone got married to Ujjala, a match arranged by their parents in the Indian Hindu system. They have two daughters - Deepika Padukone, a Bollywood actress, and Anisha Padukone, a golfer. Padukone, his wife and younger daughter Anisha reside in Bangalore, whereas Deepika lives and works in Mumbai.

4.   Prakash Padukone's life story has been chronicled in the biography 'Touch Play', by Dev S. Sukumar. The book is only the second biography of any badminton player.

Career

5.   Prakash was initiated into the game by his father Ramesh Padukone, who was the Secretary of the "Mysore Badminton Association" for many years.

6.   Padukone's first official tournament was the Karnataka state junior championship in 1962. Though he lost in the very first round, two years later he managed to win the state junior title. He changed his playing style into a more aggressive style in 1971, and won the Indian national junior title in 1972. He also won the senior title the same year. He won the National title consecutively for the next seven years. In 1978, he won his first major international title, the men's singles gold medal at the 1978 Commonwealth Games in Edmonton, Canada. In 1979, he won the "Evening of Champions" at the Royal Albert Hall, London.

7.   In 1980, he won the Danish Open, the Swedish Open and became the first Indian to win the men's singles title at the All England Championship with a victory over Indonesian rival Liem Swie King. He spent much of his international career training in Denmark, and developed close friendships with European players such as Morten Frost.

Other services

8.   After his retirement from competitive sports in 1991, Padukone served as the chairman of the Badminton Association of India for a short while. He also served as the coach of the Indian national badminton team from 1993 to 1996.

Olympic gold quest

9.   After retirement, Prakash Padukone has sought to mentor budding young players and help them achieve glory for the country. He runs the Prakash Padukone Badminton Academy and, along with Geet Sethi, he is a co-founder of Olympic Gold Quest, a foundation dedicated to the promotion of Olympic sports in India.

TIPU SULTAN

1.   Tipu Sultan was born on 20 November 1750 at Devanahalli, in present-day Bangalore Rural district, about 33 km north of Bangalore city. He was named "Tipu Sultan" after the saint Tipu Mastan Aulia of Arcot. Being illiterate, Hyder was very particular in giving his eldest son a prince's education and a very early exposure to military and political affairs. From the age of 17 Tipu was given independent charge of important diplomatic and military missions. He was his father's right arm in the wars from which Hyder emerged as the most powerful ruler of southern India.

2.   Tipu's father, Hyder Ali, was a military officer in service to the Kingdom of Mysore who had become the *de facto* ruler of Mysore in 1761 while his mother Fatima Fakhr-un-Nisa was the daughter of Mir Muin-ud-Din, the governor of the fort of Kadapa. Hyder Ali appointed able teachers to give Tipu an early education in subjects like Urdu, Persian, Arabic, Kannada, Quran, Islamic jurisprudence, riding, shooting and fencing.

Early military service

3.   Tipu Sultan was instructed in military tactics by French officers in the employment of his father. At age of 15, he accompanied his father against the British in the First Mysore War in 1766. He commanded a corps of cavalry in the invasion of Carnatic in 1767 at age 16. He also distinguished himself in the First Anglo-Maratha War of 1775–1779.

Second Anglo-Mysore War

4.   In 1779, the British captured the French-controlled port of Mahé, which Tipu had placed under his protection, providing some troops for its defence. In response, Hyder launched an invasion of the Carnatic, with the aim of driving the British out of Madras. During this campaign in September 1780, Tipu Sultan was dispatched by Hyder Ali with 10,000 men and 18 guns to intercept Colonel Baillie who was on his way to join Sir Hector Munro. In the Battle of Pollilur, Tipu decisively defeated Baillie. Out of 360 Europeans, about 200 were captured alive, and the sepoys, who were about 3800 men, suffered very high casualties. Munro was moving south with a separate force to join Baillie, but on hearing the news of the defeat he was forced to retreat to Madras, abandoning his artillery in a water tank at Kanchipuram.

5.   Tipu Sultan defeated Colonel Braithwaite at Annagudi near Tanjore on 18 February 1782. Braithwaite's forces, consisting of 100 Europeans, 300 cavalry, 1400 sepoys and 10 field pieces, was the standard size of the colonial armies. Tipu Sultan seized all the guns and took the entire detachment prisoner. In December 1781 Tipu Sultan successfully seized Chittur from the British. Tipu Sultan had thus gained sufficient military experience by the time Hyder Ali died on Friday, 6 December 1782 .

6.   Tipu Sultan realised that the British were a new kind of threat in India. He became the ruler of Mysore on Sunday, 22 December 1782, in a simple coronation ceremony. He then worked on to check the advances of the British by making alliances with the Marathas and the Mughals. The Second Mysore War came to an end with the 1784 Treaty of Mangalore.

Third Anglo-Mysore War

7.   In 1791 his opponents advanced on all fronts, with the main British force under Cornwallis taking Bangalore and threatening Srirangapatna. Tipu harassed the British supply and communication and embarked on a "scorched earth" policy of denying local resources to the invaders. In this last effort he was successful, as the lack of provisions forced Cornwallis to withdraw to Bangalore rather than attempt a siege of Srirangapatna. Following the withdrawal, Tipu sent forces to Coimbatore, which they retook after a lengthy siege.

8.   The 1792 campaign was a failure for Tipu. The allied army was well-supplied, and Tipu was unable to prevent the junction of forces from Bangalore and Bombay before Srirangapatna. After about two weeks of siege, Tipu opened negotiations for terms of surrender. In the ensuing treaty, he was forced to cede half his territories to the allies, and deliver two of his sons as hostages until he paid in full three crores and thirty lakhs rupees fixed as war indemnity to the British for the campaign against him. He paid the amount in two instalments and got back his sons from Madras.

Death

9. Three armies marched into Mysore in 1799—one from Bombay and two British, one of which included Arthur Wellesley. They besieged the capital Srirangapatna in the Fourth Mysore War. Thus, the soldiers in the British force numbered more than 50,000, whereas Tipu Sultan had only about 30,000. The British broke through the city walls, and French military advisers told Tipu Sultanto escape via secret passages, but he refused.

10. Tipu Sultan was killed at the Hoally (Diddy) Gateway, which was located 300 yards (270 m) from the N.E. Angle of the Srirangapatna Fort. He was buried the next afternoon at the Gumaz, next to the grave of his father.

RABINDRANATH TAGORE

1. **Rabindranath Tagore** born **Robindronath Thakur**, (7 May 1861 – 7 August 1941), and also known by his sobriquets **Gurudev**, **Kabiguru**, and **Biswakabi**, was a Bengali polymath, poet, musician, and artist from the Indian subcontinent. He reshaped Bengali literature and music, as well as Indian art with Contextual Modernism in the late 19th and early 20th centuries. Author of the "profoundly sensitive, fresh and beautiful verse" of *Gitanjali*, he became the first non-European to win the Nobel Prize in Literature in 1913. Tagore's poetic songs were viewed as spiritual and mercurial; however, his "elegant prose and magical poetry" remain largely unknown outside Bengal. He is sometimes referred to as "the Bard of Bengal". As an exponent of the Bengal Renaissance, he advanced a vast canon that comprised paintings, sketches and doodles, hundreds of texts, and some two thousand songs; his legacy also endures in the institution he founded, Visva-Bharati University.

2. Tagore modernised Bengali art by spurning rigid classical forms and resisting linguistic strictures. His novels, stories, songs, dance-dramas, and essays spoke to topics political and personal. *Gitanjali* (*Song Offerings*), *Gora* (*Fair-Faced*) and *Ghare-Baire* (*The Home and the World*) are his best-known works, and his verse, short stories, and novels were acclaimed—or panned—for their lyricism, colloquialism, naturalism, and unnatural contemplation. His compositions were chosen by two nations as national anthems: India's *Jana Gana Mana* and Bangladesh's *Amar Shonar Bangla*. The Sri Lankan national anthem was inspired by his work.

Early life: 1861–1878

3. The youngest of thirteen surviving children, Tagore (nicknamed "Rabi") was born on 7 May 1861 in the Jorasanko mansion in Calcutta to Debendranath Tagore (1817–1905) and Sarada Devi (1830–1875).

4. Tagore was raised mostly by servants; his mother had died in his early childhood and his father travelled widely. The Tagore family was at the forefront of the Bengal renaissance. They hosted the publication of literary magazines; theatre and recitals of Bengali and Western classical music featured there regularly. Tagore's father invited several professional Dhrupad musicians to stay in the house and teach Indian classical music to the children.

5. Tagore largely avoided classroom schooling and preferred to roam the manor or nearby Bolpur and Panihati, which the family visited. His brother Hemendranath tutored and physically conditioned him—by having him swim the Ganges or trek through hills, by gymnastics, and by practising judo and wrestling. He learned drawing, anatomy, geography and history, literature, mathematics, Sanskrit, and English—his least favourite subject. Tagore loathed formal education—his scholarly travails at the local Presidency College spanned a single day.

6. After his *upanayan* (coming-of-age) rite at age eleven, Tagore and his father left Calcutta in February 1873 to tour India for several months, visiting his father's Santiniketan estate and Amritsar before reaching the Himalayan hill station of Dalhousie. There Tagore read biographies, studied history, astronomy, modern science, and Sanskrit, and examined the classical poetry of Kālidāsa. During his 1-month stay at Amritsar in 1873 he was greatly influenced by melodious gurbani and nanak bani being sung at Golden Temple for which both father and son were regular visitors. He wrote 6 poems relating to Sikhism and a number of articles in Bengali child magazine about Sikhism.

7. Tagore returned to Jorosanko and completed a set of major works by 1877, one of them a long poem in the Maithili style of Vidyapati. As a joke, he claimed that these were the lost works of newly

discovered 17th-century Vaiṣṇava poet Bhānusiṃha. Regional experts accepted them as the lost works of the fictitious poet. He debuted in the short-story genre in Bengali with "Bhikharini" ("The Beggar Woman"). Published in the same year, *Sandhya Sangit* (1882) includes the poem "Nirjharer Swapnabhanga" ("The Rousing of the Waterfall").

Santiniketan: 1901–1932

8.　　In 1901 Tagore moved to Santiniketan to found an ashram with a marble-floored prayer hall—*The Mandir*—an experimental school, groves of trees, gardens, a library. There his wife and two of his children died. His father died in 1905. He received monthly payments as part of his inheritance and income from the Maharaja of Tripura, sales of his family's jewellery, his seaside bungalow in Puri, and a derisory 2,000 rupees in book royalties.

9.　　In November 1913, Tagore learned he had won that year's Nobel Prize in Literature: the Swedish Academy appreciated the idealistic—and for Westerners—accessible nature of a small body of his translated material focused on the 1912 *Gitanjali: Song Offerings*. He was awarded a knighthood by King George V in the 1915 Birthday Honours, but Tagore renounced it after the 1919 Jallianwala Bagh massacre.

10.　　In 1921, Tagore and agricultural economist Leonard Elmhirst set up the "Institute for Rural Reconstruction", later renamed Shriniketan or "Abode of Welfare", in Surul, a village near the *ashram*. With it, Tagore sought to moderate Gandhi's *Swaraj* protests, which he occasionally blamed for British India's perceived mental — and thus ultimately colonial — decline. He sought aid from donors, officials, and scholars worldwide to "free village[s] from the shackles of helplessness and ignorance" by "vitalising knowledge". In the early 1930s he targeted ambient "abnormal caste consciousness" and untouchability. He lectured against these, he penned Dalit heroes for his poems and his dramas, and he campaigned—successfully—to open Guruvayoor Temple to Dalits.

Death

11.　　Tagore spent the last four years of his life in sickness and pain. In late 1937, he lost consciousness. He was in a coma for a long time. Eventually he woke up, but three years later, he went back into a coma. During these years, whenever he was conscious and felt well enough, he wrote poems. These poems talk about how he came close to death. After a long period of suffering, Tagore died on 7 August 1941, at the age of 80, in his childhood home in Kolkata.

CHAPTER DM - I

DISASTER MANAGEMENT CAPSULE

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.

NATIONAL DISASTER MANAGEMENT AUTHORITY (NDMA)

General

2.   India is vulnerable, in varying degrees, to a large number of natural as well as man-made disasters. 58.6 per cent of the Indian landmass is prone to earthquakes of moderate to very high intensity. Over 40 million hectares of land (12 per cent of total land mass) is prone to floods and river erosion. Of the 7,516 km long coastline, close to 5,700 km is prone to cyclones and tsunamis. 68 percent of the cultivable area is vulnerable to drought. Hilly areas are at risk from landslides and avalanches. India also has had a history of natural disasters in recent years. Thus, the importance of Disaster Management in India.

3.   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.

Organisation of NDMA

4.   **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. It will be responsible for laying down policies, plans and guidelines for Disaster Management and coordinating their enforcement and implementation for ensuring timely and effective response to disasters.

5.   **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 is to coordinate 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. It will also perform such other functions as may be prescribed by the Central Government in consultation with the NDMA.

6.   **State Disaster Management Authority (SDMA).** 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. It will, interalia 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. 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.

7.   **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.

8.   **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.

National Disaster Response Force (NDRF)

9.   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 of Civil Defence and National Disaster Response Force.

10.   Presently, the NDRF comprises twelve battalions and further expansion may be considered in due course. These battalions are positioned at different locations across India. NDRF units will maintain close liaison with the designated State Governments and will be available to them in the event of any serious threatening disaster situation. 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. The NDRF units will also impart basic training to all the stakeholders identified by the State Governments in their respective locations.

Types of Disasters

11.   **Definition of Disaster**. The term disaster is commonly used to denote any odd event 'natural or manmade' which brings about a lot of misery to a region and it becomes difficult to cope with the situation through local resources. As per W.H.O. "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

12.   Disasters can be classified as natural and manmade disasters which are explained below:-

   (a)   **Natural Disasters**.   These are of the following types:-

      (i)   **Wind Related**. Storms, Cyclones, Tornadoes, Tidal Waves and Blizzards, etc.

      (ii)   **Water Related**. Floods/Flash Floods, Cloudburst, Excessive Rains, Drought, etc.

      (iii)   **Earth Related**.   Earthquakes, Tsunamis, Avalanches, Landslides, Volcanic Eruptions, etc.

   (b)   **Man Made Disasters**. These can be classified as under:-

      (i)   **Accidents**.   Road, rail, air, sea accidents or building collapse.

      (ii)   **Industrial Mishaps**. Gas leaks, explosion, sabotage and safety breaches.

      (iii)   **Fire**.   In buildings, coal fields or oil or gas fields and oil or gas store depots.

      (iv)   **Forest Fires**. In tropical countries, forest fires are often man made.

      (v)   **Contamination/Poisoning**.   Incidents of mass food poisoning, water contamination, illicit-liquor poisoning and epidemics.

      (vi)   **Terrorists Activities**.   Serial Blasts / explosions in public transport or markets.

(vii) **Ecological**. Pollution of air, water, noise, soil degradation, loss of biodiversity, global warming, sea level rise, toxic wastes and nuclear accidents.

(viii) **Warfare**. Conventional, chemical, biological or nuclear.

Essential Services and Their Maintenance

13. 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) 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

Type of Maintenance Required for Essential Services

14. 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 go out of gear. 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.

15. **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.

16. **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 quelling of rumours.

17. **Transport**.

(a) Maintenance of rail/road communications with special attention to:-

(i) Repairing damaged rail/ road network as it directly relates to the delivering of relief supplies by vehicles.

(ii) 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.

18.   **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.

19.   **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.

Role of NCC Cadets in Maintaining Essential Services

20.   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 Centres.

(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.

Employment of NCC Cadets during Natural Disasters

21.   For employment of NCC cadets during Natural Disasters, proper SOPs will have to be made by the local CO / Gp Cdr, in consultation with the DDMA, under the guidelines issued by HQ DG NCC / the State NCC Dtes. One of the roles to be given to NCC cadets in the overall District Disaster Management is assistance to Traffic Police. 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.

EFFECTS OF NATURAL DISASTERS AND ASSISTANCE REQUIRED

Effects of Natural Disasters

22.   The major effects of natural disasters are:-

(a)   Excessive loss of life / injuries due to burial of people

(b)   Inundation of cities / towns / villages or the country side, displacing hundreds of people, making them homeless or migrate to safer places.

(c)   Marooning of villages / houses / people.

(d)   Destruction / Collapsing of houses / buildings in villages / towns.

(e)   Total disruption of all essential services like communications, electricity, water and health services.

(f)   Severe damage to road / rail network including damage to bridges.

(g)   Displacement / loss of domestic and wild animals.

(h)   Destruction of crop / livelihood.

Type of Assistance Required

23.   The following types of assistances will be required during natural / other   calamities:-.

(a)   Setting up of information centres / reactivation of teleservices.

(b)   Re-establishment of road / rail communication.

(c)   Establishment of relief camps / shelters.

(d)   Casualty Evacuation & Rescue.

(e)   Establishment of Medical Camp and providing First Aid.

(f)   Establishment of Sanitation Services.

(g)   Establishment and distribution of Relief Material including food and water.

(h)   Carcass Disposal.

(i)   Patrolling and Liaison.

(j)   Searching for causalities / survivors.

Assistance by NCC during Natural Disasters

24.   The organisation for providing assistance during natural disasters will be the existing organisation of NCC. 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.

Method of Providing NCC Assistance

25.   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.

(d)   Allocate and handover the action groups to the various agencies for providing assistance.

26.   **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.

(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.

(g)   **Carcass Disposal Groups.**   Rotting and undisposed carcasses create unhygienic conditions and have to be disposed off immediately. Their disposal becomes an extremely important task. The members of this group have to be devoted and physically able to carry out this task and should have been medically protected. They will be imparted appropriate training for carrying out this task. If possible, the Civil Defence Volunteers, members from the NSS\boys Scouts can be included in this group.

Civil Defence Services and Their Duties

27.   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 causalities 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.

SUMMARY

1.   Disasters can be classified as natural and man made disasters which are explained below:-

(a)   **Natural Disasters**.   These are of the following types:-

(i)   **Wind Related**. Storms, Cyclones, Tornadoes, Tidal Waves and Blizzards, etc.
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(i)   **Accidents**.   Road, rail, air, sea accidents or building collapse.
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(iii) **Fire**.   In buildings, coal fields or oil or gas fields and oil or gas store depots.
(iv)   **Forest Fires**. In tropical countries, forest fires are often man made.
(v)   **Contamination/Poisoning**.   Incidents of mass food poisoning, water contamination, illicit-liquor poisoning and epidemics.
(vi)   **Terrorists Activities**.   Serial Blasts / explosions in public transport or markets.
(vii) **Ecological**.   Pollution of air, water, noise, soil degradation, loss of biodiversity, global warming, sea level rise, toxic wastes and nuclear accidents.
(viii) **Warfare**.   Conventional, chemical, biological or nuclear.

2.   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)   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.

3.   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 Centres.

(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.

4.   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.

(d)   Allocate and handover the action groups to the various agencies for providing assistance.

5.   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)   Evacuation and Rescue Groups.

(e)   First Aid Medical Groups.

(f)   Sanitation Groups.

(g)   Carcass Disposal Groups.

6.   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)   Casualty Services.

(e)   Communication Services.

(f)   Rescue Services.

(g)   Welfare Services.

(h)   Depot and Transport Services.

(i)   Salvage Service.

(j)   Corpse Disposal Service.

(k)   Supply Service.

(l)   Repair and Demolition Service.

CHAPTER DM - II

INITIATIVE TRG, ORGANISING SKILLS AND DO's AND DONT's

NATURAL DISASTERS

Introduction

1.   NCC can play a significant role in the management of the after effects of natural calamities and disasters. With its organizational capability, strength and quality of its cadre, involvement of NCC in disaster relief will provide able assistance to the nation as well as an avenue to the youth in showing its commitment to the society, play a significant role in forming correct attitudes, feelings of empathy in respect of fellow human beings and also result in personal growth and improved self-image of the cadets. The NCC will in turn benefit immensely with its enhanced image. 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.

2.   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 before hand 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

3.   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, suitable bonds would be required to be obtained from parents of cadets. 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.

5.   **Dos and Don'ts**.   Few Do's and Don'ts instructions to be followed by NCC cadets performing 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)	SW cadets may be used for softer jobs like providing medical assistance or manning exchanges.	Ensure that SD 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.

FLOODS

6. **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.
   (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.

7. **In the Flood Situation.**

   (a) Obey orders by government and shift to a safer place.
   (b) Be at safe place and they 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 don not spread rumours.

8. **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.

9. **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 TVs, VCRS, CRT terminals or other electrical equipment 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

10. **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 60' 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 already put together portable emergency survival kits for you and your family.
    a. Have an emergency radio that automatically turns on in the event of
        i. a hazard warning.
    b. Assemble your family and walk or bicycle to the nearest tsunami. Safety zone (unless someone with you is mobility impaired).

(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.

11.   **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) Stop to put on clean underwear because you might have to go to the hospital.

(j) Live in a tsunami hazard zone.

EARTHQUAKES

12.   **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 to the ceiling.

(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.

(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

13.   **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
(h) Can opener.
(i) Essential medicines
(j) Cash and credit cards
(k) Thick ropes and cords
(l) Sturdy shoes

14.   **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.

15.   **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.

16.   **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.

17.   **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.

18.   **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.

MAN MADE DISASTERS

ACCIDENTS

1. **Dos**

    (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) Your injuries, including taking pictures over the time it takes your injuries to heal.
        (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.
    (i) DO contact your attorney. If you don't have an attorney or your attorney is unable to take car accident cases, contact a qualified attorney in your area. For more on hiring a car accident attorney, read this article.

2. **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 911 from a safe place.
    (f) DON'T engage in discussions about who was at fault in the accident with anyone, and make sure you don't apologize for anything - it can be considered evidence that you were legally at fault.
    (g) DON'T agree to settlement terms without contacting your attorney and having him or her review the settlement offer.

3. **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 102 for ambulance and 100 for police. 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 Mom, Dad, Hubby, 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.

i. 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.'

j. 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.

Conclusion

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.

CHAPTER DM - III

FIRE SERVICES AND FIRE FIGHTING

Introduction

1.　　Fire is a major cause for destruction of property / lives these days. Due to increase in the standard of living, electrical goods, air conditioners and cooking gas are found in most of the houses. Also, due to the influx of multinational companies, most offices, shopping malls and hospitals have air conditioners. With the influx of these electrical gadgets and cooking gas, occurrences of fire incidents have increased manifold, especially during winters and summers. It is therefore essential that everyone should be aware of how to prevent fire hazards and/or to provide assistance in fire fighting.

Causes and Prevention of Fire

2.　　Fire is the outcome of either heating or over heating of a combustible substance to the required temperature or igniting an inflammable material. The following three elements are essential for creation of fire and its continuation:-

      (a)　　Oxygen.
      (b)　　Sufficient heat to raise the temperature of fuel to its burning point or ignition temperature.
      (c)　　Combustible or burnable material (Solid, Liquid or Gas).

Prevention of Fire

3.　　The following measures must be taken to prevent occurrence of fire incidents:-

      (a)　　**Domestic Fires**.

            (i)　　**Kitchen Fires**.　These fires can be prevented by following measures:-

                (aa)　　Don't keep any inflammable material like petrol, kerosene or clothing near the fire or the gas.
                (ab)　　Always check the gas cylinder, gas pipe for leakage. Keep the kitchen well ventilated to prevent leaking gas accumulation. Switch off the regulator when the gas is not in use.
                (ac)　　Before lighting the gas, ensure there is no gas leakage.
                (ad)　　Keep children away from gas or fire or stoves.
                (ae)　　Before leaving the kitchen, ensure that the gas and kerosene stoves are switched off and there are no burning embers in the 'Chulha'.

            (ii)　　**Other Fires**.

                (aa)　　Ensure that no electrical circuit is overloaded'.
                (ab)　　Ensure that good quality electrical items are used.
                (ac)　　Ensure that all electrical gadgets are switched off when not in use, e.g. TV, AC, room heater or iron.
                (ad)　　Ensure that smokers do not leave any burning cigarettes or stubs in ashtrays near inflammable material.
                (ae)　　Don't ignite any fire cracker inside the house.

      (b)　　**Fire in Public Places.**

            (i)　　Ensure that smokers do not leave any burning cigarettes or stubs in public dustbins or near inflammable material in closed AC offices, shopping malls or cinema halls.
            (ii)　　Don't ignite any fire cracker near petrol pumps, in crowded markets, near inflammable material or inside malls.

Fire Fighting

4.   Fire can be extinguished if any one or more of the three main constituents are removed from the scene of fire.   The fire can thus be extinguished by:-

(a)   **Starvation**.   Starvation means removal of fuel or combustible material and it can be achieved by either segregation of fire and un-burnt fuel by removing either of them e.g. removing un-burnt combustible materials from a room on fire with the help of hook or otherwise or division of a large fire into several smaller ones to prevent the radiated heat from setting alight combustible material at some distance.

(b)   **Cooling**.   Cooling implies the removal of heat to lower the temperature of burning material to a point below its ignition point. This is usually achieved by water. When water is poured over a burning material, it absorbs heat, becomes hot and flows away or is converted into steam. The burning substance loses heat to the water and its temperature comes down to below its ignition temperature and so the fire is extinguished.

(c)   **Smothering**.   Smothering means Choking 'or restricting the supply of Oxygen (Air) to the burning material. This is also called - blanketing' and is achieved by sealing all the burning material from Oxygen (Air) by covering it with sand/dry earth/ foam or by creating an atmosphere over the fire of heavier than air inert gas.

Fire Fighting Parties

5.   **House Fire Parties**. It consists of four persons who carry stirrup pumps and water buckets. They act as fire watchers and work under the orders of the wardens. They carry one stirrup pump, two buckets, one torch and one hand axe. One steel helmet and one whistle per member are envisaged as personal equipment.

6.   **Auxiliary Fire Services**.   This consists of eight persons with Trailer Pump which can throw water at the fire from a distance. The members of this Service are drawn from the Home Guards.

Fire Fighting Equipment

7.   Fire Fighting Equipment can be divided into the following four categories:-

(a)   Fire Extinguishers.
(b)   Stirrup Pumps.
(c)   Buckets.
(d)   Fire Beaters and Hooks.

8.   **Fire Extinguishers**. For the convenience of study, these could be grouped as under:-

(a)   **Soda Acid Extinguishers**.   These fire extinguishers are used for extinguishing fires involving ordinary combustible material, where the cooling effect is achieved by water or solution containing large percentage of water. Such extinguishers are conical /cylindrical in shape.

(b)   **Foam Type or Dry Chemical Powder Extinguishers**. These fire extinguishers contain dry chemicals or solution and are exclusively meant for extinguishing fires involving inflammable liquids such as oils, fats, or grease, where blanketing the fire to isolate it from Oxygen (Air) is required.

(c)   **CTC Carbon dioxide and Dry Chemical Extinguishers**. These fire Extinguishers contain chemicals, either liquid, gas or dry, and are mainly used to fight fires involving Live 'electrical equipment' etc. where, the use of an electrically non-conductive extinguishing agent is of most importance.

(d)   The main advantages of these extinguishers are:-

(i)   They are easy to operate.

(ii)   They need only one man to operate and carriage to another place.
(iii)   They are very useful in the initial stages of fire.

(e)   The disadvantages of these extinguishers are:-

(i)   The use is limited as the duration of the working of the   extinguishers is approximately one to two minutes.
(ii)   The cost of these extinguishers is high.
(iii)   These extinguishers require constant care and careful maintenance.

9.   **Stirrup Pumps**.The stirrup pump is an excellent piece of first aid fire fighting equipment designed for use on small fire. It is very useful in localizing and controlling fires with limited water supplies. Water spray from this equipment may be used on small fires for cooling the combustible material or the surrounding of scene of fire. It is generally operated by a team of four members but in an emergency a team of two members can also operate it effectively. The consumption of water is about 3.8 to 5.7 litres per minute. The spray produced by this pump can reach 15 to 20 feet away from the nozzle with water consumption 2.8 litres per minute.

10.   **Bucket**.   Buckets are ideal for storing water and sand for fighting small fires. They could be easily carried by one person, from one place to another.

11.   **Fire Beaters / Hooks**.   Beaters made of wire net in a rectangular shape and hooks made of iron fitted on bamboo poles are ideal for separating the burning and unburnt combustible material, and extinguishing by beating the small fires.

Conclusion

12.   It is extremely essential for all to be aware of the causes of fires and how to prevent fires or carryout firefighting in homes and public places.

SUMMARY

1.   Fire is the outcome of either heating or over heating of a combustible substance to the required temperature or igniting an inflammable material. The following three elements are essential for creation of fire and its continuation: -

(a)   Oxygen.
(b)   Sufficient heat to raise the temperature of fuel to its burning point or ignition temperature.
(c)   Combustible or burnable material (Solid, Liquid or Gas).

2.   The fire can thus be extinguished by:-

(a)   Starvation.
(b)   Cooling.
(c)   Smothering.

3.   **Fire Fighting Parties.**

(a)   House Fire Parties.
(b)   Auxiliary Fire Services.

4.   Fire Fighting Equipment can be divided into the following four categories: -

(a)   Fire Extinguishers.
(b)   Stirrup Pumps.
(c)   Buckets.
(d)   Fire Beaters and Hooks.

CHAPTER SS - I

SOCIAL SERVICE CAPSULE

Basics of Social Service

1.   **Methods**.   There are generally three accepted methods identified for conduct of social service which are as under:-

    (a)   **Social Case Work**.   This aims to help the individual make maximum use of the established community, through understanding the individual in his total situation.

    (b)   **Social Group Work**.   It seeks to help the individuals utilize their fullest capacity for their own welfare and for the welfare of the group as a whole, through understanding of the behaviour of individuals in a group setting.

    (c)   **Community Organization**.   It attempts to help groups of individuals or groups of agencies to work together so that their combined efforts will be useful for the social welfare of the whole community.

2.   **Types of Social Service Activities**.   There can be many social service activities.   Some of the social service activities which can be undertaken are as under:-

    (a)   Education.
    (b)   Family Welfare, Medical Care, Family Planning and Nutrition.
    (c)   Provision of Water and Cooking Fuel, Roads, Electricity and Sanitation.
    (d)   Old Age Support Systems.
    (e)   Employment.
    (f)   Social Assistance, Social Security and Care & Protection.
    (g)   Housing and Rehabilitation.
    (h)   Recreation, Sports and Social activities.

3.   **Contribution of NCC Cadets**.   NCC cadets individually or in a group can make significant contribution in this field:-

    (a)   If a student helps a blind man cross a road it is a service done to humanity.
    (b)   A group of students can render service to people ravaged by flood, cyclone, famine and earthquake.
    (c)   Students are educated and they can remove superstition, blind faith, ignorance of the illiterate.
    (d)   They can help the nation in the removal of illiteracy.
    (e)   Students can teach them to take health care.
    (f)   They can take active part in the national scheme of afforestation.
    (g)   They can look to the sanitation of their own area.
    (h)   The students may have a role to play in awakening public opinion against social evils like drug addiction, casteism, dowry system, by taking out procession or organizing seminars.
    (i)   They can nurse the sick, donate blood, and hospitalize them in time of need. In any kind of accident students can render considerable help.

Rural Development Objectives

4.   **Objectives of Rural Development.**   Following are the primary objectives of rural development:-

    (a)   To improve the living standards by providing food, shelter, clothing, employment and education.
    (b)   To Increase productivity in rural areas and reduce poverty.
    (c)   To involve people in planning and development through their participation in decision making and through centralization of administration.
    (d)   To ensure distributive Justice and equalization of opportunities in the society.

Important Rural Development Programmes

5.   **MGNREGA**.   Stands for the Mahatma Gandhi National Rural Employment Guarantee Act. It was the first ever law internationally, that guarantees wage employment. MGNREGA aims at improving livelihood and security of households in rural areas of the country. It guarantees of least one hundred days of wage employment in a year to every household whose adult member volunteers to do unskilled manual work.

6.   **Features of MGNREGA**.   Unique features of the Act include:-

   (a)   Time bound employment guarantee and wage payment within 15 days.
   (b)   Incentive- disincentive structure to the state government, for providing or not providing employment, as per demand.
   (c)   Emphasis on labour intensive work prohibiting the use of contractor, and machinery.
   (d) Ensure the creation of durable community, social and economic infrastructure and assets in the rural areas.
   (e)   The Act also mandates 33 percent participation for women.

7.   **Pradhan Mantri Gram Sadak Yojana (PMGSY)**. It was launched with aim of giving connectivity. It is a nationwide plan in India to provide good all-weather road connectivity to unconnected villages. Of 178,000 (1.7 lakh) habitations with a population of above 500 in the plains and above 250 in the hilly areas planned to be connected by all-weather roads, 82% were already connected by December 2017 and work-in-progress on the remaining 47,000 habitations was on-track for completion by March 2019 (December 2017).

8.   **National Social Assistance Programme (NSAP)**.   The National Social Assistance Programme (**NSAP**) was launched in 1995-96. The NSAP then comprised of the National Old Age Pension Scheme (**NOAPS**) for senior citizens, National Family   Benefit Scheme (**NFBS**) and National Maternity Benefit Scheme (**NMBS**).   On 1st April, 2000 a new scheme known as 'Annapurna Scheme' was launched. This Scheme aimed at providing 10 kg of food grains per month to meet the requirement of those senior citizens who, though eligible had remained uncovered under the NOAPS.

9.   **Sansad Adarsh Gram Yojna**.   In this, each Member of Parliament would take out some part of their funds for the development of any one adopted village. The funds would be used for construction and development of that village. Sansad Adarsh Gram Yojana is a rural development programme broadly focusing upon the development in the villages which includes social development, cultural development and spread motivation among the people on social mobilization of the village community.   The distinct feature of this Yojana is that it is (a) demand driven (b) inspired by society (c) based on people's participation.

10.   **Key objectives of the Yojana include**.

   (a)   The development of model villages, called Adarsh Grams, through the implementation of existing schemes, and certain new initiatives to be designed for the local context, which may vary from village to village.
   (b)   Creating models of local development which can be replicated in other villages.
   (c)   Sansad Adarsh Gram Yojana was initiated to bring the member of parliament of all the political parties under the same umbrella while taking the responsibility of developing physical and institutional infrastructure in villages and turn them into model villages. Under this yojana, each member of parliament needs to choose one village each from the constituency that they represent, except their own village or their in-laws village and fix parameters and make it a model village by 2019.
   (d)   Villages will be offered smart schools, universal access to basic health facilities and Pucca housing to homeless villagers.

11.   **Pradhan Mantri Awas Yojna**. Pradhan Mantri Awas Yojana (PMAY) is an initiative by Government of India in which affordable housing will be provided to the urban poor with a target of building 20 million affordable houses by 31 March 2022.   It has two components: Pradhan Mantri Awas Yojana (Urban) (PMAY-U) for the urban poor and Pradhan Mantri Awaas Yojana (Gramin) (PMAY-G and also PMAY-R) for the rural poor.   This scheme is converged with other schemes to ensure houses have a toilet, Saubhagya Yojana electricity connection, Ujjwala Yojana LPG gas connection, access to drinking water and Jan Dhan banking facilities, etc.

12.   The features of Pradhan Mantri Awas Yojana are that the government will provide an interest subsidy of 6.5% on housing loans availed by the beneficiaries for a period of 20 years under credit link subsidy scheme (CLSS) from the start of a loan.   The houses under Pradhan Mantri Awas Yojana would be constructed through a technology that is eco-friendly, while allotting ground floors in any housing scheme under PMAY, preference will be given to differently abled and older persons.

13.   **Jeevan Jyoti Bima Yojna**.   It is a life insurance policy in ensuring financial future for the customer with lowest cost on yearly basis. Anyone within the age group from 18 to 50 years can get enrolled in it. As of May 2015, only 20% of India's population has any kind of insurance, this scheme aims to increase the number. Pradhan Mantri Jeevan Jyoti Bima Yojana is available to people between 18 and 50 years of age with bank accounts.

14.   This scheme will be linked also to the bank accounts opened under the Pradhan Mantri Jan Dhan Yojana scheme.   Most of these accounts had zero balance initially.   The government aims to reduce the number of such zero balance accounts by using this and related schemes.   Now all Bank account holders can avail this facility through their net-banking service facility or filling a form at the bank branch at any time of the year.   The premium is deducted automatically from the insured's bank account.   Insured's family members will receive a sum insured of 2 lac Rupees after insured's death.

15.   **Pradhan Mantri Krishi Sinchai Yojna (PMKSY)**.   This scheme is a national mission to improve farm productivity and ensure better utilization of the resources in the country.Major objectives of PMKSY are:-

       (a)   Convergence of investment in irrigation at the field level.
       (b)   Expand cultivable area under irrigation.
       (c)   Improve On-farm water use efficiency to reduce wastage of water.
       (d)   Enhance the adoption of being precise in irrigation and other water saving technologies (more crop per drop).
       (e)   Enhance recharge of aquifers and introduce sustainable water conservation practice.

Social Security Schemes of Government

16.   Government of India has launched three new mega social security schemes. These schemes intend to widen the process of financial inclusion in the country to include Atal Pension Yojana (APY), Pradhan Mantri Jeevan Jyoti Yojana (PMJJBY), and Pradhan Mantri Suraksha Bima Yojana (PMSBY).

17.   **Atal Pension Yojana (APY)**.   This scheme has been launched to make the population self-reliant (under pension) after they have spent a lifetime working in non-pensionable jobs. The government aspires to make the unorganized workforce which makes chunk of the Indian labour force join the National Pension Scheme. This will enable them to compulsorily save for their future. The features of the scheme are as follows:-

       (a)   The pension subscribers will receive a fixed minimum monthly pension ranging from Rs.1,000 to Rs. 5,000 at the age of 60 years. The fixed minimum monthly pension will be depending on the contributions of subscribers.
       (b)   Union Government will co-contribute 50 percent of the total contribution of subscriber for a period of 5 years.
       (c)   Subscribers must have bank account and should not be members of any statutory social security scheme or Income Tax payers.
       (d)   The minimum age of joining is 18 years and maximum age is 40 years. Focus of APY is to target unorganized sector workers.
       (e)   The pension will also be available to the spouse on the death of the subscriber and thereafter, the pension corpus would be returned to the nominee.
       (f)   Subscriber and Enrolment Payment will be auto-debited from the accounts of account holders depending upon selected monthly pension range.

18.   **Pradhan Mantri Jeevan Jyoti Yojana (PMJJBY)**.   The features of the scheme are as follows:-

(a)   The insurance subscriber will get an annual life insurance in case of death.

(b)   It is available to any person in the age group of 18 to 50 years having a bank account.

(c)   Risk coverage of this scheme is Rs. 2 lakhs in case of death due to any reason.   For premium, Rs. 330 per annum will be directly auto-debited by the bank from the subscriber's account.

(d)   The Scheme will be offered by life Insurance Corporation (LIC) and all other life insurers who are willing to tie up with banks for the purpose of joining the scheme.

19.   **Pradhan Mantri Suraksha Bima Yojana (PMSBY)**.   It is aimed at increasing the penetration of accidental insurance cover in India. The features of this scheme are as follows:-

(a)   The insurance subscriber will get annual life insurance in case of accidental death, partial disability or full disability.

(b)   It is available to any person in the age group of 18 to 70 years. Any person having Aadhaar number-linked bank account can join the scheme.

(c)   He/ she must give a simple form to the bank every year before 1st of June. In the form, name of nominee also must be given.

(d)   Risk coverage for accidental death and full disability is Rs. 2 lakh and for partial disability is Rs.1 lakh.

(e)   For the payment of premium, Rs. 12 per annum will be directly auto-debited by the bank from the subscriber's account in case of long-term option.

NGOs

20.   **Non-Government Organisations**.

(a)   These are organisations which are controlled by members of society, who form a group or groups and, work towards social welfare and nation building. People with common objective and aspirations, together make organisations called Non-Government Organisation (NGOs) and get them registered.

(b)   An NGO is a non-profit group or association that acts outside of institutionalised political structures and pursue matters of interest to its members by lobbying, persuasion, or direct action.

(c)   NGOs firstly make survey of various problems, collect information about them, organize various demonstrations, give speeches and wherever action needs to be taken, they take with full vigour.   They understand social problems, the causes, affects and create necessary infrastructure to overcome them.

(d)   NGOs are primarily non-commercial.   They collect funds both from people and the government.   NGOs usually gain a portion of their funding from private sources.   Major sources of NGO funding include membership dues, grant from international institutions or national governments and private donations.

Contribution of NGOs

21.   Contribution by NGOs could be in the following activities undertaken by them:-

(a)   Blood Donation.
(b)   Adult Literacy.
(c)   Anti Dowry Drive.
(d)   Anti-Leprosy Drive.
(e)   Anti-Drug Drive.
(f)   Tree Plantation.
(g)   Environmental Programmes.

(h)   Help in natural calamities such as Flood, Earth-quake.
(i)   Educating people about the ill-effects of AIDS and education for prevention of the same.
(j)   Family Planning Programmes.
(k)   Community Development Work.
(l)   Promotion of Social-equality.
(m)   Wildlife and Animal Care.
(n)   Human-rights.
(o)   Awareness Campaign.
(p)   Child Care.
(q)   Polio Eradication drive.
(r)   Providing schooling facilities especially in remote villages and rural areas.
(s)   Creating and providing health and hygiene infrastructure and facilities to reduce diseases and help in creating a healthy and fit population.
(t)   Cottage Industry.
(u)   Orphanage and Old Age Homes.

Contribution of Youth

22.   **The Role of Youth**.   In order to consider the role of youth in India it is helpful to first consider the overall situation in India as this provides the context in which young people are growing up. There are two areas in particular to consider: the transition towards being a developed country and the changes in population. India has made great strides in technology and other areas, including the space programme. However, much of the country remains unaffected by such developments and there is still much to be done to create an inclusive society where the living conditions for the whole population are brought up to an acceptable level and absolute poverty is eradicated.   The differences between castes and religions also still remain a factor in the cohesiveness of the population as a whole.

23.   This potential pool of youth power can be effectively motivated and channelised to contribute towards social welfare. There are several welfare activities in which they can voluntarily participate. There are various NGOs (non-government organizations) which provide base or a platform, where from and under which they can pursue the following **welfare activities:**

(a)   Students can work in the hospitals to attend helpless patients on weekends or during free days in a week.
(b)   They can provide solace to the old people in the old age homes.
(c)   Teaching adult people and making people aware of spread of diseases, hygienic conditions can prove to be a boon (blessing) for illiterate people.
(d)   NCC units can be made compulsory in the colleges and universities.   The students personally can go to the depressed and the deprived people and experience their afflictions. This experience is aimed at holistic concept of education.
(e)   After getting training for first aid, they can be a blessing for the society where they can contribute their valuable services. Like in case of: Dog bite, an accident, fractures or other emergency condition.

24.   In fact, Social service can/must be implemented as a subject of study in the educational institutions. In this way, education will be wedded to the social expectations and obligations.

Role of NCC

25.   NCC plays a major role in upliftment and improvement of the society either through direct involvement or by spreading awareness among people through campaigns and other programmes. NCC contributes towards the development of society in the following ways:-

(a)   Blood donation Camps. The NCC units organise blood donation camps on regular basis and at the same time encourage others for their participation and contribution in same.

(b)   Tree Plantation. Tree plantation drive has been the regular affair by NCC, where in, all cadets participate to generate awareness among the people and encourage them for planting more trees.

(c) Swachh Bharat Abhiyan.   The NCC also contributes to the cleanliness drive initiated by our Hon'ble Prime Minister Narendra Modi. As part of Swachh Bharat Abhiyan NCC adopts villages or other areas to promote cleanliness and make people aware of the importance hygiene and sanitation. Each cadet in NCC is to do 100 hours of shramdaan.

(d) Awareness Programmes.   The NCC cadets organise various awareness programmes to promote awareness among the people.   They highlight on the issues that need to be addressed so as to eradicate from our society.   Few important awareness programmes being organized by NCC are:-

      (i) Female foeticide
      (ii) Dowry system
      (iii) Population control
      (iv) HIV/AIDS
      (v) Health and hygiene
      (vi) Child abuse and trafficking
      (vii) Drug abuse and trafficking

26. While carrying out any such welfare activity cadets would not undertake any menial task and they will not be tasked for any activity when their safety is at risk.

SUMMARY

1. There are generally three accepted methods identified for conduct of social service which are as under:-

      (a) Social Case Work.
      (b) Social Group Work.
      (c) Community Organization.

2. **Types of Social Service Activities.**   There can be many social service activities.   Some of the social service activities which can be undertaken are as under:-

      (a) Education.
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      (c) Provision of Water and Cooking Fuel, Roads, Electricity and Sanitation.
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4.   **Objectives of Rural Development.**   Following   are   the   primary   objectives   of rural development:-

(a)   To improve the living standards by providing food, shelter, clothing, employment and education.
(b)   To Increase productivity in rural areas and reduce poverty.
(c)   To involve people in planning and development through their participation in decision making and through centralization of administration.
(d)   To ensure distributive Justice and equalization of opportunities in the society.

5.   **Important Rural Development Programmes.**

(a)   MGNREGA.
(b)   Pradhan Mantri Gram Sadak Yojana (PMGSY).
(c)   National Social Assistance Programme (NSAP).
(d)   Sansad Adarsh Gram Yojna.
(e)   Pradhan Mantri Awas Yojna.
(f)   Jeevan Jyoti Bima Yojna.
(g)   Pradhan Mantri Krishi Sinchai Yojna (PMKSY).

6.   **Social Security Schemes of Government.**

(a)   Atal Pension Yojana (APY).
(b)   Pradhan Mantri Jeevan Jyoti Yojana (PMJJBY).
(c)   Pradhan Mantri Suraksha Bima Yojana (PMSBY).

7.   An NGO is a non-profit group or association that acts outside of institutionalised political structures and pursue matters of interest to its members by lobbying, persuasion, or direct action.

8.   This potential pool of youth power can be effectively motivated and channelised to contribute towards social welfare.   There are several welfare activities in which they can voluntarily participate.   There are various NGOs (non-government organizations) which provide base or a platform, where from and under which they can pursue the following **welfare activities:**

(a)   Students can work in the hospitals to attend helpless patients on weekends or during free days in a week.
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(d)   NCC units can be made compulsory in the colleges and universities.   The students personally can go to the depressed and the deprived people and experience their afflictions.   This experience is aimed at holistic concept of education.
(e)   After getting training for first aid, they can be a blessing for the society where they can contribute their valuable services.   Like in case of: Dog bite, an accident, fractures or other emergency condition.

CHAPTER SS - II

SWACHH BHARAT ABHIYAN

Introduction

1.   We Indians are personally very clean people.   We brush our teeth and take a bath every day and wash our hands before eating.   We keep our houses spic and span. But when it comes to public places, as people we are simply unable to keep our streets, our railway stations, hospitals, or places of worship clean.   This is the state of affairs everywhere in India including hundreds and thousands of villages, towns, mega-cities as well as in the streets of the national capital New Delhi.   We maintain very poor civic sense or social ethics.   No one else is going to do for us but we ourselves have to bring in the change.

2.   Civic Sense encompasses unspoken norms of society that help it run smoothly without someone tripping on somebody else's toes.   Civic Sense is all about having consideration for a fellow human being. It means being polite, showing consideration to elderly, women, children and disabled people, driving in one's lane without honking, throwing one's garbage in dustbins and smoking only at designated places.

Swachh Bharat Abhiyan

3.   Swachh Bharat Abhiyan (English: Clean India Movement) is a campaign by the Government of India to clean the streets, roads and infrastructure of the country's 4,041 statutory cities and towns with the ultimate aim of making our country clean from garbage.

4.   The campaign was officially launched on 02 October 2014 at Rajghat, New Delhi, by Hon'ble Prime Minister Narendra Modi.   It is India's largest ever cleanliness drive with three million government employees, and especially school and college students from all parts of India, participating in the campaign.

5.   **Aims and Objectives**. The Swachh Bharat mission aims to involve each and every Indian from all walks of life in the mission of cleanliness.   It is a mass movement that seeks to create a Clean India.

6.   The objectives of Swachh Bharat are to reduce or eliminate open defecation through the construction of individual, cluster and community toilets.   The Swachh Bharat mission will also make an initiative of establishing an accountable mechanism of monitoring latrine use.   The government is aiming to achieve an Open- Defecation Free (ODF) India by 2 October 2019, the 150th anniversary of the birth of Mahatma Gandhi, by constructing 12 million toilets in rural India, at a projected cost of 1.96 lakh crore (US$30 billion).

7.   **Implementation**.   By inviting common people to participate in the mission, a sense of responsibility has been evoked amongst the people. With citizens now becoming active participants in cleanliness activities across the nation, the dream of a 'Clean India' by Mahatma Gandhi has started taking shape.

8.   **Outcome and Benefits Expected**.   People from all sections of the society have come forward and joined this mass movement of cleanliness.   From government officials to jawans, Bollywood actors to the sportspersons, industrialists to spiritual leaders, all have lined up for the noble cause.   Organising frequent cleanliness drives, seminars and campaigns for spreading awareness about hygiene through plays and music are also being widely carried out across the nation.

9.   **Contribution of NCC towards Swachh Bharat Abhiyaan**.   The Prime Minister of India Mr Narendra Modi awarded the National Cadet Corps for its outstanding contribution towards Swachh Bharat Mission in a workshop organized by Urban Development Ministry and Drinking Water and Sanitation Ministry.

10.   NCC, through its mass base in rural and urban areas, took up the task of Swachata during the Swachata Pakhwada from August 01-15, 2016 on a war footing with a total of over five lakh eighty thousand cadets participating.   The campaign was carried out pan India across all states and union territories.   All seventeen NCC Directorates including more than 10,000 institutes participated.   The National Cadet Corps has been a major part of the Swachh Bharat Mission initiative and the NCC Cadets have been carrying out

these activities as part of social responsibility and community development.   The enthusiasm shown by NCC Cadets also inspired the locals to join in to make the Swachh Bharat Mission a great success.

11.   The activities carried out by the cadets were cleanliness drive at historical sites and a mass pledge by cadets.   The NCC also held awareness rallies, street plays, lectures and seminars across the country. The cadets distributed public health material with the help of civil administration, cleaned statues of national leaders and made posters to spread awareness about swachata.

12.   The Swachata Abhiyan is very close to NCC and the cadets perform these activities as part of social responsibility and community development of NCC curriculum.   The cadets took a pledge to devote at least two hours every week towards Swachata.

13.   **Sauchh Abhiyan**.   Sauchh mission is aimed to construct individual sanitary latrines for household purpose.   Sauchh Abhiyan is a project within Swachh Bharat Abhiyan which deals with only toilets and bathrooms in the country.

14.   **Benefits of Sauchh Abhiyan**.   It is beneficial for the people living below poverty line.   It assists in converting dry latrines into low-cost sanitary latrines.   It also provides facility of hand pumping, safe and secure bathing facilities, setting up of sanitary stores, construction of drains for disposal of solid and liquid wastes etc.

Conclusion

15.   Civic Sense is not just about keeping the roads clean and avoiding the violation of basic civil rights, it's about respecting one another, abiding by the law and maintaining discipline in public places. A Clean India would be the best tribute India could pay to an father of nation Mahatma Gandhi.

SUMMARY

1.   The Swachh Bharat mission aims to involve each and every Indian from all walks of life in the mission of cleanliness.   It is a mass movement that seeks to create a Clean India. The objectives of Swachh Bharat are to reduce or eliminate open defecation through the construction of individual, cluster and community toilets.   The Swachh Bharat mission will also make an initiative of establishing an accountable mechanism of monitoring latrine use.

2.   **Contribution of NCC towards Swachh Bharat Abhiyaan**. NCC, through its mass base in rural and urban areas, took up the task of Swachata during the Swachata Pakhwada. The National Cadet Corps has been a major part of the Swachh Bharat Mission initiative and the NCC Cadets have been carrying out these activities as part of social responsibility and community development. The activities carried out by the cadets were cleanliness drive at historical sites and a mass pledge by cadets.   The NCC also held awareness rallies, street plays, lectures and seminars across the country.   The cadets distributed public health material with the help of civil administration, cleaned statues of national leaders and made posters to spread awareness about swachata.

CHAPTER SS - III

SOCIAL SERVICE AND COMMUNITY DEVELOPEMENT ACTIVITIES

Introduction

1.   Social Security refers to all governmental or others programmes aimed at providing basic needs to citizens who are retired, unemployed, or unemployable due to disability/old age. It is funded through contributions from both the employees and the employers or by the government itself. The ILO in 2014 estimated that only 27% of the world's population has access to comprehensive social security.

Social Security

2.   Social security refers to the action programs of government intended to promote the welfare of the population through assistance measures guaranteeing access to sufficient resources for food and shelter and to promote health and well-being for the population at large and potentially vulnerable segments such as children, the elderly, the sick and the unemployed. Services providing social security are often called social services.

3.   Importantly, the need to ensure social security for all, especially those in the unorganized sector, is an overarching concern recognized in the Five-Year Plans. The Constitution of India provides strength and spirit to the social security for organized and unorganized workers through its Directive Principles of the State Policy.

4.   Social welfare refers to a set of institutional or personal services provided either by the state or voluntary organizations to prevent the incidence or to reform or rehabilitate the victims of disabilities, or disorganization or delinquencies or destitution and so on.

5.   **Types of Social Security**.   Social security is of three types:-

(a)   Social Insurance.   It is where people receive benefits of services in recognition of contributions to an insurance program. These services typically include provision for retirement pensions, disability insurance, survivor benefits and unemployment insurance.

(b)   Services.   The ones provided by government or designated agencies responsible for social security provision. In different countries, that may include medical care, financial support during unemployment, sickness, or retirement, health and safety at work, aspects of social work and even industrial relations.

(c)   Basic Security.   It is irrespective of participation in specific insurance program where eligibility may otherwise be an issue. For instance, assistance given to newly arrived refugees for basic necessities such as food, clothing, housing, education, money, and medical care.

SOCIAL EVILS

FEMALE FOETICIDE

6.   **Causes of Female Foeticide.**

(a)   **Extreme Desire to Have a Male Child**.   Removal of girls from the family tree, even before they are born, clearly shows the desire for a boy child.   Sons are seen as main source of income and help at old age.

(b)   **Unwanted Pregnancy**.   Though most people mention this as an excuse for performing abortions, but it is generally the course taken after knowing the sex of the baby.

(c)   **Dowry System**.   In India, the age-old custom of 'dowry system' puts a burden on the parents', who are "blessed" with a girl child and start calculating the high costs related with marriage expenses.

(d) **Poor Medical Ethics.** Many unscrupulous and unethical hospitals, clinics and illegal agencies run ultra sound facilities to determine the sex and later facilitate selective abortion of females illegally. It is a booming multi-million industry in India.

(e) **Inferior Status.** Inferior status of women in Indian society is not new, and has been an age-old practice.

7. **Effects of Female Foeticide**.

(a) Reduced Sex Ratio. 914 girls for 1000 boys as per census 2011.
(b) Female / Women Trafficking. Poor and young girls are the victims of this illegal practices.
(c) Increase in rape and assault cases.
(d) Population Drop. With less mothers and wombs, there are fewer births.

8. **Measures to Prevent Female Foeticide**.

(a) Cancellation / permanent ban of the doctor's license who reveal the gender of the child.
(b) Heavy penalty imposed on firms doing illegal sex determination.
(c) High fines / judicial actions against 'parents' who knowingly try to kill their unborn girl.
(d) High incentives for the girl child in education, employment etc.
(e) Equal rights for women in the property of the parents / husband.
(f) Awareness campaigns targeted specially on the youth.

DOWRY

9. **Causes of Dowry System**.

(a) **Economic factors**. There are many economic factors that contribute towards the system of dowry. Some of these include inheritance systems and the bride's economic status.

(b) **Social factors**. The structure and kinship of marriage in parts of India contributes to dowry. In the north, marriage usually follows a patrilocal (lives with husband's family) system, where the groom is a non-related member of the family. In the south, marriage is more often conducted within the bride's family, for example with close relatives or cross-cousins, and in a closer physical distance to her family. In addition, brides may have the ability to inherit land, which makes her more valuable in the marriage, decreasing the chance of dowry over the bride price system.

(c) **Religious Factors**. Dowry in India is not limited to any specific religion. It is widespread among Hindus and other religions. For example, Indian Muslims call dowry as *jahez*, justify the practice in terms of jahez-e-fatimi.

(d) **Economic Inequality.** This fuels the desire to ask for more and more cash or gifts to live a lavish life style.

(e) **Increasing Unemployment of Males**. In order to prove their status, unemployed males are growingly demanding more and more dowry to fulfil their desires.

(f) **Parental Compulsions.** In order to find a good match for their daughter, well to do parents are offering huge dowry.

(g) **Divine Sanctions.** The Vedas prescribe that a dowry be given by the bride's family to the groom.

10. **Prevention of Dowry**

(a) Not to offer or accept any dowry.

(b) Educate the members of the family with law - that accepting or giving dowry is an offence.

(c) Educate the members of the family and the neighbours to respect a woman's rights and privileges.

(d)   Encourage women to fight for their rights.

(e)   Educate the girl child to become economically independent.

(f)   Strict law enforcement on dowry.

CORRUPTION

11.   **Prevention of Corruption.**   These are some suggested measures to prevent corruption:-

(a)   Proper education of all sections of society to understand that corruption in any form is bad and will not be tolerated.
(b)   Neither give bribe or favors to any one nor takes bribes/favors   from any one.
(c)   Highlighting / reporting of cases of corruption.
(d)   Speedy trial and exemplary punishment for persons involved in corruption.
(e)   Ensuring transparency in all dealings.
(f)   Full freedom to Lok Pal or Lokayukta to investigate cases of corruption.
(g)   Simplifying routine procedures.

DRUG ABUSE AND TRAFFICKING

12.   **What is Drug Abuse**.   Consuming the substance which is neither approved nor supervised by medical professionals. The use of steroids for performance enhancement in sports is also called drug abuse. Continuous and prolonged abuse of drugs may make a person an addict.

13.   **Preventive and Remedial Measures**.   There are certain preventive and remedial measures for dealing with the problem of drug abuse.

(a)   The Government must use all the media to propagate against the habit of drug-taking.
(b)   Voluntary organizations should pay more attention to instruct addicts how to give up the vice to bring them to the main stream of public life without shame or sorrow.
(c)   Physicians should teach them how to prevent and avoid the evil and how to lead a normal healthy life.
(d)   Parents should pay more care, attention and love to their sons and daughters.
(e)   Reading of moral and religious books is also helpful to addicts.
(f)   The police must act fearlessly to act against the people involved drug traffic.

HIV / AIDS

14.   **What is HIV / AIDS.**   Although HIV and AIDS are often used synonymously, they are different. HIV (Human Immuno-deficiency Virus) is a virus that gradually destroys the body's immune system. AIDS (Acquired Immuno Deficiency Syndrome) is a condition wherein various diseases affect the body because of the body's weak natural defense mechanism – the immunity.   Therefore, AIDS is an acquired condition in which a person may have various diseases that cause similar symptoms, all of which are due to the body's diminished ability to fight diseases.   Anyone who has HIV infection will develop AIDS over a period of time.

15.   **How Does HIV/AIDS Spread.**   HIV is present in all body fluids of an infected person and is more in number, in the blood, semen and vaginal fluids. HIV infection normally spreads when there is contact with these body fluids through four main routes:-

(a)   **Sexual Transmission.** The most common route of spread of HIV infection is through unprotected sex between two people, where at least one has HIV infection. Unprotected sex means having sex without condom.

(b)   **Blood Transfusions.** As per the guidelines of the National AIDS Control Organization (NACO), it is mandatory to test blood for HIV before transfusion.   The risk of transmission of HIV through tested blood is therefore very remote.   The only possibilities of infection through blood are, if the blood was not tested for HIV or the HIV infection was in the *window period*. Window

period is the term used for the duration between the entry of HIV in the body and the detection of its antibodies through blood tests. Window period is normally up to three months

(c) **Sharing Needles and Syringes for Intravenous Drug Use.** When people inject drugs intravenously, they may draw small amounts of blood into the needle. If another person uses this needle immediately, the blood containing HIV will be injected into the second person. Thus, he/she can also be infected with HIV.

(d) **Mother to Child Transmission.** Mother to child transmission of HIV can occur in three ways:-

   (i) During pregnancy, when the HIV crosses the placenta.
   (ii) During delivery.
   (iii) **During Breastfeeding.** Although HIV is present in breast milk, it does not mean that the baby will always be infected with it.

(e) **Other Methods.**

   (i) **Skin Piercing.** There are several cultural practices in India that involve skin piercing such as, piercing ears or nose for ornamental reasons, tattooing, etc.
   (ii) **Oral Route.** The risk through oral route may be there only if there are cuts or wounds in the mouth or bleeding gums.

16. **Role of the Youth in Preventing HIV / AIDS.** HIV is more common in the most productive age group of 15-45 years, and therefore causes major impacts on the economic status of the affected individual, family, community, and the nation at large. The young adults can play a very important role in preventing the HIV at community level, and also minimise its impact at all levels by taking following actions:-

(a) Youth can assume responsibility in preventing HIV infections by avoiding behaviour that might lead to HIV infections.

(b) Youth may also share the right to refuse sex and assume responsibility for ensuring safe sex.

(c) People living with HIV/AIDS have the same right to education, employment, health, travel, marriage, recreation, privacy, social security, scientific benefits etc. Hence, all should share responsibilities for avoiding HIV infection / re-infection.

(d) The youth by creating a proper and positive peer pressure, can delay the age at first sex, avoid sex before marriage, practicing safer sex, and preventing alcohol and drug abuse. The stereotypical image of a "macho" male needs to be changed to depict responsible behaviours.

(e) The young can also play an important role in addressing gender imbalance, which is one of the important factors for underdevelopment and HIV transmission.

(f) Youth should also educate general public by spreading the information that HIV cannot be transmitted by the following actions:-

   (i) Shaking Hands.
   (ii) Sharing of Clothes.
   (iii) Sharing of Food and Utensils.
   (iv) Sharing of Toilets.
   (v) Insect Bites.
   (vi) Hugging or Kissing.
   (vii) Working in the same office or travelling in the same vehicle.
   (viii) Playing or swimming with the infected person.
   (ix) Coughing, sneezing or in routine patient-care activities (bedmaking, feeding etc).

BETI BACHAO, BETI PADHAO

17.   It is a campaign of the Government of India that aims to generate awareness and improve the efficiency of welfare services intended for girls in India.   Female foeticide has led to a sharp drop in the ratio of girls born in contrast to boy infants in some states in India. Ultrasound technology has made it possible for pregnant women and their families to learn the gender of a foetus early in a pregnancy. Discrimination against girl infants, for several reasons, has combined with the technology to result in a rise in abortions of foetuses identified as female during ultrasonic testing.

18.   The trend was first noticed when results of the 1991 national census were released, and it was confirmed to be a worsening problem when results of the 2001 national census were released.   The reduction in the female population of certain Indian states continues to worsen, as results of the 2011 national census have shown.   It has been observed that the trend is most pronounced in relatively prosperous regions of India.   The dowry system in India is often blamed; the expectation that a large dowry must be provided for daughters in order for them to marry is frequently cited as a major cause for the problem.   Pressure for parents to provide large dowries for their daughters is most intense in prosperous states where high standards of living, and modern consumerism, are more prevalent in Indian society.

19.   This campaign aims to address the issue of the declining child sex ratio image (CSR) and is a national initiative jointly run by the Ministry of Women and Child Development, the Ministry of Health and Family Welfare and the Ministry of Human Resource Development. It initially focused multi-sector action in 100 districts throughout the country where there was a low CSR.

20.   Strategies employed to successfully carry out the scheme are:

(a)   Implement a sustained social mobilization and communication campaign to create equal value for the girl child and promote her education.
(b)   Place the issue of decline in child sex ratio/sex ratio at birth in public discourse, improvement of which would be an indicator for good governance.
(c)   Focus on gender critical districts and cities.

21.   The Beti Bachao campaign is also supported by the Indian Medical Association.

MISSION INDRADHANUSH

22.   Mission Indradhanush is a health mission of the government of India. The scheme seeks to drive towards 90% full immunization coverage of India and sustain the same by year 2020. Vaccination is being provided   to   prevent   eight   vaccine   preventable   diseases   nationally, i.e. Diphtheria, Pertussis, Tetanus, Polio, Measles, severe form of Childhood Tuberculosis and Hepatitis B and meningitis & pneumonia caused by Haemophilus influenza type B; and against Rotavirus Diarrhoea and Japanese Encephalitis in selected states and districts respectively.

23.   The ultimate goal of Mission Indradhanush is to ensure full immunization with all available vaccines for children up to two years of age and pregnant women. The Government has identified 201 high focus districts across 28 states in the country that have the highest number of partially immunized and unimmunized children.

24.   To further intensify the immunization programme, Government of India aims to reach each and every child up to two years of age and all those pregnant women who have been left uncovered under the routine immunisation programme/UIP.   The special drive will focus on improving immunisation coverage in select districts and cities to ensure full immunisation to more than 90% by December 2018.   The achievement of full immunisation under Mission Indradhanush to at least 90% coverage was to be achieved by 2020 earlier. With the launch of IMI, achievement of the target has now been advanced.

25.   Intensified Mission Indradhanush will cover low performing areas in the selected districts (high priority districts) and urban areas. Special attention will be given to unserved/low coverage pockets in sub-centre and urban slums with migratory population. The focus is also on the urban settlements and cities identified under National Urban Health Mission (NUHM).

DIGITAL INDIA

26.   **Digital India** is a campaign launched by the Government of India in order to ensure the Government's services are made available to citizens electronically by improved online infrastructure and by increasing Internet connectivity or by making the country digitally empowered in the field of technology. The initiative includes plans to connect rural areas with high-speed internet networks. Digital India consists of three core components: the development of secure and stable digital infrastructure, delivering government services digitally, and universal digital literacy.

27.   Digital India was launched by the Prime Minister of India Narendra Modi on 1 July 2015 with an objective of connecting rural areas with high-speed Internet networks and improving digital literacy. The vision of Digital India programme is inclusive growth in areas of electronic services, products, manufacturing and job opportunities. It is centred on three key areas – digital infrastructure as a utility to every citizen, governance and services on demand, and digital empowerment of citizens. The Government of India entity Bharat Broadband Network Limited (BBNL) which executes the Bharat Net project is the custodian of Digital India (DI) project.

28.   Some of the facilities which will be provided through this initiative are Bharat net, digital locker, e-education, e-health, e-sign, e-shopping and national scholarship portal. As part of Digital India, Indian Government planned to launch Botnet cleaning centres. The main features of Digital India are:

(a)   National e-Governance Plan aimed at bringing all the front-end government services online such as:

(i)   **MyGov.in** is a platform to share inputs and ideas on matters of policy and governance. It is a platform for citizen engagement in governance, through a "Discuss", "Do" and "Disseminate" approach.

(ii)   **UMANG (Unified Mobile Application for New-age Governance)** is a Government of India all-in-one single unified secure multi-channel, multi-platform, multi-lingual, multi-service, freeware mobile app for accessing over 1,200 central and state government services in multiple Indian languages over Android, iOS, Windows and USSD (featurephone) devices, including services such as AADHAR, Digi Locker, Bharat Bill Payment System, PAN, EPFO services, PMKVY services, AICTE, CBSE, tax and fee or utilities bills payments, education, job search, tax, business, health, agriculture, travel, Indian railway tickets bookings, birth certificates, e-District, e-Panchayat, police clearance, passport, other utility services from private companies and much more.

(iii)   **eSign framework** allows citizens to digitally sign a document online using Aadhaar authentication.

(iv)   **Swachh Bharat Mission (SBM)** Mobile app is being used by people and Government organisations for achieving the goals of Swachh Bharat Mission.

(v)   **eHospital application** provides important services such as online registration, payment of fees and appointment, online diagnostic reports, enquiring availability of blood online etc.

(vi)   **Digital attendance:** attendance.gov.in to keep a record of the attendance of government employees on a real-time basis. This initiative started with implementation of a common Biometric Attendance System (BAS) in the central government offices located in Delhi.

(c)   Facilities to digitally empower citizens

(i)   **Digital Locker facility** This will help citizens to digitally store their important documents like PAN card, passport, mark sheets and degree certificates. Digital Locker will provide secure access to Government issued documents. It uses authenticity services provided by Aadhaar. It is aimed at eliminating the use of physical documents and enables

the sharing of verified electronic documents across government agencies. Three key stakeholders of Digi Locker are Citizen, Issuer and requester.

(ii)   **BPO and job growth:** The government is planning to create 28,000 seats of BPOs in various states and set up at least one Common Service Centre in each of the gram panchayats in the state.[20]

(iii)   **e-Sampark Vernacular email service:** Out of 10% English speaking Indians, only 2% reside in rural areas. Rest everyone depends on their vernacular language for all living their lives. However, as of now, email addresses can only be created in English language. To connect rural India with the Digital India, the Government of India impelled email services provider giants including Gmail, office and Rediff to provide the email address in regional languages.

WASTE MANAGEMENT

Introduction

29.   Waste Management refers to the collection, transport, processing or disposal, managing and monitoring of waste materials. The term normally relates to all kinds of waste, whether generated during the extraction of raw materials, the processing of raw materials into intermediate and final products, the consumption of final products, or other human activities, including municipal (residential, institutional, commercial), agricultural, and social (health care, household hazardous waste, sewage sludge). Waste management is intended to reduce adverse effects of waste on health, the environment or aesthetics. All wastes materials, whether they are solid, liquid, gaseous or radioactive, fall within the scope of waste management. It also encompasses the legal and regulatory framework that relates to waste management encompassing guidance on recycling etc.

30.   There are following types of Waste:

(a)   **Solid Waste**.   Solid waste predominantly, is any garbage, refuse or rubbish that we make in our homes and other places. This can be further Classified into different types depending on their source as under:-

     (i)   Household waste is generally classified as municipal
     (ii)   Industrial waste as hazardous waste
     (iii)   Biomedical waste or hospital waste as disease causing waste
     (iv)   Electronic wastes such as TV's, refrigerators and computers

(b)   **Liquid Waste**. Waste can come in non-solid form. Some solid waste can also be converted to a liquid waste form for disposal.   This can be classified into following types:-

     (i)   Chemicals released by industries.
     (ii)   Waste water released by households through the sewer lines.

(c)   **Radioactive Waste**.   These are those wastes that contain radioactive material. Radioactive wastes are usually by-products of nuclear power generation and other applications of nuclear fission or nuclear technology, such as research and medicine. Radioactive waste is hazardous to most forms of life and the environment and is regulated by government agencies in order to protect human health and the environment.

(d)   **Municipal Solid Waste.**   This includes trash or garbage from households, schools, offices, market places, restaurants and other public places. This waste comprises of:-

     (i)   Organic waste such as vegetable and fruit peels, leftover foodstuff, etc.
     (ii)   Paper.
     (iii)   Cotton and Woolen clothes.
     (iv)   Wood.
     (v)   Plastic Bags.
     (vi)   Tin, aluminum and other metal items such as cans.
     (vii)   Glass Bottles.

(e)   **Hospital or Bio-Medical Waste.**   Hospital waste is generated during the diagnosis, treatment, or immunization of human beings or animals or in research activities in these fields or in the production or biological testing. It may include Soiled Waste, Disposables, Anatomical Waste, Discarded Medicines and Chemical Wastes.

(f)   **Electronic Waste.**   This is waste from electronic and electrical devices.   Think of DVD and music players, TV, Telephones, computers, vacuum cleaners and all the other electrical stuff in your home. These are also called e-waste, e-scrap, or waste electrical and electronic equipment (WEEE).   Some e-waste (like TV) contains lead, mercury, cadmium, and brominated flame retardants.   These are harmful to humans and the environment. It is therefore important that the right authorities ensure the proper disposal of such waste.

(g)   **Hazardous Waste.**   Hazardous or harmful are those that potentially threaten public health or the environment. Such waste could be inflammable (can easily catch fire), reactive (can easily explode), corrosive (can easily eat through metal) or toxic (poisonous to human and animals). It can further be explained as:-

    (i)   **Ignitable**.   If this waste item easily catch fire, burst into flames, irritate eyes, skin or breathing. Examples include varnish, paints or polish.

    (ii)   **Reactive**.   If this waste item can chemically react with another substance to explode or give of dangerous vapours. An example includes Ammonia, which can react with Chlorine bleach to produce harmful gas.

    (iii)   **Toxic**. If the waste item is poisonous to humans and other living things, many pesticides and household cleaning chemicals fall in this class.

    (iv)   **Corrosive.**   These waste items are acidic in nature and can erode other materials. Corrosive waste can eat through metal, or cause severe burns and skin complications if they get into contact with skins.

(h)   **Organic Waste**.   Organic waste comes from plants or animal sources. Commonly, they include food waste, fruit and vegetable peels, flower trimmings and even dog poop can be classified as organic waste. They are biodegradable (this means they are easily broken down by other organisms over time and turned into manure). Many people turn their organic waste into compost and use them in their gardens.

(j)   **Agricultural Waste.**   Typically, this is waste generated by agricultural activities. These include horticulture, fruit growing, seed growing, livestock breeding, market gardens and seedling nurseries. Waste items in this group include empty pesticide containers, old silage wrap, out of date medicines and wormers, used tyres, surplus milk, cocoa pods and corn husks.

(k)   **Industrial Waste.**   Since the industrial revolution, the rise in the number of industries manufacturing glass, leather, textile, food, electronics, plastic and metal products has significantly contributed to waste production. Take a look at the things in your home, every item there was probably manufactured and possibly, waste was produced as a result.

(l)   **Construction / Demolition waste.**   Construction waste is that resulting from the construction of roads and building. Waste items include concrete debris, wood, earth, huge package boxes and plastics from the building materials and the like.

Disposal and Management of Waste

31.   **Actions by Individuals**.   Some steps which all individuals can take while contributing to the waste management includes the following:-

(a)   Separation of household waste into bio-degradable and non-biodegradable.

(b)   Reduce use of plastic bags and replace with paper or jute/cloth bags.

(c)   Recyclable waste such as paper, glass, cloth etc. could be segregated and disposed off accordingly.

(d)   Keep the surroundings of your house and around the house clean. Do not dump waste just outside the house on the road.

(e)   Colonies could start vermin-composting and natural composting.

(f)   What is waste for you is wealth for somebody else. There has been a tradition in India of finding an innovative use for everything –tyres, battery cases, plastic bins and what not. Think of reuse of the thing you would like to discard.

32.   **Actions by Civic Bodies**.   The major functions of civic body may include the following:-

    (a)   Prohibiting littering of street.
    (b)   Organizing house to house waste collection.
    (c)   Conducting awareness programs to spread information to public.
    (d)   Providing sufficient community storage facilities.
    (e)   Use of colour code bins and promotion of waste separation.
    (f)   Transportation of wastes in covered vehicles.
    (g)   Processing of wastes by adopting suitable combination of composting, aerobic digestion, palletisation etc.
    (h)   Up gradation of the existing dump sites and Disposal of inert wastes sanitary landfills.

33.   **Solid Waste Management**.   Some of the highlights of the Solid Waste Management (SWM) Rules, 2016 are:

    (a)   Waste segregation at source is mandatory.   Waste generators have to segregate waste into three streams - Organic or Biodegradable waste, Dry waste (Plastic, Paper, Metal, Wood, etc.) and Domestic Hazardous waste (diapers, napkins, mosquito repellents, cleaning agents etc.). Further, bulk waste generators such as hotels, hospitals etc. are expected to treat organic waste either onsite or by collaborating with the urban local body.

    (b)   Municipalities and urban local bodies have been directed to include informal waste pickers and rag pickers into their waste management process.   This is the first time that national policy has acknowledged and included the informal sector into the waste management process.

    (c)   FMCG product manufacturers that use non-biodegradable packaging for their products must put in place a system to collect the packaging waste generated due to their production.

    (d)   Urban local bodies have been given a provision to charge bulk generators a user fee to collect and process their waste, additionally spot fines may be levied on user's burning garbage or throwing it in a public place.

    (e)   No non-recyclable waste having a calorific value of 1,500 Kcal/kg or more should be disposed in the landfills. It should either be utilized for generating energy or can be used for preparing refuse derived fuel or it can be used for co-processing in cement or thermal power plants.

WOMEN HEALTH AND SANITATION

34.   Women's health in India can be examined in terms of multiple indicators, which vary by geography, socio economic standing and culture. To adequately improve the health of women in India multiple dimensions of well-being must be analysed in relation to global health averages and also in comparison to men in India. Health is an important factor that contributes to human well-being and economic growth.

35.   Currently, women in India face a multitude of health problems, which ultimately affect the aggregate economy's output. Addressing the gender, class or ethnic disparities that exist in healthcare and improving the health outcomes can contribute to economic gain through the creation of quality human capital and increased levels of savings and investment.

36.   Gender is one of the main social determinants of health—which include social, economic, and political factors—that play a major role in the health outcomes of women in India and access to healthcare in India. Therefore, the high level of gender inequality in India negatively impacts the health of women. Studies have indicated that boys are more likely to receive treatment from health care facilities compared to girls.

37.   Gender discrimination begins before birth; females are the most commonly aborted sex in India. If a female foetus is not aborted, the mother's pregnancy can be a stressful experience, due to her family's preference for a son.   Once born, daughters are prone to being fed less than sons, especially when there are multiple girls already in the household.   As women mature into adulthood, many of the barriers preventing them from achieving equitable levels of health stem from the low status of women and girls in Indian society, particularly in the rural and poverty-affected areas.

38.   **Problems with India's healthcare system**.   Women are negatively affected by the geographic bias within implementation of the current healthcare system in India.   Of all health workers in the country, nearly two thirds are men.   This especially affects rural areas where it has been found that out of all doctors, only 6 percent are women.   This translates into approximately 0.5 female allopathic physicians per 10,000 individuals in rural area.

39.   **Health problems of tribal women**.   The high incidence of breast lumps among Adivasi women of Adilabad in Telangana has created apprehension of more serious health impacts for this remote population.   "Leave alone breast cancer or any other type of carcinoma, even routine mammarian infections were unknown among indigenous people belonging to the Gond, Pardhan, Kolam and Thotti tribe."

40.   **Malnutrition and morbidity**.   Poverty and malnutrition are common issues faced by Indian women.   Nutrition plays a major role in and individual's overall health; psychological and physical health status is often dramatically impacted by the presence of malnutrition.   One of the main drivers of malnutrition is gender specific selection of the distribution of food resources.

41.   Maternal malnutrition has been associated with an increased risk of maternal mortality and also child birth defects.   Addressing the problem of malnutrition would lead to beneficial outcomes for women and children.

Breast Cancer

42.   India is facing a growing cancer epidemic, with a large increase in the number of women with breast cancer. By the year 2020 nearly 70 percent of the world's cancer cases will come from developing countries, with a fifth of those cases coming from India.

43.   Much of the sudden increase in breast cancer cases is attributed to the rise in Westernisation of the country. This includes westernised diet, greater urban concentrations of women, and later child bearing. Additionally, problems with India's health care infrastructure prevent adequate screenings and access for women, ultimately leading to lower health outcomes compared to more developed countries.

TREE PLANTATION

44.   Tree-planting is the process of transplanting tree seedlings, generally for forestry, land reclamation, or landscaping purpose.   It differs from the transplantation of larger trees in arboriculture, and from the lower cost but slower and less reliable distribution of tree seeds.

45.   Because trees remove carbon dioxide from the air as they grow, tree planting can be used as a geoengineering technique to remove CO_2 from the atmosphere.   Desert greening projects are also motivated by improved biodiversity and reclamation of natural water systems, but also improved economic and social welfare due to an increased number of jobs in farming and forestry.

46.   Tree Plantation drives combat many environmental issues like deforestation, erosion of soil, desertification in semi-arid areas, global warming and hence enhancing the beauty and balance of the environment.   Trees absorb harmful gases and emit oxygen resulting in increase in oxygen supply.   On an average, a single tree emits 260 pounds of oxygen annually.   Similarly, a fully-grown tree is sufficient for 18 human beings in one acre of land in one year stressing the importance of tree plantation for mankind.

47.   The type of tree planted may have great influence on the environmental outcomes.   It is often much more profitable to outside interests to plant fast-growing species, such as eucalyptus, casuarina or pine (e.g., *Pinusradiata* or *Pinuscaribaea*).

48.   To promote the growth of native ecosystems, many environmentalists advocate only indigenous trees be planted.   A practical solution is to plant tough, fast-growing native tree species which begin rebuilding the land.   Planting non-invasive trees that assist in the natural return of indigenous species is called "assisted natural regeneration."   Alternatively, farmer-managed natural regeneration (FMNR), involves farmers preserving trees (not replanting), and is considered to be a more cost effective method of reforestation than regular tree planting.

TRAFFIC AWARENESS

Save Yourself by Learning Traffic Signs and Road Safety Measures

49.   Traffic signs are the silent speakers on the road. Be it the person behind the wheel or a pedestrian, having a sound knowledge about road safety is absolutely necessary for all before hitting the roads.

50.   Traffic signs give information about the road conditions ahead, provide instructions to be followed at the major crossroads or junctions, warn or guide drivers, and ensure proper functioning of road traffic. Being unaware of road signs is akin to throwing caution to the wind. It can lead to loss of life and property. A person is supposed to be familiar (get through a written or oral test) with the traffic signs and symbols before acquiring a driving license in India.

Traffic Control Organisation

51.   **Road traffic control** involves directing vehicular and pedestrian traffic around a construction zone, accident or other road disruption, thus ensuring the safety of emergency response teams, construction workers and the general public.   Traffic control also includes the use of CCTV and other means of monitoring traffic by local or state roadways authorities to manage traffic flows and providing advice concerning traffic congestion.

52.   The responsibility to control all traffic in a city or outside is of the Traffic Police department which works under the District Police Chief. The Traffic Police carries out the following tasks:-

    (a)   Clearing of road blockages due to accidents or any other reason.
    (b)   Educating general public on road safety rules.
    (c)   Conduct of road safety seminars or training.
    (d)   Control / monitoring of Speed.
    (e)   Ensuring proper marking and placement of road signs.

Traffic Organization

53.   The traffic in any city or town is controlled by the Deputy Commissioner of Police (Traffic). He is assisted by various   Assistant Commissioners of Police (ACPs), Inspectors, Assistant Sub Inspectors (ASIs), Head Constables and Constables. The strength depends on the size of the city or town and the traffic that is to be managed. In addition, there is a Control Room, which monitors all Traffic Cameras and Communications.

Causes of Road Accidents

54.   Road accidents are very common in our nation and the majority of these road crashes are caused by human error.   While some are relatively minor, thousands of lives are taken every year by these road accidents.   Few of the causes are listed below:-

    (a)   Distracted Driving.   It becomes a larger threat every year and has been the leading cause of car accidents for the past decades.   Please pay attention to the road while you are driving. That means no calls, no eating, no reading, no grooming or application of makeup, and talking while behind the wheel.

    (b)   Drunk Driving. Drunk driving is one of the most dangerous causes of accidents in the nation and is the deadliest. If you have had anything to drink, take a taxi or give your keys to a sober friend. It is not worth the risk.

(c)   <u>Speeding</u>.   Although it can be tempting to push the speed limit when you are running late, speeding is the second most common cause of accidents, so you should resist the urge and stay within the legal limits.

(d)   <u>Reckless Driving</u>.   Changing lanes too quickly, speeding well over the limit, and acting aggressive on the roads can lead to horrible accidents. It is important to take your time and remain calm while driving to avoid needless accidents caused by simple carelessness.

(e)   <u>Rain</u>.   While you can't always avoid driving in the rain, the slippery, treacherous road conditions caused by heavy rains should be avoided when at all possible. If visibility is too low to drive or the roads seem particularly slick, you should pull over and wait until the storm passes.

(f)   <u>Running Red Lights</u>.   It may seem obvious, but it bears repeating. Red always means stop. Even if it seems like no other cars are coming, you can cause a serious accident by running a red light and you will be breaking the law.

(g)   <u>Night Driving</u>.   Lack of visibility makes hazards more difficult to see at night. Make sure that you are extra alert on the road at night, and use your full lights when on an abandoned road without street lights.

(h)   <u>Tailgating</u>.   There is never an excuse to get too close to the car in front of you, no matter how frustratingly slow they seem to be going. Keep a safe distance from other cars so that you will have time to react to sudden turns or uses of brakes.

(j)   <u>Wrong-Way Driving/ Improper Turns</u>.   Everyone makes mistakes, but lapses in judgement while driving a car can cause horrible accidents. Be aware of street signs warning of one-way streets or other irregularities, especially in unfamiliar areas. When people don't get in the proper lane to make a turn, use signals properly, or follow traffic signals, accidents happen. Always look out for traffic signs and obey the proper right-of-way when you make a turn.

(k)   <u>Teenage Drivers</u>.   Teens don't have the experience to know what to do in unsafe conditions and that causes accidents. If you have teenagers, make sure that they have had a defensive driving course, do not permit cell phone use while driving, and limit the passengers they can take with them in the car.

(l)   <u>Drugs</u>. While alcohol is the culprit we usually associate with drugs, including marijuana, prescription pills and other illegal drugs also cause terrible accidents. Never drive if you are under the influence of any drug, prescribed or not.

55.   **Road Safety Education**.   Education about road safety is often provided in schools, colleges, workplaces, clubs and public places. However, there could be other ways to create mass awareness:

(a)   Distribute booklets and pamphlets in schools.
(b)   Show presentations on road safety, traffic signs and negative aspects of road accidents in the classrooms.
(c)   Share online content with peers.
(d)   Encourage parents to help children learn preventive measures in real time.
(e)   Educate teachers with the basic laws and regulations on the road.

56.   **Celebrating Road Safety**.   Every year, prominent metro cities of India celebrate the road safety week to promote road safety measures and aware people about various traffic signs. During the entire week, the transport departments of various states create awareness through community building process in schools, colleges, offices, and on roads. They also sensitize people about the outcome of drunken driving, high-speed driving, the importance of wearing a helmet for bikers and seat belts for four-wheeler drivers. They also educate about traffic and driving signals. At times, they choose themes to communicate to the masses

POLLUTION

Types of Pollutants

57.   The term "pollution" refers to any substance that negatively impacts the environment or organisms that live within the affected environment. The five major types of pollution include: air pollution, water pollution, soil pollution, light pollution, and noise pollution.

58.   **Air Pollution**.   A major source of air pollution results from the burning of fossil fuels. Vehicle and factory emissions are common sources of this type of air pollution. The burning of fossil fuels contributes to the formation of smog, a dense layer of particulate matter that hangs like a cloud over many major cities and industrial zones. Air pollution contributes to respiratory problems such as asthma, lung cancer, chronic bronchitis, and other lung ailments.   Nitrogen and sulphur oxides in the air contribute to acid rain, which is a form of precipitation with a lower (more acidic) pH than normal.   Acid rain harms forests, species that live in water bodies, and degrades outdoor statues, monuments, and buildings.

59.   **Water Pollution**.   A major source of water pollution is runoff from agricultural fields, industrial sites, or urban areas. Runoff disrupts the water body's natural balance. For example, agricultural runoff typically includes fertilizer or toxic chemicals. Fertilizer can cause algal blooms (an explosive growth of algae), choking out other plants and decreasing the amount of available oxygen necessary for the survival of other species. Raw sewage is another type of water pollutant. When sewage gets into the drinking water supply, serious stomach and digestive issues may result, including the spread of diseases such as typhoid or dysentery. A third source of water pollution is trash. Improperly disposed of items, such as plastic bags, fishing line, and other materials may accumulate in the water and lead to the premature death of animals that get tangled within the garbage.

60.   **Soil Pollution**. Soil can become polluted by industrial sources or the improper disposal of toxic chemical substances.   Common sources of soil pollution include asbestos, lead, PCBs, and overuse of pesticides/herbicides.

61.   **Light Pollution**.   Light pollution refers to the large amount of light produced by most urban and other heavily-populated areas. Light pollution prevents citizens from seeing features of the night sky and has also been shown to impede the migration patterns of birds and the activities of nocturnal animals.

62.   **Noise Pollution**.   Noise pollution typically refers to human-made noises that are either very loud or disruptive in manner. This type of pollution has been shown to impact the movement of sea mammals, such as dolphins and whales and also impacts the nesting success of birds.

SUMMARY

1.   Social security is of three types:-

    (a)   Social Insurance.
    (b)   Services.
    (c)   Basic Security.

Female Foeticide

2.   **Causes of Female Foeticide.**

    (a)   Extreme Desire to Have a Male Child.
    (b)   Unwanted Pregnancy.
    (c)   Dowry System.
    (d)   Poor Medical Ethics.
    (e)   Inferior Status.

3.   **Measures to Prevent Female Foeticide**.

    (a)   Cancellation / permanent ban of the doctor's license who reveal the gender of the child.

(b) Heavy penalty imposed on firms doing illegal sex determination.
(c) High fines / judicial actions against 'parents' who knowingly try to kill their unborn girl.
(d) High incentives for the girl child in education, employment etc.
(e) Equal rights for women in the property of the parents / husband.
(f) Awareness campaigns targeted specially on the youth.

Dowry

4. **Causes of Dowry System**.

(a) Economic factors.
(b) Social factors
(c) Religious Factors
(d) Economic Inequality.
(e) Increasing Unemployment of Males.
(f) Parental Compulsions.
(g) Divine Sanctions.

5. **Prevention of Dowry**

(a) Not to offer or accept any dowry.
(b) Educate the members of the family with law - that accepting or giving dowry is an offence.
(c) Educate the members of the family and the neighbours to respect a woman's rights and privileges.
(d) Encourage women to fight for their rights.
(e) Educate the girl child to become economically independent.
(f) Strict law enforcement on dowry.

Drug Abuse

6. **Preventive Measures**

(a) The Government must use all the media to propagate against the habit of drug-taking.
(b) Voluntary organizations should pay more attention to instruct addicts how to give up the vice to bring them to the main stream of public life without shame or sorrow.
(c) Physicians should teach them how to prevent and avoid the evil and how to lead a normal healthy life.
(d) Parents should pay more care, attention and love to their sons and daughters.
(e) Reading of moral and religious books is also helpful to addicts.
(f) The police must act fearlessly to act against the people involved drug traffic.

HIV / AIDS

7. **How Does HIV/AIDS Spread**.

(a) Sexual Transmission.
(b) Blood Transfusions.
(c) Sharing Needles and Syringes for Intravenous Drug Use
(d) Mother to Child Transmission.
(e) Skin Piercing.
(f) Oral Route.

8. **Role of the Youth in Preventing HIV / AIDS**.

(a) Youth can assume responsibility in preventing HIV infections by avoiding behaviour that might lead to HIV infections.
(b) Youth may also share the right to refuse sex and assume responsibility for ensuring safe sex.

(c)   People living with HIV/AIDS have the same right to education, employment, health, travel, marriage, recreation, privacy, social security, scientific benefits etc. Hence, all should share responsibilities for avoiding HIV infection / re-infection.

(d)   The youth by creating a proper and positive peer pressure, can delay the age at first sex, avoid sex before marriage, practicing safer sex, and preventing alcohol and drug abuse. The stereotypical image of a "macho" male needs to be changed to depict responsible behaviours.

(e)   The young can also play an important role in addressing gender imbalance, which is one of the important factors for underdevelopment and HIV transmission.

(f)   Youth should also educate general public by spreading the information that HIV cannot be transmitted by the following actions:-

     (i)   Shaking Hands.
     (ii)   Sharing of Clothes.
     (iii)   Sharing of Food and Utensils.
     (iv)   Sharing of Toilets.
     (v)   Insect Bites.
     (vi)   Hugging or Kissing.
     (vii)   Working in the same office or travelling in the same vehicle.
     (viii)   Playing or swimming with the infected person.
     (ix)   Coughing, sneezing or in routine patient-care activities (bedmaking, feeding etc).

Beti Bachao, Beti Padhao

9.   It is a campaign of the Government of India that aims to generate awareness and improve the efficiency of welfare services intended for girls in India. Strategies employed to successfully carry out the scheme are:

(a)   Implement a sustained social mobilization and communication campaign to create equal value for the girl child and promote her education.

(b)   Place the issue of decline in child sex ratio/sex ratio at birth in public discourse, improvement of which would be an indicator for good governance.

(c)   Focus on gender critical districts and cities.

10.   The Beti Bachao campaign is also supported by the Indian Medical Association.

Mission Indradhanush

11.   Mission Indradhanush is a health mission of the government of India.The ultimate goal of Mission Indradhanush is to ensure full immunization with all available vaccines for children up to two years of age and pregnant women. Intensified Mission Indradhanush will cover low performing areas in the selected districts (high priority districts) and urban areas. Special attention will be given to unserved/low coverage pockets in sub-centre and urban slums with migratory population. The focus is also on the urban settlements and cities identified under National Urban Health Mission (NUHM).

Digital India

12.   **Digital India** is a campaign launched by the Government of India in order to ensure the Government's services are made available to citizens electronically by improved online infrastructure and by increasing Internet connectivity or by making the country digitally empowered in the field of technology. The initiative includes plans to connect rural areas with high-speed internet networks. Digital India consists of three core components: the development of secure and stable digital infrastructure, delivering government services digitally, and universal digital literacy.

Waste Management

13.   Waste Management refers to the collection, transport, processing or disposal, managing and monitoring of waste materials. The term normally relates to all kinds of waste, whether generated during the extraction of raw materials, the processing of raw materials into intermediate and final products, the consumption of final products, or other human activities, including municipal (residential, institutional,

commercial), agricultural, and social (health care, household hazardous waste, sewage sludge). Waste management is intended to reduce adverse effects of waste on health, the environment or aesthetics. All wastes materials, whether they are solid, liquid, gaseous or radioactive, fall within the scope of waste management. It also encompasses the legal and regulatory framework that relates to waste management encompassing guidance on recycling etc.

Women Health and Sanitation

14.   Women's health in India can be examined in terms of multiple indicators, which vary by geography, socio economic standing and culture. To adequately improve the health of women in India multiple dimensions of well-being must be analysed in relation to global health averages and also in comparison to men in India. Health is an important factor that contributes to human well-being and economic growth.

15.   Currently, women in India face a multitude of health problems, which ultimately affect the aggregate economy's output. Addressing the gender, class or ethnic disparities that exist in healthcare and improving the health outcomes can contribute to economic gain through the creation of quality human capital and increased levels of savings and investment.

16.   Gender is one of the main social determinants of health—which include social, economic, and political factors—that play a major role in the health outcomes of women in India and access to healthcare in India.

Tree Plantation

17.   Tree-planting is the process of transplanting tree seedlings, generally for forestry, land reclamation, or landscaping purpose. Because trees remove carbon dioxide from the air as they grow, tree planting can be used as a geoengineering technique to remove CO_2 from the atmosphere.Tree Plantation drives combat many environmental issues like deforestation, erosion of soil, desertification in semi-arid areas, global warming and hence enhancing the beauty and balance of the environment.

Traffic Awareness

18.   **Road traffic control** involves directing vehicular and pedestrian traffic around a construction zone, accident or other road disruption, thus ensuring the safety of emergency response teams, construction workers and the general public.

19.   **Causes of Road Accidents**

   (a)   Distracted Driving.
   (b)   Drunk Driving.
   (c)   Speeding.
   (d)   Rain.
   (f)   Running Red Lights.
   (g)   Night Driving.
   (h)   Tailgating.
   (j)   Wrong-Way Driving/ Improper Turns.
   (k)   Teenage Drivers.
   (l)   Drugs.

Pollution

20.   The term "pollution" refers to any substance that negatively impacts the environment or organisms that live within the affected environment. The five major types of pollution include: air pollution, water pollution, soil pollution, light pollution, and noise pollution.

CHAPTER SS - IV

PROTECTION OF CHILDREN AND WOMEN SAFETY

PROTECTION OF CHILDREN

Introduction

1.　　India is home to the largest child population in the world. Almost 42 per cent of its total population is under eighteen years of age. The health and security of the country's children is integral to any vision for its progress and development. One of the issues marring the vision for the country's children is the evil of child sexual abuse. The Protection of Children from Sexual Offences Act (POCSO) 2012 came into force in November 2012 to deal with the problem.

Definitions and Provisions

2.　　**General Provisions**.

　　(a)　　The Act is gender-neutral and **defines a child as any person below the age of eighteen years.**
　　(b)　　The Act provides precise definitions for different forms of sexual abuse, including penetrative and non-penetrative sexual assault, sexual harassment and pornography.
　　(c)　　The Act provides for stringent punishment including rigorous imprisonment for life for certain offences, and fine.
　　(d)　　The Act provides for mandatory reporting of sexual offences.
　　(e)　　The Act provides for child-friendly procedures for reporting of offences, recording of evidence, investigation and trial.

3.　　Under Section 45 of the Act, the power to make rules rests with the Central Government. The rules framed under the Act provide:-

　　(a)　　Arrangements for care and protection and emergency medical treatment of the child.
　　(b)　　Compensation payable to a child who has been the victim of a sexual offence.
　　(c)　　The periodic monitoring of the provisions of the Act the National Commission for Protection of Child Rights (NCPCR) and State Commissions for Protection of Child Rights (SCPCR).
　　(d)　　Arrangements for the care and protection of the child and no re-victimisation during investigation and trial.

Punishment under the Act

4.　　The act also recognizes that the intent to commit an offence, when unsuccessful for whatever reason, needs to be penalized. The attempt to commit an offence under the act has been made liable for punishment for up to half the punishment prescribed for the commission of the offence.

5.　　The act also provides punishment for providing assistance to the offence. This would cover Trafficking of the children for sexual purposes.

6.　　**Punishment for Offences Covered in the Act**.　These are as under:-

　　(a)　　**Penetrative Sexual Assault (Section 3).**　Not less than seven years imprisonment, this may extend to imprisonment for life and, fine (Section 4).
　　(b)　　**Aggravated Penetrative Sexual Assault (Section 5).**　Not less than ten years imprisonment, this may lead to imprisonment for life and, fine (Section 6).
　　(c)　　**Sexual Assault (Section 7).**　Not less than three years imprisonment, this may extend to five years and, fine (Section 8).
　　(d)　　**Aggravated Sexual Assault (Section 9).**　Not less than five years imprisonment, this may extend to seven years, and fine (Section 10).
　　(e)　　**Sexual Harassment of the Child (Section 11).**　Three years imprisonment and fine (Section 12).

(f)   **Use of Child for Pornographic Purposes (Section 13).** Five years imprisonment and fine, and in the event of subsequent conviction, seven years imprisonment and fine (Section 14 (1)).

Methods for Reporting and Recording

7. **General Provisions**.

(a)   His or her right to privacy and confidentiality protected and respected by every person by all means and through all stages of a judicial process involving the child.
(b)   The media has been barred from disclosing the identity of the child without the permission of the special court.
(c)   For speedy trial the act provides the evidence of the child to be recorded within a period of 30 days. Also, the special court is to complete the Trial within a period of one year, as far as possible.
(d)   The Special Juvenile Police Unit (SJPU) or the local police are also required to report the matter to the child welfare committee within 24hrs of recording the complaint, for long term rehabilitation of the child.
(e)   The Act provides for the establishment of Special Courts for trial of offences under the Act.

8. **Reporting and Recording of Evidence**.   The Act incorporates child friendly procedures for reporting, recording of evidence, investigation and trial of offences. These include:-

(a)   Recording the statement of the child at the residence of the child or at the place of his choice, preferably by a woman police officer not below the rank of sub-inspector.
(b)   No child to be detained in the police station in the night.
(c)   Police officer will not be in uniform, while recording the statement of the child.
(d)   The statement of the child to be recorded, as spoken by the child.
(e)   Assistance of an interpreter or translator or an expert be provided as per the need of the child.
(f)   Assistance of special educator or any person familiar with the manner of communication of the child in case child is disabled.
(g)   Medical examination of the child in presence of parents.
(h)   The victim is a girl child; the medical examination shall be conducted by a woman doctor.
(i)   Frequent breaks for the child during trial.
(j)   Child not to be called repeatedly to testify.
(k)   No aggressive questioning or character assassination of the child.
(l)   In-camera trial of cases.

Child Abuse

9. **General.**

(a)   Child abuse is an intrinsic part of today's global attention. Every child is at risk as it does not affect only one religion, caste or creed.
(b)   It is generally observed that the statistics are higher, when the child is at its adolescence. Abuse can be of mental, as well as physical, or both.

10. **Definition.**   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.

11. **Forms of Child Abuse**.   Child Abuse can be of following forms:-

(a)   **Physical Abuse**.   Causing physical injury upon a child. This may include hitting, shaking, kicking, beating, or otherwise harming a child physically.
(b)   **Emotional Abuse**. Emotional abuse (also known as verbal abuse, mental abuse) means, causing behavioural, emotional, or mental distress/trauma, by acts or the failure to act by others.
(c)   **Sexual Abuse**. Sexual abuse is inappropriate sexual behaviour with a child.

(d) **Child Neglect.** Child neglect is an act of omission or commission leading to the denial of a child's basic needs.

12. **Child Abuse India.** A national study on child abuse conducted in 2006 by Ministry of Child and Women Welfare found that it is 5-12 year age group children who are most at risk of abuse and exploitation. Over 50% children were subjected to physical abuse and 53.22% children reported facing sexual abuse.

WOMEN SAFETY

General

13. Safety of Women in India is a vast topic now-a-days. We cannot say that women are safe in India by seeing the last few year crimes against women especially in the national capital. Women generally feel frightened while going alone outside to the home. It is a very sad reality of the country that its women citizens are living with fear all time. Personal safety of women has been the topic of importance for every Indian citizen. In order to improve the condition regarding women safety in India, following are some points as tips for women safety:

14. **Some Tips Regarding Women Safety**.

(a) Self defence techniques are the first and foremost thing to which each and every woman must be aware of and get proper self-defense training for their safety. They must be aware of some effective defence techniques such as kicks to groin, blocking punches, etc.

(b) Generally, most of the women are gifted with sixth sense which they must use whenever they encounter any problem. They should at once avoid any situation which they feel is bad for them.

(c) Escape and run is also a good way to reduce some risks of women whenever they encounter any problem. They should never go with any unknown person alone at unknown places.

(d) Women must understand and feel their physical power and use accordingly. They should never feel weaker than men and take self-defence training.

(e) They should be careful while communicating with someone on internet in the cyberspace.

(f) Pepper spray can also be proved as a useful self-defence tool however it has a drawback that some people cannot be harmed through it even after full-face spray.

(g) They must have all the emergency numbers with them and WhatsApp also if possible so that they can immediately tell to their family members and police.

(h) Women should be very conscious while driving a car and going on any trip. They must lock all the doors of the car while travelling with own or private car.

Safety Laws for Women in India

15. There is a list of safety laws for women in India working in the field to provide safety to the women from all type of crimes against women. Some safety laws are Child Marriage Restraint Act 1929, Special Marriage Act 1954, Hindu Marriage Act 1955, Hindu Widows Remarriage Act 1856, Indian Penal Code 1860, Dowry Prohibition Act 1961, Maternity Benefit Act 1861, Foreign Marriage Act 1969, Indian Divorce Act 1969, Medical Termination of Pregnancy Act 1971, Christian Marriage Act 1872, Code of Criminal Procedure 1973, Equal Remuneration Act 1976, Married Women's Property Act 1874, Births, Deaths & Marriages Registration Act 1886, Indecent Representation of Women (Prevention) Act 1986, Muslim women (protection of rights on divorce) Act 1986, Commission of Sati (Prevention) Act 1987, National Commission for Women Act 1990, Prohibition of Sex Selection Act 1994, Protection of Women from Domestic Violence Act 2005, Prevention of Children from Sexual Offences Act 2012, Sexual Harassment of Women at Work Place Act 2013, etc.

16.   Another Juvenile Justice (Care and Protection of Children) Bill, 2015 has been passed replacing the existing Indian juvenile delinquency law of 2000 (Juvenile Justice (Care and Protection of Children) Act, 2000). This act was passed by the Lok Sabha on 7th of May in 2015 and however, by the Rajya Sabha on 22nd of December in 2015. This act is passed to lower down the juvenile age from 18 to 16 years in cases of heinous offense (especially after the release of Nirbhaya's case accused juvenile).

Conclusion

17.   We have a very large population of children in our country and many of them require protection of various kinds. The Protection of Children from Sexual Offences Act 2012, is an important milestone and it is our moral responsibility that we educate our children about the act and the provisions enshrined in it.

18.   Women safety is a big social issue which needs to be solved urgently by the effort of all. It is inhibiting the growth and development of the country and most importantly hurting the half population of the country in all aspects (physically, mentally, and socially).

SUMMARY

1.   India is home to the largest child population in the world. Almost 42 per cent of its total population is under eighteen years of age. The health and security of the country's children is integral to any vision for its progress and development. One of the issues marring the vision for the country's children is the evil of child sexual abuse. The Protection of Children from Sexual Offences Act (POCSO) 2012 came into force in November 2012 to deal with the problem.

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 Abuse can be of following forms:-

      (a)   Physical Abuse.
      (b)   Emotional Abuse.
      (c)   Sexual Abuse
      (d)   Child Neglect.

3.   There is a list of safety laws for women in India working in the field to provide safety to the women from all type of crimes against women. Some safety laws are Child Marriage Restraint Act 1929, Special Marriage Act 1954, Hindu Marriage Act 1955, Hindu Widows Remarriage Act 1856, Indian Penal Code 1860, Dowry Prohibition Act 1961, Maternity Benefit Act 1861, Foreign Marriage Act 1969, Indian Divorce Act 1969, Medical Termination of Pregnancy Act 1971, Christian Marriage Act 1872, Code of Criminal Procedure 1973, Equal Remuneration Act 1976, Married Women's Property Act 1874, Births, Deaths & Marriages Registration Act 1886, Indecent Representation of Women (Prevention) Act 1986, Muslim women (protection of rights on divorce) Act 1986, Commission of Sati (Prevention) Act 1987, National Commission for Women Act 1990, Prohibition of Sex Selection Act 1994, Protection of Women from Domestic Violence Act 2005, Prevention of Children from Sexual Offences Act 2012, Sexual Harassment of Women at Work Place Act 2013, etc.

CHAPTER SS - V

ROAD / RAIL TRAVEL SAFETY

Introduction

1.   Road/Rail accidents are man-made disasters which involve high human suffering.   They impose a huge cost in terms of deaths, injuries and loss of income.   A **road accident**, also called a motor vehicle collision (MVC) among other terms, occurs when a vehicle collides with another vehicle, pedestrian, animal, road debris, or other stationary obstruction, such as a tree or pole.   Such collisions often result in injury, death, and property damage.   A **rail accident** is a type of disaster involving one or more trains.   Train wrecks often occur as a result of miscommunication, as when a moving train meets another train on the same track; or an accident, such as when a train wheel jumps off a track in a derailment; or when a boiler explosion occurs.   These could be avoided with certain precautions if taken in time.   Towards this, role of traffic control organization and anti-drunken driving measures play key roles. The new Motor Vehicle Act is a significant step in this direction.

Do's & Don'ts: For Road / Rail Safety

2.   The following are the Do's and Don'ts: -

    (a)   **Do's for Road Safety.**
        (i)   Obey traffic rules.
        (ii)   Conduct or attend of road safety seminars.
        (iii)   Educate general public on traffic rules.
        (iv)   Wear helmet and seat belts.
        (v)   Give pedestrians the right-of-way in crosswalks

    (b)   **Don'ts for Road Safety.**
        (i)   Do not drink and **drive.**
        (ii)   Do not over **speed.**
        (iii)   Do not cross **the road during the red signal.**
        (iv)   Do not use **mobile phones while driving.**
        (v)   Do not engage in other activities, while driving.

    (c)   **Do's for Rail Safety.**
        (i)   Carry own Identification Card while travelling.
        (ii)   Always use over bridge to cross the track.
        (iii)   Stop vehicles when the gate is closed at the crossing.
        (iv)   Pull the chain, only in emergency if required to stop the train.
        (v)   Report to the railway police regarding unidentified objects or suspected persons

    (d)   **Don'ts for Rail Safety.**
        (i)   Do not be careless while crossing train tracks.
        (ii)   Do not try to get in/ get down while train is moving.
        (iii)   Do not ignore the signal at railway crossing.
        (iv)   Do not sit on the footsteps/foot board while travelling.
        (v)   Do not use fire while travelling.
        (vi)   Do not consume alcohol during journey.
        (vii)   Do not accept any eatables from unknown persons.
        (viii)   Do not quarrel with railway staff and fellow passengers.
        (ix)   Do not travel on footboards of moving train.
        (x)   Do not bunch up to present a large target at railway platforms.

How to Plan a Journey

3.   Planning a trip is not difficult, if you know the essential items, you need to bring.   Even if you're just taking a short trip, it pays to be prepared when you travel. Think ahead about the conditions you'll encounter at your destination.

(a)   The first item to pack is always common sense.

(b)   Clothes and food are a necessity in order to have a fun trip. Light clothing is the best attire for summer trip and clothes such as sweaters are the more suitable for cold places.

(c)   The most important thing to bring is money. Other stuff is also needed, but these are the top things to consider when packing for a trip.

(d)   **Get a physical exam**. If you've recently had surgery, a heart attack, a stroke, a bone fracture or another major health problem, your doctor can advise you on how soon you may travel, especially by air. Update immunizations. Even if you're just traveling across several states, be sure your immunizations are up-to-date.

(e)   Take extras. You never know when your stay might be extended or what unexpected circumstances might happen at your destination. Pack more of your medications than you think you'll need. Take along a list of your allergies and prescription medications.

(f)   Include a pair of sturdy, comfortable shoes and clothes that are appropriate for all weather variations at your destination.

(g)   Food is very important when considering a trip. Without food it is impossible to drive safely and focus on where you are going. Choosing the right food is an important decision, because you have limited space and need to choose wisely what you are going to bring.

(h)   Carry your important documents like Identity card.

(j)   Travel in group.

(k)   Do follow security instructions and procedure.

(l)   Do not accept any eatables from unknown persons.

(m)   Collect maximum information about the destination. Always have a map and contact numbers with you.

Conclusion

4.   Safety should be the first priority while on move in train or by road travel. Always follow the rail/road safety measures. Rules and regulations are for everyone, in which motor vehicle laws also assist. One should always be cautious, follow safety and security measures during any kind of travel.

SUMMARY

1.   **Do's & Don'ts: For Road / Rail Safety.**

    (a)   **Do's for Road Safety.**

        (i)   Obey traffic rules.
        (ii)   Conduct or attend of road safety seminars.
        (iii)   Educate general public on traffic rules.
        (iv)   Wear helmet and seat belts.
        (v)   Give pedestrians the right-of-way in crosswalks

    (b)   **Don'ts for Road Safety.**

        (i)   Do not drink and **drive.**
        (ii)   Do not over **speed.**
        (iii)   Do not cross **the road during the red signal.**
        (iv)   Do not use **mobile phones while driving.**
        (v)   Do not engage in other activities, while driving.

    (c)   **Do's for Rail Safety.**

        (i)   Carry own Identification Card while travelling.
        (ii)   Always use over bridge to cross the track.
        (iii)   Stop vehicles when the gate is closed at the crossing.
        (iv)   Pull the chain, only in emergency if required to stop the train.
        (v)   Report to the railway police regarding unidentified objects or suspected persons

    (d)   **Don'ts for Rail Safety.**

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(iii)   Do not ignore the signal at railway crossing.
(iv)   Do not sit on the footsteps/foot board while travelling.
(v)   Do not use fire while travelling.
(vi)   Do not consume alcohol during journey.
(vii)   Do not accept any eatables from unknown persons.
(viii) Do not quarrel with railway staff and fellow passengers.
(ix)   Do not travel on footboards of moving train.
(x)   Do not bunch up to present a large target at railway platforms.

CHAPTER SS - VI

NEW INITIATIVES

Introduction

1.   In the new millennia India has been blessed with twin advantages, namely the demographic dividend and availability of Information Communication Technology (ICT) to effect unparalleled transformative change in the country. The ever-improving developments in ICT coupled with technologically literate young people, India is able to leap-frog many of her development issues in one go. Governments of the day are taking advantages of this opportunity through various new initiatives bringing in substantial improvement in the social and economic condition of the masses. Few of these initiatives are as under:-

    (a)   **Aadhar**.   For unique identity of citizens and its connectivity digitally.
    (b)   **BHIM App**.   For fast, safe and trustworthy payments.
    (c)   **Make in India**. To encourage manufacturing in India.
    (d)   **Start up India**. For encouraging new businessmen.
    (e)   **Skill India**.   For skill training schemes.
    (f)   **Mudra Bank.** Loan for entrepreneurs.

AADHAR

2.   Aadhar is a Unique Identification Number issued by UIDAI to individuals for the purpose of establishing unique identification of every single person. Aadhar is actually a 12-digit number and not a card. The Unique Identification Authority of India (UIDAI) is the regulatory body for this.

Features of Aadhar

3.   Aadhar has the following features which are peculiar to it:-

    (a)   **Uniqueness**.   This is achieved through the process of demographic and biometric de-duplication. The de-duplication process compares the resident's demographic and biometric information, collected during the process of enrolment, with the records in the UIDAI database to verify if the resident is already in the database or not.

    (b)   **Portability**.   Aadhaar gives nationwide portability as it can be authenticated anywhere on-line. This is critical as millions of Indians migrate from one state to another or from rural area to urban centers etc.

    (c)   **Random Number**.   Aadhaar number is a random number devoid of any intelligence. Person willing to enroll has to provide minimal demographic along with biometric information during the enrolment process. The Aadhaar enrolment process does not capture details like caste, religion, income, health, geography, etc.

    (d)   **Scalable Technology Architecture**.   The UID architecture is open and scalable. Resident's data is stored centrally and authentication can be done online from anywhere in the country. Aadhaar Authentication service is built to handle 100 million authentications a day.

    (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.

Why Aadhar Card is Becoming Important?

4.   With the passage of time, importance of Aadhar card has greatly increased.   In future, Aadhar card will be mandatory to avail benefits of various government schemes and services.   Few important uses of Aadhar card in our basic living are as under:-

    (a)   **LPG Subsidy through Aadhar.** Government has started the **PAHAL Scheme** under which the subsidy amount of LPG cylinder is directly transferred into the Aadhar number linked

bank account of the consumer.   Absence of Aadhar card can deprive the consumer from availing subsidy benefits on LPG cylinders.

(b)   **Aadhar card must for Passport.**   Government has also ordered that Aadhar card is necessary for issuance of new passport. You can be denied of passport if you do not have your Aadhar card with you.

(c)   **Aadhar is Digital ID Proof.**   Aadhar card will be identity proof of every individual in future. Since the details of Aadhar card holder are kept at secure online servers, the bio-metrically verified identity of an individual can be used to confirm the identity of its holder.

(d)   **Use Aadhar for new SIM Card.**   Aadhar card is necessary for purchasing new SIM cards. With this you cannot buy a new SIM card without having Aadhar card.

(e)   **Aadhar Vital for Government Employees.**   There is a proposal to bring Aadhar card into use to connect it with the attendance book of government employees.

5.   **Advantages/Benefits of Aadhar Card.**   Indian Government is planning to use Aadhar not only for the identity but also for the various other important purposes. Some of the uses are:-

(a)   In several places and all government departments various documentary proof is required, but, the Aadhar will reduce the burden of many identity proofs.

(b)   To open a 'bank account' or to operate a current account, now it's mandatory to submit your Aadhar Number, to your bank officials. So, RBI can easily find out all the bank accounts of a person.

(c)   Aadhar Number linked to a bank account will get LPG Subsidy directly to their bank account.

(d)   Under the Prime Minister's 'Jhan Dhan Yojana', Aadhar is used as the main document as evidence, to open a 'bank account.'

(e)   For various monetary transaction providing UIN detail, would be necessary, which reduce the 'black money' transfer.

(f)   Various types of duplication of data and fake identities created by frauds for a long time, in India, for their individual benefits, can be stopped with the help of UIN.

BHIM APP

6.   The indigenously developed payment app 'BHIM' (Bharat Interface for Money) has been named after the main architect of Indian constitution, Dr Bhim Rao Ambedkar.   BHIM is a biometric payment system app using Aadhar platform, and is based on Unified Payment Interface (UPI) to facilitate e-payments directly through bank. It stresses on the importance of technology and digital transactions.   It can be used on all mobile devices, be it a Smartphone or a feature phone with or without internet connection. The payments through the new system (BHIM App) can be made by just a thumb impression after the bank account is linked with Aadhar gateway.   Indeed, the technology through BHIM will empower poorest of the poor, small business and the marginalized sections. The app will minimize the role of plastic cards and point of sale machines.   The app will eliminate fee payments for service providers like MasterCard and Visa, which has been a stumbling block in people switching to digital payments.

7.   Advantages of BHIM app are:-

(a)   The app can be used to send and receive money through smart phones.
(b)   Money can also be sent to non-UPI supported banks.
(c)   Bank balance can also be checked through the app.
(d)   Currently Hindi and English are supported in the app, with more languages coming soon.

MAKE IN INDIA

8.   Make in India scheme is a Government initiative to facilitate and augment the manufacturing industry in India. In other words, it can also be said that this program is intended to increase the GDP of the Indian economy. Besides promoting manufacturing and employment sector in the country it has set wide array of targets which are meant to change the entire economy of the country positively.

9.   This program has a wide scope, associated with different sectors of the economic environment of the country. It is specifically designed to promote the enlisted or targeted, 25 different sectors, which were badly in a need of such reforms. It is intended and approved to facilitate the foreign direct investment and domestic companies in manufacturing their products in the Indian vicinity.

10.   The initiative is built on four pillars which are as follows:

(a)   **New Processes**.   The government is introducing several reforms to create possibilities for getting Foreign Direct Investment (FDI) and foster business partnerships.   Some initiatives have already been undertaken to alleviate the business environment from outdated policies and regulations.   This reform is also aligned with parameters of World Bank's 'Ease of Doing Business' index to improve India's ranking on it.

(b)   **New Infrastructure**.   Infrastructure is integral to the growth of any industry.   The government intends to develop industrial corridors and build smart cities with state-of-the-art technology and high-speed communication.   Innovation and research activities are supported by a fast-paced registration system and improved infrastructure for Intellectual Property Rights (IPR) registrations.   Along with the development of infrastructure, the training for the skilled workforce for the sectors is also being addressed.

(c)   **New Sectors**.   'Make in India' has identified 25 sectors to promote with the detailed information being shared through an interactive web-portal. The Government has allowed 100% FDI in Railway, Construction, Defence and Pharmaceutical.

(d)   **New Mindset**.   Government in India has always been seen as a regulator and not a facilitator. This initiative intends to change this by bringing a paradigm shift in the way Government interacts with various industries. It will focus on acting as a partner in the economic development of the country alongside the corporate sector.

11.   Major initiatives, policy changes and a slew of reforms have put India on the global industrial map as one of the fastest growing economies as well as one of the most attractive investment destinations in the world due to following advantages:-

(a)   Fastest Growing Economy.
(b)   **Demographic Advantage**.   With 356 million 10-24 year-olds, India has the world's largest youth population.
(c)   **Favourable Policies**.   Major FDI policy reforms have been made in a number of sectors, such as defense, construction development, pensions, broadcasting, pharmaceutical and civil aviation

12.   Key features of the Programme:-

(a)   Facilitate foreign direct investment and production of goods in India by Indian and foreign companies in India.
(b)   Increased demand for employment in various sectors.
(c)   Attract foreign currency to be invested in the Indian industrial sectors.
(d)   Create a demand of skilled people in specific sectors.
(e)   It aims to ease doing business in India. It has far more potential to take India ahead of the present ranking.

START UP INDIA

13.　　Start-up India Campaign of Government of India intends to promote bank financing for start-up ventures, to increase entrepreneurship and encourage start-ups with jobs creation.　It will restrict the role of States in policy domain and to get rid of "license raj" and interruptions like land permissions, foreign investment proposal, environmental clearances etc.　A Start-Up is defined as an entity that is headquartered in India which was opened less than five years ago and have an annual turnover less than Rs 25 crore.　The government has already launched the MUDRA Bank, a new institution set up for development and refinancing activities relating to micro units with a refinance Fund of Rs 200 billion.

14.　　The **Stand-up India** Initiative is also planned and run concurrently with Start-up India intended to encourage entrepreneurship among **SCs/STs and women** communities.　Start-up India will be a flagship initiative of the Government of India to develop a strong eco-system for fostering innovation and Start-ups in the country that will drive sustainable economic progress and generate huge employment opportunities. The government through this initiative aims to empower Start-ups to grow through modernization 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 90-day exit window.
    (e)　　Eliminating red tape.
    (f)　　Self-certification compliance.
    (g)　　Encourage entrepreneurship.

SKILL INDIA

15.　　Skill India is a campaign launched by the Government on 15 July 2015 which aims to train over 40 crore (400 million) people in India in different skills by 2022.　It includes various initiatives of the government like "National Skill Development Mission", "National Policy for Skill Development and Entrepreneurship, 2015", "Pradhan Mantri Kaushal Vikas Yojana (PMKVY)" and the "Skill Loan scheme".

16.　　**Objectives of 'Skill India'**.　The main goal is to create opportunities, space and scope for the development of the talents of the Indian youth and to develop more of those sectors which have already been put under skill development for the last so many years and also to identify new sectors for skill development. The new programme aims at providing training and skill development to 500 million youth of our country by the year 2020, covering each and every village.

17.　　**Features of 'Skill India'**.

    (a)　　The emphasis is to skill the youths in such a way so that they get employment and also improve entrepreneurship.

    (b)　　Provides training, Support and guidance for all occupations that were of traditional type like carpenters, cobblers, welders, blacksmiths, masons, nurses, tailors, weavers etc.

    (c)　　More emphasis will be given on new areas like real estate, construction, transportation, textile, gem industry, jewellery designing, banking tourism and various other sectors, where skill development is inadequate or nil.

    (d)　　Tailor-made, need-based programmes would be initiated for specific age groups which can be like language and communication skills, life and positive thinking skills, personality development skill, management skills, behavioral skills, including job and employability skills.

    (e)　　The course methodology of 'Skill India' would be innovative, which would include games, group discussion, brainstorming sessions, practical experiences, case studies etc.

18. **Advantages of Skill India**.

(a)   Raise confidence, improve productivity and give direction through proper skill development.

(b)   Skill development will enable the youths to get blue-collar jobs.

(c)   Developments of skills, at a young age, right at the school level, is very essential to channelize them for proper job opportunities.

(d)   Every job aspirant would be given training in soft skills to lead a proper and decent life. Skill development would reach the rural and remote areas also.

(e)   Corporate educational institutions, non-government organizations Government, academic institution and society would help in the development of skills of the youths so that better results are achieved in the shortest time possible.

MUDRA BANK

19.   Micro Units Development and Refinance Agency Bank (or MUDRA Bank) is a public sector financial institution in India. It provides loans at low rates to micro-finance institutions and non-banking financial institutions which then provide credit to MSMEs - Micro, Small and Medium Enterprises.

20. **Objective of Mudra Bank**.

(a)   The main aim of the Mudra Bank programme is regulate the lending and borrowing activities in the microfinance setup of India and thus make it stable to a certain extent.

(b)   These organizations primarily cater to small business units, self-help groups, retailers and individual entrepreneurs.

(c)   The initiative aims to provide crediting services and financial support to those microfinance entities that are functioning across the country.

21. **Products and Offerings**.

(a)   The Mudra Bank will provide three kinds of loans – Shishu, Tarun and Kishore.

(b)   Shishu loans are basically for the ones who are just starting out their businesses the maximum amount that will be lent under Shishu loan is Rs. 50,000.

(c)   Kishore loans are for those who are in the middle stage of their business endeavours For Kishore loan, the upper limit is Rs. 5 lakhs.

(d)   Tarun loans are for those who are looking to move on to higher levels, such as doing business expansion. Tarun loan, the maximum amount has been fixed at Rs. 10 lakhs.

(e)   The bank will determine which loan applicant falls under particular category and the loans will be provided in accordance to that.

22. **Benefits of Mudra Bank**.

(a)   The biggest potential advantage of the Mudra Bank programme is that it can help a large number of countless entrepreneurs across the country by providing financial support, which is such an important component in their existence and eventual success.

(b)   With its focus on the underprivileged section of the Indian economic hierarchy, Mudra Bank may one day replicate what Grameen Bank has done in Bangladesh.

Conclusion

23.   The new development initiatives undertaken by Government of India will definitely propel India to a higher developmental pedestal if executed properly. The government, the industries, banks, various other agencies and common man especially youth will have to work in collaboration to make these initiatives a great success.

SUMMARY

1.   Few of the Government Initiatives are as under:-

     (a)   **Aadhar**.   For unique identity of citizens and its connectivity digitally.
     (b)   **BHIM App**.   For fast, safe and trustworthy payments.
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     (d)   **Start up India**.   For encouraging new businessmen.
     (e)   **Skill India**.   For skill training schemes.
     (f)   **Mudra Bank.**   Loan for entrepreneurs.

2.   Aadhar is a Unique Identification Number issued by UIDAI to individuals for the purpose of establishing unique identification of every single person. Aadhar is actually a 12-digit number and not a card. The Unique Identification Authority of India (UIDAI) is the regulatory body for this. Aadhar is meant for individuals of any age (including children) for the purpose of establishing identities. Since Aadhar is for only individuals, it is different for all the members of a family. For deciding uniqueness of every individual, the demographic details (residence address information) of the person and his/her biometric information (photograph, iris-scan, fingerprints) is collected which is stored in a centralized database.

3.   BHIM is a biometric payment system app using Aadhar platform, and is based on Unified Payment Interface (UPI) to facilitate e-payments directly through bank. It stresses on the importance of technology and digital transactions. It can be used on all mobile devices, be it a Smartphone or a feature phone with or without internet connection. The payments through the new system (BHIM App) can be made by just a thumb impression after the bank account is linked with Aadhar gateway.

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CHAPTER SS - VII

CYBER AND MOBILE SECURITY

CYBER SECURITY

Definition

1.   Cyber security refers to the body of technologies, processes, and practices designed to protect networks, devices, programs, and data from attack, damage, or unauthorized access. Cyber security may also be referred to as information technology security. Cyber Security is all about protecting your devices and network from unauthorized access or modification. The Internet is not only the chief source of information, but it is also a medium through which people do business.

2.   **Types of Cyber Security**.   Cyber Security is classified into the following types:

     (a)   **Information Security**.   Information security aims to protect the users' private information from unauthorized access, identity theft. It protects the privacy of data and hardware that handle, store and transmit that data.

     (b)   **Network Security**.   Network security aims to protect the usability, integrity, and safety of a network, associated components, and data shared over the network. When a network is secured, potential threats gets blocked from entering or spreading on that network.

     (c)   **Application Security**.   Application security aims to protect software applications from vulnerabilities that occur due to the flaws in application design, development, installation, and upgrade or maintenance phases.

3.   **Types of Threats**.   There are many different types of cybersecurity threats, some of the most common types of threats are listed below,

     (a)   **Viruses**.   Viruses are a type of malware programs that are specially designed to cause damage to the victims' computer. Viruses can self-replicate under the right conditions and can infect a computer system without the permission or knowledge of the user. It has two major characteristics, the ability to replicate itself and the ability to attach itself to another computer file. A virus has the capability to corrupt files and steal private information like credit card details of the user and send them back to the hacker. Viruses cannot exist on its own, i.e., without a host program; it is usually present as a parasite on another program.

     (b)   **Password Attacks**.   It is a type of cyber security threat which involves a hacking attempt by hackers to crack the passwords of the user. With the help of a hacking tool, hackers may enter many passwords a second to crack the victim's account credentials and gain access. Hackers may also perform password attacks on a computer login screen to gain access to a victim's computer and the data stored in it.

     (b)   **Spyware and Keyloggers**.   Malware such as the spyware can spy on computing habits of the victims. Some malware such as the keyloggers can record the victims' keystrokes including their passwords, PIN numbers, and credit card details. Keyloggers and spyware programs enter the victims' system when they download and install seemingly benign software from a dubious website.

     (c)   **Adware**.   Adware is a group of malwares that is known to generate these pop-ups. If a user notices strange pop-up messages on their computer screen, it is most likely to be a malware attack. The main intention of adware is to gain permissions that will then allow them to install additional malicious software. If the user downloads that additional software, it may then either delete or steal your data. Some of these pop-up messages can also be used to simply bombard your computer screen with unwanted information such as advertisements.

     (d)   **Trojans**.   Trojans are a type of malware programs that disguise themselves as harmless or useful software. Trojans can cause a variety of malicious activities on the victims' computer

including downloading malicious programs, deleting or stealing files and providing hackers unauthorized access to the victims' computer.

(e) **Ransomware**. Ransomware is a group of malwares which locks or encrypts the victim's computer and demands payment for decrypting the computer. The primary motive for all ransomware attacks is always monetary. Unlike many other types of cyber-attacks, ransomware attacks notify the victim about the exploit, and it also gives instructions on how to recover from it (usually it demands payment for recovery). To avoid a crackdown by law enforcement, hackers who are behind the ransomware attacks typically demand payments in virtual currencies, such as the Bitcoins.

4. **Challenges.** For an effective cyber security, an organization needs to coordinate its efforts throughout its entire information system. Elements of cyber encompass all of the following:

(a) Network security
(b) Application security
(c) Endpoint security
(d) Data security
(e) Identity management
(f) Database and infrastructure security
(g) Cloud security
(h) Mobile security
(i) Disaster recovery/business continuity planning
(j) End-user education

MOBILE SECURITY

5. **Introduction.** There are three prime targets for attackers for mobile devices:

(a) **Data**. Smartphones are devices for data management, and may contain sensitive data like credit card numbers, authentication information, private information, activity logs (calendar, call logs);
(b) **Identity**. Smartphones are highly customizable, so the device or its contents can easily be associated with a specific person. For example, every mobile device can transmit information related to the owner of the mobile phone contract, and an attacker may want to steal the identity of the owner of a smartphone to commit other offenses;
(c) **Availability.** Attacking a smartphone can limit access to it and deprive the owner of its use.

6. **User awareness**. Much malicious behavior is allowed by the carelessness of the user. Smartphone users were found to ignore security messages during application installation, especially during application selection, checking application reputation, reviews and security and agreement messages. From simply not leaving the device without a password, to precise control of permissions granted to applications added to the smartphone, the user has a large responsibility in the cycle of security: to not be the vector of intrusion. This precaution is especially important if the user is an employee of a company that stores business data on the device. Detailed below are some precautions that a user can take to manage security on a smartphone.

7. **Being sceptical**. A user should not believe everything that may be presented, as some information may be phishing or attempting to distribute a malicious application. It is therefore advisable to check the reputation of the application that they want to buy before actually installing it.

8. **Permissions given to applications**. The mass distribution of applications is accompanied by the establishment of different permissions mechanisms for each operating system. It is necessary to clarify these permissions mechanisms to users, as they differ from one system to another, and are not always easy to understand. In addition, it is rarely possible to modify a set of permissions requested by an application if the number of permissions is too great. But this last point is a source of risk because a user can grant rights to an application, far beyond the rights it needs.

9.   **Be careful**.   Protection of a user's phone through simple gestures and precautions, such as locking the smartphone when it is not in use, not leaving their device unattended, not trusting applications, not storing sensitive data, or encrypting sensitive data that cannot be separated from the device.

10.   **Disconnect peripheral devices that are not in use**.   NIST Guidelines for Managing the Security of Mobile Devices 2013, recommends: Restrict user and application access to hardware, such as the digital camera, GPS, Bluetooth interface, USB interface, and removable storage.

11.   **Enable Android Device Encryption**.   Latest Android Smartphones come with an inbuilt encryption setting for securing all the information saved on your device. It makes it difficult for a hacker to extract and decipher the information in case your device is compromised.

Precautions

12.   These precautions are measures that leave no easy solution to the intrusion of people or malicious applications in a smartphone.   If users are careful, many attacks can be defeated, especially phishing and applications seeking only to obtain rights on a device.   Here are some practical steps that will help you minimize the exposure of your mobile device to digital threats.

          (a)   **Use strong passwords/biometrics**.   Strong passwords coupled with biometric features, such as fingerprint authenticators, make unauthorized access nearly impossible.   Your passwords should be eight or more characters long and contain alphanumeric characters.

          (b)   **Ensure public or free Wi-Fi is protected**.   Everybody loves free Wi-Fi, especially when the data plan is inexpensive.   But cheap can turn expensive in a very devastating manner.   That's because most of the free Wi-Fi points are not encrypted.   These open networks allow malicious people to eavesdrop on the network traffic and easily get your passwords, usernames and other sensitive information.   To protect against Wi-Fi hacking, use applications that secure your connection or at least tell you the status of the Wi-Fi to which you are connected.

          (c)   **Utilize VPN**.   If you're not sure about the security status of the network to which you're connected, using VPN (Virtual Private Network) client is mandatory.   A VPN will enable you to connect to a network securely.   At the same time, any browsing activity you do on the public Wi-Fi will be shielded from prying eyes.   It is also useful when accessing sites that are less secure. You really need to have a new mindset when it comes to fighting cybercrime.

          (d)   **Encrypt your device**.   Most mobile devices are bundled with a built-in encryption feature. Encryption is the process of making data unreadable.   Decryption is converting the unreadable data into normal data.   This is important in case of theft, and it prevents unauthorized access.   You simply need to locate this feature on your mobile device and enter a password to encrypt your device.

          (e)   **Install an Antivirus application**.   The files you download and the apps you install on your mobile device might be packed with malicious code.   Once launched, this code could send your data to hackers, thereby making you unsecured and robbing you of your privacy.   To avoid that, installing a reputable antivirus application will guarantee your security.   Some antivirus applications also offer more functionalities, such as erasing your data if you lose your mobile device, tracking and blocking unknown callers who might be a threat, and telling you which applications are not safe.

          (f)   **Update to the latest software**.   Your mobile device firmware might also be vulnerable to security threats.   New loopholes might be exploited leaving your device open to threats, to avoid that, always update your firmware/device.

13.   **Other things to consider**.

          (a)   **Avoid turning on autofill**.   Some websites and applications will automatically fill in your username when you visit them. This is due to the autofill feature. Turn it off as soon as possible.

(b)   **Log out**.   After using mobile applications, especially those that are linked to one another, such as google applications, ensure that you log off each time you are done using them.

(c)   **Use only trusted stores**.   You should download apps from secure stores, such as Apple's App Store. This depends on the platform your mobile device uses.

Conclusion

14.   Making your mobile device secure is not an easy task, but it should be your first priority. As there are new vulnerabilities found every day, it's important to make sure that you are aware of any suspicious activity that occurs on your device.

SUMMARY

1.   Cyber security refers to the body of technologies, processes, and practices designed to protect networks, devices, programs, and data from attack, damage, or unauthorized access. Cyber security may also be referred to as information technology security.   Cyber Security is all about protecting your devices and network from unauthorized access or modification.

2.   There are many different types of cybersecurity threats, some of the most common types of threats are listed below:-

      (a)   Viruses
      (b)   Password Attacks.
      (b)   Spyware and Keyloggers.
      (c)   Adware.
      (d)   Trojans.
      (e)   Ransomware.

3.   There are three prime targets for attackers for mobile devices: -

      (a)   Data.
      (b)   Identity.
      (c)   Availability.

4.   Here are some practical steps that will help you minimize the exposure of your mobile device to digital threats:-

      (a)   Use strong passwords/biometrics.
      (b)   Ensure public or free Wi-Fi is protected.
      (c)   Utilize VPN
      (d)   Encrypt your device
      (e)   Install an Antivirus application.
      (f)   Update to the latest software.
      (g)   Avoid turning on autofill.
      (h)   Log out.
      (j)   Use only trusted stores.

CHAPTER HH - I

HYGIENE AND SANITATION (PERSONAL AND CAMP HYGIENE)

Introduction

1.   Maintaining hygiene and sanitation is necessary for many reasons; personal, social, health, psychological or simply as a way of life.   Keeping a good standard of hygiene helps to prevent the development and spread of infections, illnesses and bad odours.   Personal and Food Hygiene are necessary to preserve and improve the health of the individual and of the community as a whole.   Its study is aimed at making the cadets aware of the many preventable health hazards and to enable them to look after themselves and their community most efficiently.   It seeks to develop in them the concepts of healthy living. Personal hygiene involves all aspects of the health of an individual.   Responsibility for the maintenance of personal health therefore lies with the individual.   Every person must remain in perfect physical, mental and social health, only then can he serve the community and the country well.

2.   **Personal Hygiene**.   Personal hygiene involves those practices performed by an individual to care for one's bodily health and well-being, through cleanliness.   Maintenance of personal hygiene is very important in preventing disease. It deals with the practices that help in the maintenance and promotion of a person's health.   Personal hygiene habits such as washing hands and brushing teeth will keep bacteria, viruses and illness at bay. There are mental and physical benefits. Practicing good body hygiene helps you feel good about yourself.   Main components of personal hygiene are:-

        (a)   Sleep is the periodical rest of both body and mind and it is extremely essential for a healthy body. The duration of sleep one requires varies with individual age. The average requirement of sleep is about 7 to 8 hours a day.
        (b)   Bathing, keeping the skin clean and in healthy condition is essential for good health. Wash your body regularly. Your body is constantly shedding skin. That skin needs to come off. Otherwise, it will take up and cause illnesses.
        (c)   Brush your teeth twice a day. Brushing minimizes the accumulation of bacteria in mouth which can cause tooth decay and gum diseases.
        (d)   Keeping finger and toe nails trimmed and in good shape will prevent problems such as hang nails and infected nail beds. Feet that are clean and dry are less likely to contact Athlete's foot.

3.   **Food Hygiene**. Food hygiene is the condition and measures necessary to ensure the safety of food from production to consumption. Food can become contaminated at any point duringlaughtering or harvesting, processing, storage, distribution, transportation andpreparation. Lack of adequate food hygiene can lead to foodborne diseases and death of consumer.   The five keys to safer food are listed below:-

        (a)   Keep clean.
        (b)   Separate raw and cooked items.
        (c)   Cook thoroughly.
        (d)   Keep food at safe temperatures.
        (e)   Use safe water and raw materials.

4.   **Important Components of Food Hygiene**.   Food is a potential source of infection and is liable to contamination by microorganisms at any point during its journey from the producer to the consumer. Prevention of contamination of food has to be observed from production to handling, distribution and serving. The following are the important components of food hygiene.

        (a)   **Milk Hygiene.** Milk is an efficient vehicle for many disease organisms Contamination of milk may be through infected animal, human handler or environmental factors. Following aspects should be ensured to obtain clean and safe milk:-
                (i)   The animal and its surroundings should be healthy and clean. The animal should be properly washed before milking.
                (ii)   Milk handler should be free from any communicable disease.
                (iii)   Milk vessels should be cleaned, sanitized and kept covered.
                (iv)   Water supply must be safe.

(b)   **Pasteurization.** It is the heating of milk to such temperature and for such periods of time, as are required to destroy any pathogens without destruction of nutritive value. It does not alter taste.

(c)   **Fish Hygiene.** Fish for human consumption should be fresh. In fresh fish, the gills are bright red and the eyes are clear and prominent. Consumption of contaminated fish may give rise to fish poisoning.

(d)   **Egg Hygiene.** Though the majority of freshly laid eggs are sterile inside, the egg shell may become contaminated by faecal matter from the hen. The egg must be properly washed before cooking.

(e)   **Fruits and Vegetables Hygiene.** Fruits and vegetables are an important source for the spread of pathogenic organisms, protozoan and helminthes. Fruits and vegetables consumed raw must be washed well before eating.

(f)   **Hygiene of Eating Places.**

(i)   Eating places should not be located near filthy places, open drains, animal, sheds, manure/soakage pits and other such places.
(ii)   Floors should be easy to clean, and should be preferably tiled.
(iii)   Room for storage of food should be well ventilated, insect and rat proof and should have adequate lighting.
(iv)   Perishable and non-perishable items should be kept separately.
(v)   Furniture should be strong and easy to clean.
(vi)   Refuse should be collected in covered bins and removed regularly.
(vii)   Water supply should be independent, adequate and safe.
(viii)   Proper place for cleaning of utensils should be provided.

(g)   **Hygiene of Food Handlers.**

(i)   Complete medical examination of food handlers must be done at the time of employment.
(ii)   Regular health check-ups should be done.
(iii)   Food handlers should be regularly educated on health and hygiene aspects.
(iv)   They should be constantly reminded about hand washing, trimming of nails, covering of hair, wearing of overalls and covering mouth while coughing and sneezing during cooking.

Camp Hygiene

5.   **Sanitation** means keeping the living area and its surroundings neat and clean. This involves removal of waste products and refuse.

6.   **Cook House.**   The quality of food in the Camp should be of high standard and purchased from authorised or reputed dealers.   All precautions should be taken to ensure that no case of Food Poisoning occur in the Camps.   A sample of food provided to cadets will be preserved for 36 hours after the meal is served.

7.   **Cooking and serving of food**. The following points need attention:-

(a)   All preliminaries, such as, cutting, peeling and washing of food items will be done in a separate room.   Proper preparation tables, cutting and chopping blocks will be used for the purpose
(b)   The cooked food should be served hot and so timed that food is ready just a few minutes before distribution.
(c)   Regular inspection of the hygiene, sanitation and cleanliness of the cook house staff and utensils should be carried out.
(d)   Avoid over peeling, use of excessive oil, condiments, salt and sugar.

8.   **Soakage Pits**. Each cook house will have soakage pit, 6 feet deep and 4 ½ feet wide.   These pits will be fly-proofed, filled with lime stone/brick and covered with a top layer of earth.   Waste food will be buried in refuse pits which will be located away from the cook houses.

9.   **Water Points.** Water used in the Camp must be from authorised source and must be checked by the local medical authority and certified as potable.   Chemical for water treatment should be procured depending on requirement.   Emphasis be laid on the following,

        (a)   Cleanliness of the water containers and the surroundings be ensured.
        (b)   Proper drainage facilities/soakage pits to avoid stagnation of water.
        (c)   Wherever possible, provision of RO plant should be ensured for drinking water.

10.   **Camp Latrines.** These are of following types:-

        (a)   **Deep Trench Latrines**. A pit three feet wide, at least eight feet deep and of a length suitable to the requirement is constructed and wooden seats placed over it with proper partitions and curtains. Soil may necessitate reverting of sides with sand bags, bamboos or wire netting. On vacation of camp, these are filled up with soil to assist in disintegration and prevent breeding of flies.

        (b)   **Shallow Trench Latrines**. For camps of less than a week's duration, dig a row of trenches in parallel, each trench being 3 feet long, 1 foot wide and 2 feet   deep.   Each trench should be 2 feet apart. The ratio is 5 trenches for the first hundred users and three for each subsequent hundred. After defecation, the excreta are covered with loose earth with a shovel or a scoop. These trenches are filled up after 24 hours and new trenches are dug up.

        (c) **Urinals.** The most common urinal used for camps is the **Funnel Urinals** which are constructed over a simple soakage pit.

11.   DTLs of proper specifications will be constructed and covered by proper latrine frames.   Latrines will be smoked every morning.   The wooden frames will also be washed twice a day and treated with lime. Partition screens will be erected for each latrine seat.   Night Latrines will be earmarked and lighting provided.   Sufficient urinals should be provided within the camp area.   These will be treated daily with creosote and lime quick.   Separate latrines and urinals will be established for girl and boy cadets and proper security ensured.

Conclusion

12.   Adequate sanitation, together with good hygiene and safe water, are fundamental to good health and to social and economic development. Many sanitation programs are planned and executed by government bodies, and few are successful due to the failure to convince and educate the people of the importance of sanitation and the need for an active cooperation. Education factors play a very important role because it is only through the basic understanding of the need for sanitation can the people be mobilized for its implementation. It is only when they understand the consequences of the unsanitary conditions they have that they will be willing to change their habits.

SUMMARY

1.   Personal hygiene involves those practices performed by an individual to care for one's bodily health and well-being, through cleanliness.   Maintenance of personal hygiene is very important in preventing disease. It deals with the practices that help in the maintenance and promotion of a person's health.

2.   Food hygiene is the condition and measures necessary to ensure the safety of food from production to consumption. Food can become contaminated at any point duringlaughtering or harvesting, processing, storage, distribution, transportation andpreparation. Lack of adequate food hygiene can lead to foodborne diseases and death of consumer. The five keys to safer food are listed below:-

        (a)   Keep clean.

        (b)   Separate raw and cooked items.

        (c)   Cook thoroughly.

        (d)   Keep food at safe temperatures.

        (e)   Use safe water and raw materials.

3.   **Sanitation** means keeping the living area and its surroundings neat and clean. This involves removal of waste products and refuse.

4.   DTLs of proper specifications will be constructed and covered by proper latrine frames. Latrines will be smoked every morning. The wooden frames will also be washed twice a day and treated with lime. Partition screens will be erected for each latrine seat.

CHAPTER HH - II

FIRST AID IN COMMON MEDICAL EMERGENCIES AND TREATMENT OF WOUNDS

Introduction

1.   First aid is the assistance given to any person suffering a sudden illness or injury, with care provided to preserve life, prevent the condition from worsening, and/or promote recovery. At its most basic, first aid is the initial assistance given to a victim of injury or illness. Comprised of relatively simple techniques that can be performed with rudimentary equipment, first aid is usually carried out by a lay person until professional medical assistance arrives. There will be number of occasions on which we may be faced with a situation where, we may be required to provide First Aid to the injured, because of an accident or due to any calamity. Therefore, it is very important for all cadets to have knowledge of providing basic First Aid in common medical emergencies.

Injuries to Internal Organs

2.   Internal injuries cannot be seen but can only be suspected, where bleeding instead of coming to the surface occurs into the cavity of chest or abdomen where in important organs like heart, lungs, liver or spleen might get ruptured. The following symptoms are observed in case of internal injuries:-

     (a)   Cold clammy skin.
     (b)   Weak or rapid pulse.
     (c)   Shallow sighing and breathing.
     (d)   Face pinched and pale.
     (e)   Eyes deeply sunken with dark rings around them.
     (f)   Patient usually restless and anxious and may lose consciousness.

3.   **Recognition**.

     (a)   Trouble breathing
     (b)   Shallow breathing
     (c)   Tenderness at site of injury
     (d)   Deformity & bruising of chest
     (e)   Pain upon movement/deep breathing/coughing
     (f)   Dusky or blue lips or nail beds
     (g)   May cough up blood
     (h)   Crackling feeling upon touching victim's skin

4.   **Treatment**.

     (a)   Call for an ambulance
     (b)   Assist the victim into a position of comfort
     (c)   Conduct a secondary survey
     (d)   Monitor patient's condition carefully
     (e)   Be vigilant, keep alert for any changes.
     (f)   If a flail segment is suspected, tightly secure a bulky dressing (such as a tightly folded hand towel) to help stabilize the injury.

5.   **Open Chest Wounds.** An open pneumothorax or sucking chest wound - the chest wall has been penetrated (by knife, bullet, falling onto a sharp object...)

6.   **Recognition**.

     (a)   An open chest wound – escaping air
     (b)   Entrance and possible exit wound (exit wounds are more severe)
     (c)   Trouble breathing
     (d)   Sucking sound as air passes through opening in chest wall
     (e)   Blood or blood-stained bubbles may be expelled with each exhalation

(f)   Coughing up blood

7.   **Treatment**.

(a)   Assess ABCs and intervene as necessary
(b)   Do not remove any embedded objects
(c)   Call for an ambulance
(d)   Lateral positioning: victim's injured side down
(e)   Treat for shock
(f)   Conduct a secondary survey
(g)   Monitor vitals carefully

8.   **Burns and Scalds.**   Burns may be caused by heat either, dry by contact with fire or flame, or wet, as caused by moist heat such as hot water, hot fluids and steam, which is called scalding. Chemical burns may be caused by strong acids or alkalis.

9.   **First aid Treatment**.

(a)   If the burn is chemical, let water from a pipe or hose flow freely on the burn so that the chemical flows off.
(b)   Protect the burnt area by applying bandage or cover exposed part with clean towel or cloth.
(c)   Give complete rest and plenty of fluids to the patient.
(d)   Re-assure the patient.
(e)   Evacuate patient to the nearest hospital or dispensary.

Snake, Scorpion and Dog Bite

10.   **Snake Bite.**   In Snake bite, the poison is injected by the snake through a pair of hollow and deeply grooved biting fangs. The majority of bites occur on parts of limbs which are exposed like hands, feet and lower legs.

11.   **First Aid Treatment.**   All cases of snake bite should be treated as being bitten by poisonous snakes. The First Aid treatment will be as follows:-

(a)   Make the victim lie down comfortably.
(b)   Give convincing reassurance against fear of death.
(c)   Apply a light constricting tourniquet with hand kerchief, bandage or shoe lace above the knee for a bite on the leg and above elbow for a bite on the arm. So that the poison does not flows to all parts of the body.
(d)   Wash with soap and water. Use water freely.
(e)   Evacuate the patient quickly to the nearest dispensary or hospital.
(f)   If breathing fails, start artificial respiration.

12.   **Snake Bites: Do's and Don'ts.**

(a)   **Do's**.

(i)   Stay calm, make the victim lie down comfortably.
(ii)   Give convincing reassurance against fear of death.
(iii)   Call ambulance.
(iv)   Take off anything constricting the area, such as a ring or watch.
(v)   Position the affected area at above heart level on the basis on the affected site.
(vi)   If breathing fails, start artificial respiration.

(b)   **Don'ts**.

(i)   Don't apply ice as it can cause local tissue damage.
(ii)   Don't cut the affected area and don't attempt to suck venom out.
(iii)   Don't use a commercially available extraction device.

(iv)   Don't use electrical therapy.

(v)   Don't apply any type of lotion or ointments.

13.   **Scorpion Bite**.   Bite by scorpions should be treated like snake bite.

14.   **First Aid Treatment.** If blood has been drawn, the wound should be cleaned well with antiseptic lotion.

15.   **Rabid Dog Bite**.   Rabies is a very dangerous disease transmitted by a rabid dog. The disease is preventable by giving anti-rabies vaccine.

16.   **First Aid Treatment.**

(a)   Immediately wash the bite area with lots of water and soap.

(b)   Wound should be cleaned with available antiseptic.

(c)   Patient should be sent to hospital for an anti-rabies injection course.

(d)   Dog and the patient should be kept under observation for at least 10 days.

Asphyxia.

17.   The tissue and organs of the body are supplied with oxygen through respiration, essential for the functioning of body. Respiration consists of inspiration, expiration and a pause. During inspiration air is drawn inside causing the lungs to expand. During expiration the lungs contract and air is pushed out. The respiratory system consists of the air passage known as respiratory tract and lungs. The actions of muscles concerned with respiration are controlled and regulated by the respiratory centre of the brain.

18.   **Causes.** Anything which interferes with respiration producing irregularities in breathing, produces a condition known as Asphyxia. The **main causes** of Asphyxia are:-

(a)   Drowning – due to water entering the air passage.

(b)   Hanging and Strangulation – due to obstruction to entry of air.

(c)   Suffocation.

(i)   Due to obstruction to entry of air through the air passage.

(ii)   Foreign body obstruction in air passage.

(iii)   Inhalation of poisonous gases e.g. carbon monoxide.

(d)   Over dosage of drugs such as sleeping pills, morphine, pethedine.

(e)   Electric Shock.

(f)   Diseases e.g. tetanus, epilepsy, rabies.

19.   **Signs and Symptoms of Asphyxia.**

(a)   Dizziness and weakness.

(b)   Shortness of breath rate or breathing increase.

(c)   Rapid pulse.

(d)   Partial loss of consciousness.

(e)   Swelling of the veins of the neck.

(f)   Face, lips, nails, fingers and toes turn blue.

20.   **General Rules for Treatment of Asphyxia.**

(a)   Remove the cause if possible or the casualty from the cause.

(b)   Ensure that there is a free passage for air.

(c)   Lay the individual on his back. Press the head back-wards supporting the neck on your palm. Lift the tongue clear of the airway. Give mouth to mouth breathing.

21.   **First Aid for Special Cases - Drowning.**

(a)   Wet clothes should be loosened.

(b)   Mouth, throat and nostril should be cleaned of mucus and any foreign body.

(c)   Patient should be made to lie down over his belly, face down, head turned to one side, arms stretched beyond the head, tongue pulled out.

(d)   Artificial respiration should be given till he starts breathing.

(e)   Cover the patient with a blanket.

22.   **First Aid in Case of Strangulation or Hanging.**

(a)   Cut the constriction.

(b)   Clear the air passage.

(c)   Start artificial respiration.

(d)   Give inhalations if possible.

(e)   Make the patient warm and comfortable.

23.   **First Aid in Case of Choking**.   Bend the casualty's head and shoulders forward, to dislodge the obstructions. In case of small child hold him upside down and thump his back hard between the shoulder blades or encourage vomiting by passing two fingers to the back of the throat.

24.   **First Aid in Case of Suffocation by Poisonous Gas**. Protect yourself and remove the casualty from the gas as early as possible.

25.   **First Aid in Case of Electric Shocks.**

(a)   Switch off or break the current, if possible.

(b)   Remove the casualty from contact with the current, if possible.   Stand on some insulating material such as rubber soled shoes or boots or piles of newspapers.

(c)   Give artificial respiration.

(d)   Treat for shock and burns.

26.   **Insensibility or Unconsciousness**.   Insensibility or unconsciousness is caused due to interruption of the action of the brain, through some interference with the functions of the central nervous system.

27.   **Stages of Unconsciousness.**

(a)	1st Stage	Delirium – When the restlessness of body and mind are present. Patient responds to loud commands, gives maximum response to minimum stimulus.
(b)	2nd Stage	
(c)	3rd Stage	Semi- Coma- Patient responds to painful stimuli only (minimum response to maximum stimulus).
(d)	4th Stage	When the patient makes no response to any Stimulus.

28.   **Causes of Unconsciousness or Coma.**

(a)   Head injury and brain Hemorrhage.

(b)   Hypoglycaemia.

(c)   Heart failure.

(d)   Physical agents such as heat strokes, electric shocks.

(e)   Epilepsy.

29.   **General Rules of First Aid in Casualties of Unconsciousness.**

(a)   Make the patient lie down with head turned to one side. Pull out his tongue.

(b)   Loosen the clothing, ensure fresh air.

(c)   If breathing has stopped or is irregular, start artificial respiration.

(d)   Keep the air passage clear.

(e)   Nothing should be given by mouth. Remove false teeth, if any.

30.   **Artificial Respiration.** If there is any irregularity in breathing or a cardiac arrest, artificial respiration is given. If it is given correctly and in time, the patient's life can be saved. There are three methods for providing artificial respiration, but we will tell you only about the most common one.

31.   **Mouth to Mouth Respiration**.   This is the most common and simple method and is given immediately. If given timely, it can save many lives. This can be given by following way:-

        (a)   Casualty should be in supine position.

        (b)   Clean the mouth and throat to maintain clear air passage.

        (c)   Extend the neck to straighten the air passages.

        (d)   Cover the patient's mouth with clean gauze and blow directly and slowly into it. (10 – 12 times per minutes).

First Aid for Different Type of Fractures

32.   **First Aid In Case of Simple Fracture.**   The first aid to be rendered is:-

        (a) Reassure the patient and make him comfortable.

        (b) Apply splints with any common article like stick or ply board or card board to immobilize the fracture.

        (c) Relieve him of discomfort and pain and keep the patient warm.

33.   **In Case of Compound Fracture.**   The first aid to be rendered is:-

        (a)   Bleeding should be stopped immediately.

        (b)   Remove foreign objects, if any, but do not meddle too much.

        (c)   Cover the wound with a clean pad with light bandage.

        (d)   Apply appropriate splints.

        (e)   Transfer the patient to the nearest hospital immediately.

TREATMENT AND CARE OF WOUNDS

Classification of Wounds

34.   **Definition**.   Wounds can be defined as a break in continuity of the skin or muscles membrane. It is caused by violence.

35.   **Classification.** According to level of contamination, a wound can be classified as under:-

        (a)   **Inside Wound.** It is wound caused by a sharp instrument like knife, razor and so on. Its edges are clean.

        (b)   **Lacerated Wound.** It is caused by blunt instrument. The edges are torn or uneven.

        (c)   **Open Wound/ Punctured Wound.** It is a deep narrow wound caused by a pointed instrument like knife, bayonet. The wound is small on the surface but may be very deep causing injuries to internal organs.

        (d)   **Closed Wound/ Contusion.** A contusion is an injury or a bruise in which some of the tissues or a part is irregularly torn or ruptured but, the skin may not be broken. It is caused by a blow or blunt instrument.

36. **Open Wound**. Open wounds can be classified according to the object that caused the wound:-

(a) **Incisions or Incised Wounds.** Caused by a clean, sharp-edged object such as a knife, razor, or glass splinter.

(b) **Lacerations.** Irregular tear-like wounds caused by some blunt trauma. Lacerations and incisions may appear linear (regular) or stellate (irregular). The term *laceration* is commonly misused in reference to incisions.

(c) **Abrasions (Grazes).** Superficial wounds in which the top most layer of the skin (the epidermis) is scraped off. Abrasions are often caused by a sliding fall onto a rough surface.

(d) **Avulsions.** Injuries in which a body structure is forcibly detached from its normal point of insertion. A type of amputation where the extremity is pulled off rather than cut off.

(e) **Puncture Wounds**. Caused by an object puncturing the skin, such as a splinter, nail or needle.

(f) **Penetration Wounds**. Caused by an object such as a knife entering and coming out from the skin.

(g) Wounds. Caused by a bullet or similar projectile driving into or through the body. There may be two wounds, one at the site of entry and one at the site of exit, generally referred to as a "through-and-through."

37. **Closed Wound**. Closed wounds have fewer categories, but are just as dangerous as open wounds:

(a) Hematomas (or blood tumor). Caused by damage to a blood vessel that in turn causes blood to collect under the skin. Hematomas that originate from internal blood vessel pathology are petechiae, purpura, and ecchymosis. The different classifications are based on size. Hematomas that originate from an external source of trauma are contusions, also commonly called bruises.

(b) Crush Injury. Caused by a great or extreme amount of force applied over a long period of time.

38. **First Aid For Wounds**. The method for giving first aid for different types of wounds are:-

(a) Place the patient in a comfortable position.
(b) Stop the bleeding, if any.
(c) Remove any foreign body, if it is easily visible and can be easily removed.
(d) Prevent the entry of germs by applying sterilized dressing like first field or shell dressing.
(e) Give rest to the injured part by sling.
(f) Immobilize the part, if wound is large or complicated by fracture.
(g) Treat the patient for shock.
(h) Send the patient to nearest hospital.

39. **Dressing of Wounds**. A wound is to be cleaned with antiseptic lotion and covered with cotton or gauze piece with medication, before applying the bandage.

40. **Aim.** The aim of dressing a wound is as under:-

(a) To protect the wound from infection.
(b) To reduce swelling and early healing.
(c) To support the effected part.
(d) To enable the individual to carry out his day to day routine.
(e) To stop the bleeding.

41. **Articles Required for Dressing of Wounds**.

   (a) Anti septic (A/S) lotion.
   (b) Cotton / Gauze piece
   (c) Scissors.
   (d) Bandages of different size and band aid.
   (e) A/S ointment or powder.

42. **Procedure for Dressing of Wounds.** The following procedure is to be adopted while dressing of wounds:-

   (a) Reassure the patient and place him in comfortable position.
   (b) Stop the bleeding, remove foreign body and clean the wound with A/S lotion and cotton.
   (c) Apply A/S ointment or powder and cover it with gauze. Select suitable bandage, start bandaging clock wise from outer aspect to inner aspect by covering 1/3 of previous lining.
   (d) Put the knot away from the wound.
   (e) Bandaging should not be either too tight or loose.

Conclusion

43. Wounds are a common feature among humans who are outdoor oriented. If cared properly during early stage the wounds heal quickly. Resultantly the wounded person suffers less and is available to the society as a healthy and fit person to resume work. NCC cadets by virtue of their routine are prone to injuries and hence must possess this basic knowledge to help fellow cadets or friends in school or at home.

SUMMARY

1. First aid is the assistance given to any person suffering a sudden illness or injury, with care provided to preserve life, prevent the condition from worsening, and/or promote recovery. At its most basic, first aid is the initial assistance given to a victim of injury or illness. Comprised of relatively simple techniques that can be performed with rudimentary equipment, first aid is usually carried out by a lay person until professional medical assistance arrives.

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   (b) Weak or rapid pulse.
   (c) Shallow sighing and breathing.
   (d) Face pinched and pale.
   (e) Eyes deeply sunken with dark rings around them.
   (f) Patient usually restless and anxious and may lose consciousness.

3. **Burns and Scalds. First aid Treatment**.

   (a) If the burn is chemical, let water from a pipe or hose flow freely on the burn so that the chemical flows off.
   (b) Protect the burnt area by applying bandage or cover exposed part with clean towel or cloth.
   (c) Give complete rest and plenty of fluids to the patient.
   (d) Re-assure the patient.
   (e) Evacuate patient to the nearest hospital or dispensary.

4. **Snake Bite. First Aid Treatment.** All cases of snake bite should be treated as being bitten by poisonous snakes. The First Aid treatment will be as follows:-

   (a) Make the victim lie down comfortably.
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(c)   Apply a light constricting tourniquet with hand kerchief, bandage or shoe lace above the knee for a bite on the leg and above elbow for a bite on the arm. So that the poison does not flows to all parts of the body.

(d)   Wash with soap and water. Use water freely.

(e)   Evacuate the patient quickly to the nearest dispensary or hospital.

(f)   If breathing fails, start artificial respiration.

5.   **Rabid Dog Bite   First Aid Treatment.**

(a)   Immediately wash the bite area with lots of water and soap.

(b)   Wound should be cleaned with available antiseptic.

(c)   Patient should be sent to hospital for an anti-rabies injection course.

(d)   Dog and the patient should be kept under observation for at least 10 days.

6.   **Foreign Body in Eye   First Aid Treatment**.

(a)   Ask the patient not to rub the eyes.

(b)   Wash the eye with water repeatedly for a minute or two.

(c)   Search for the foreign body by lifting the upper eyelid and parting the lower eyelid down. The patient should face the light. If the foreign body is seen, it can be wiped off with the moistened corner of hand kerchief, cloth or cotton swab.

(d)   If foreign body is fixed to the eye-ball, patient should be sent to the hospital with a light eye bandage.

7.   **Foreign Body in Nose   First Aid Treatment**.

(a)   Blowing the nose and sneezing may expel the foreign body.

(b)   Make the casualty breathe through the mouth.

(c)   Do not try to remove the foreign body.

(d)   Send the patient to the nearest hospital.

8.   The main causes of **Asphyxia** are:-

(a)   Drowning – due to water entering the air passage.

(b)   Hanging and Strangulation – due to obstruction to entry of air.

(c)   Suffocation.

     (i)   Due to obstruction to entry of air through the air passage.

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     (iii)   Inhalation of poisonous gases e.g. carbon monoxide.

(d)   Over dosage of drugs such as sleeping pills, morphine, pethedine.

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(b)   Shortness of breath rate or breathing increase.

(c)   Rapid pulse.

(d)   Partial loss of consciousness.

(e)   Swelling of the veins of the neck.

(f)   Face, lips, nails, fingers and toes turn blue.

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(b)   Ensure that there is a free passage for air.

(c)   Lay the individual on his back. Press the head back-wards supporting the neck on your palm. Lift the tongue clear of the airway. Give mouth to mouth breathing.

11.   **First Aid in Case of Electric Shocks.**

     (a)   Switch off or break the current, if possible.
     (b)   Remove the casualty from contact with the current, if possible.   Stand on some insulating material such as rubber soled shoes or boots or piles of newspapers.
     (c)   Give artificial respiration.
     (d)   Treat for shock and burns.

12.   **General Rules of First Aid in Casualties of Unconsciousness.**

     (a)   Make the patient lie down with head turned to one side. Pull out his tongue.
     (b)   Loosen the clothing, ensure fresh air.
     (c)   If breathing has stopped or is irregular, start artificial respiration.
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     (a)   Inside Wound.
     (c)   Lacerated Wound.
     (c)   Open Wound/ Punctured Wound.
     (d)   Closed Wound/ Contusion.

16.   **First Aid For Wounds**. The method for giving first aid for different types of wounds are:-

     (a)   Place the patient in a comfortable position.
     (b)   Stop the bleeding, if any.
     (c)   Remove any foreign body, if it is easily visible and can be easily removed.
     (d)   Prevent the entry of germs by applying sterilized dressing like first field or shell dressing.
     (e)   Give rest to the injured part by sling.
     (f)   Immobilize the part, if wound is large or complicated by fracture.
     (g)   Treat the patient for shock.
     (h)   Send the patient to nearest hospital.

17.   **Procedure for Dressing of Wounds**.   The following procedure is to be adopted while dressing of wounds:-

     (a)   Reassure the patient and place him in comfortable position.
     (b)   Stop the bleeding, remove foreign body and clean the wound with A/S lotion and cotton.
     (c)   Apply A/S ointment or powder and cover it with gauze. Select suitable bandage, start bandaging clock wise from outer aspect to inner aspect by covering 1/3 of previous lining.
     (d)   Put the knot away from the wound.
     (e)   Bandaging should not be either too tight or loose.

CHAPTER HH - III

INTRODUCTION TO YOGA

Introduction

1. Yoga is a commonly known activity for physical, mental, and spiritual disciplines which originated in ancient India. One of the most detailed and thorough expositions on the subject are the Yog Sutras of Patanjali. Various traditions of yoga are found in Hinduism, Buddhism, Jainism and Sikhism. UNO has declared 21 June as the International Day of yoga. NCC is practising, propagating and celebrating this in a big way every year.

Definition and Purpose of Yoga

2. **Definition**. The concepts and practices of Yoga originated in India about several thousand years ago. Its founders were great Saints and Sages. The great Yogis presented rational interpretation of their experiences of Yoga and brought about a practical and scientifically sound method within everyone's reach. Yoga today is no longer restricted to hermits, saints and sages; it has entered into our everyday lives and has aroused a worldwide awakening and acceptance in the last few decades. The science of Yoga and its techniques have been reoriented to suit modern sociological needs and lifestyles. Experts of various branches of medicine including modern medical sciences are realizing the role of these techniques in the prevention and mitigation of diseases and promotion of health.

Purpose

3. Yoga is a disciplined method utilized for attaining a goal. In the sense the physical postures of yoga are to alleviate health problems, reduce stress and make the spine supple. Yoga is also used as a complete exercise program and physical therapy routine.

4. The characteristics of Yoga are given below:-

    (a) The Yogic system of health involves the exercise of skeletal as well as the deep-seated smooth muscles of the body.

    (b) The intra-thoracic and intra-abdominal pressure may be mentioned as special characteristics of the yoga system of health.

    (c) Little expenditure of energy and money is involved in the Yoga practices.

    (d) The rich as well as poor, and men and women of all ages can practice Yogic practices.

    (e) Every school of Yoga emphasized specific practices, but their aim always remained the same; but the highest level of integration through the control of the modification of mind.

    (f) The nature of Yogic practices is psycho-neurophysical.

    (g) All yogic practices are complementary.

Asanas

5. There are innumerable asanas. Some of the asanas useful for curing ailments and for maintaining good health are as follows:-

    (a) **Padmasana**. Sit on the asan. Spread the leg forward, place your left foot on the join of your right thigh, and right foot on the joint of left thigh in such a way that both heels touch each other below your navel in the middle of abdomen. Place your hands on your knees. Keep the head and spinal column erect. Keep your eyes close or open. Stay in the final position for 1-2 minutes in the initial stage. Later increase the time
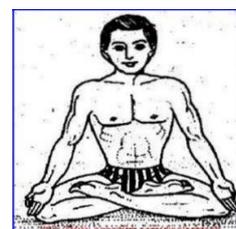
gradually. This asan is useful for Jaap, Dhyana and Samadhi. This asan also helps in curing diseases like asthama, hysteria and insomnia.

(b)   **Siddhasana**.   The main function of this asana is to awaken the power of Kundalini.   Sit on the carpet.   Place the heel of left foot under the testis on the prostrate gland in such a way, that the sole of your foot should be placed at root of genitals. Place the hand on the knees so that palm face upward.   This asana helps the mind to be firm, attentive and alert.
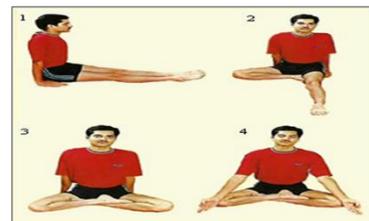
(c)   **Gyan Mudra**.   Sit in Padmasana or siddhasana.   Put your Hands on your knees with palm facing upwards.   Bend your index finger and place them at the root of your thumbs.   Spread the remaining three fingers forward, all joined together.   This asana is most suitable for pranayam and dhyana.

(d)   **Suryanamaskara**.   Suryanamaskara is a combined sequence of 12 positions.   By this sequence of 12 positions, the whole body is well exercised. While practicing Suryanamaskara recite the different names of Sun god at each position.

(i)   **Stage 1**:- Stand in attention. Fold your hands in the centre of your chest. Now recite the first of the twelve mantras.

(ii)   **Stage 2**:- Stretch your hands up and take the body backwards from the waist as far as possible. The hands must remain straight and touch your ears.

(iii)   **Stage 3**:- Now bend down   without bending the knees. Try to put the palms on the ground and touch the nose with knees without bending knees.

(iv)   **Stage 4**:- Take left leg back. Bend your right knee, the knee will remain between the two arms, with the hands sticking to the ground, Now bend the neck backward as far as possible. Look forward and hold the breath.

(v)   **State 5**:- Take right leg back. Put both the toes and the knees together and pull your body up in such a way that it looks like inverted 'V'. Look backward through your legs keeping the head, the waist and the arms in a straight line.

(vi)   **State 6**:- Bend down your body in such a way that your forehead, chest and knees should touch the ground except your hips which should be slightly raised from the ground.

(vii)   **State 7**:- Stretch the arms, Inhale, put the chest forward and move back your neck as much as you can. Look up and hold the breath.

(viii)   **State   8**:- Maintain same position as in Stage 5.

(ix)   **Stage   9**:- Maintain same position as in Stage 4.

(x)   **Stage 10**:-   Maintain same position as in Stage 3.
(xi)   **Stage 11**:-   Maintain same position as in stage 2.
(xii)   **Stage 12**:-   Maintain same position as in Stage 1 and then take your hand down. Make the rest posture.

(e)   **Shavasana**.   The main aim of this asana is releasing the mind from the body. By this asana we can achieve relaxation in the shortest possible time.   This asana provides relief in disease like blood pressure, weakness of nerves and other ailments.   Lie on your back and let your body be relaxed completely.   Your feet should be 30-45 cm apart, arms in sides with palm upwards, eyes gently closed with attention on breathing. Keep body in a straight position.   For proper blood circulation in the body, the legs, hand and neck should have no curves or bend.   Take a long and deep breath then concentrate on each and every part of your body, putting it in a relaxed state Timing 5-10 minutes.

(f)   **Vajrasana**.   Bend the legs and sit on knees.   Place the heels at the sides of the anus in such a way that thighs rest on the legs and the buttock rest on the heels.   Stretch the arms and place the hands on the knees.   Keep the knees close by.   Sit erect.   This asana can be done immediately after eating food.   This helps digestion and eliminates gas troubles.   Timing 1-3 minutes.
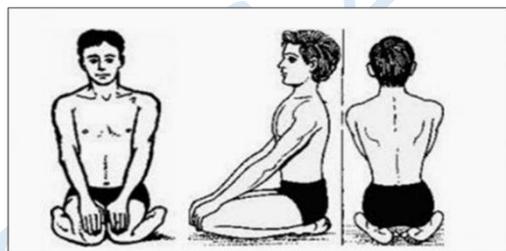
(g)   **Dhanurasana**.   Lie down on the chest, legs should be folded at the knees and the feet should be grasped with both the hands near the ankles. The thighs and the chest should be raised, making the body appear like a bow. This asana provides good exercise to the abdominal muscles, lower back and thighs, Timing 10-30 seconds, 4-5 times.

DHANURASANA (BOW POSE)

(h)   **Chakrasana**. Lie down on the back. Bend the legs at the knees. Heels are close to the hips and sole touching the ground. Bend the arms at the elbows and place them on the ground on either side of the head. Place them in such a way that palms should rest on the ground and the direction of the fingers should be towards your feet. First raise your hips and waist, keeping the legs straight. Raise the back as far as possible. This asana helps in making the spine supple. Timing ½ -1 min, 1-2 times.
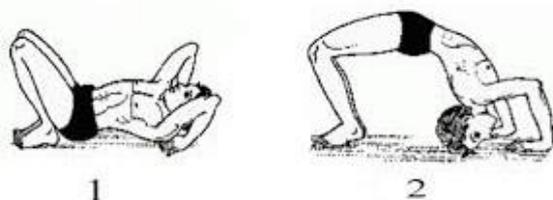
(n)   **Sarvangasana**. Lie down flat on the back. Raise legs from the hips, push the trunk up until legs are in vertical position. The chin should press against the chest. The hands are giving support to lower ribs. Hold this position up to 2-10 minutes. Come back as slowly as possible. Do not give any jerks to the body. This asana improves circulatory, respiratory and alimentary systems of the body. Timings: ½ -1 minute.

SARVANGASANA
(Shoulder Stand)
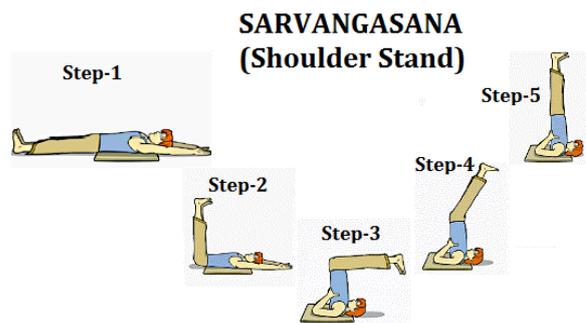
(o)   **Halasana.** Lie down flat on the back. Place the arms by sides along the hips, palm facing the ground. The legs are raised up in a single motion and put down behind the head keeping knees unbent. The chin should touch the chest. In this exercise, the legs will remain straight and breathing should be normal. Hold this position for 30-50 seconds. This asana stimulates blood circulation and makes the spine flexible and elastic.

Conclusion

6.   Yoga is a subject which can be looked at intellectually and some useful and beneficial ideas imbibed. Yoga can be imbibed by adopting certain attitudes which alter the nature of the samskaras. Yoga can be imbibed by living in an ashram environment and trying to be aware of the physical, mental and spiritual dimensions at the same time. Yoga can be learnt in a classroom environment as science, as psychology, as an applied subject, with the aim of providing new understanding and insight into the life process, into areas where karmas are performed, into areas which shape the inner being in terms of awareness, inner development, the experience of harmony or balance, eventually culminating in the experience of samadhi and the fullness of wisdom, prajna.

SUMMARY

1.   Yoga is a commonly known activity for physical, mental, and spiritual disciplines which originated in ancient India.   One of the most detailed and thorough expositions on the subject are the Yog Sutras of Patanjali. The concepts and practices of Yoga originated in India about several thousand years ago. Its founders were great Saints and Sages. The great Yogis presented rational interpretation of their experiences of Yoga and brought about a practical and scientifically sound method within everyone's reach.

2.   The **characteristics of Yoga** are given below:-

(a)   The Yogic system of health involves the exercise of skeletal as well as the deep-seated smooth muscles of the body.
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(c)   Little expenditure of energy and money is involved in the Yoga practices.
(d)   The rich as well as poor, and men and women of all ages can practice Yogic practices.

(e)   Every school of Yoga emphasized specific practices, but their aim always remained the same; but the highest level of integration through the control of the modification of mind.
(f)   The nature of Yogic practices is psycho-neurophysical.
(g)   All yogic practices are complementary.

CHAPTER A - I

ADVENTURE ACTIVITIES

PARASAILING

1.   **Definition**.   Parasailing is also known as Parascending or Parakiting.   It is a recreational kiting activity where a person is towed behind a vehicle or a boat while attached to a specially designed canopy wing that reminds one of a parachutes, known as parasail wing.   On land or over water the manned kite's moving anchor may be a car, truck or a boat.   Parasailing just by kiting in heavy winds should be discouraged.   The vehicle pulling the parasail should have enough pulling power.   The parascender has little or no control over the parachute.   There are six parts of a parasail.   The harness attaches the person to the parasail, which is connected to the vehicle through the tow rope.   The sport should not be confused with paragliding.

2.   The Parasailing Equipment mainly consist of a Glider, which in its inflated form offers resistance to the wind and the air, then there is a harness which is attached to the paraglide and the pilot for safety purpose. A helmet and an extra parachute are there for the safety and the emergency landing of the pilot VARIOMETER is the main instrument for gauging the ascent and the descent of the pilot.

3.   **Safety**.   Safety tips advised by the Parasail Safety Council are as follows:-

(a)   **Licensing.**   Make sure you parasail with a fully licensed (state & local) company operating from a well-established location insured by a licensed insurance company. Don't pay for your ride on the boat. This operator may not have a license or be insured.

(b)   **Established Operators.**   Only parasail with established business operators.

(c)   **Visual Inspection**.   Make sure that the parasail boat appears to be well maintained. Avoid parasailing with an operator whose parasail equipment looks old and weathered, this is especially true with the tow rope, never parasail if the tow rope looks worn or frayed.

(d)   **Established Locations.**   Choose a parasail business that operates from an established location and not a beach front.

(e)   **Release Forms.**   When you sign the release form, make sure that the operator explains all of the risks.   Avoid operators who simply hands you a release form and tell you to sign it.

(f)   **Pre-Flight Safety Briefing.**   A professional, safety conscious parasail operation will always provide you with detailed safety briefing prior to your flight.   This briefing should include:-

(i)   A basic description of the parasail activity, equipment and inherent risks.
(ii)   Safety precautions during your excursion while onboard the vessel.
(iii)   The proper use of hand signals in the event you want to be retrieved before your ride is over.

(iv)   Provide instruction on the correct position for landings, especially in rough seas and high-speed landings to prevent body injuries.

(v)   Detailed rescue instructions and survival techniques in the event of equipment failure, emergency water landings especially in high winds and/or rough seas.

(vi)   **Warning**.   If you do not receive a safety briefing do not parasail with that operator!

(g)   **Weather.**   Check the local weather before parasailing.   Never fly in rain, fog or an approaching storm fronts in the area.   Avoid parasailing in winds over 15 mph which can increase your risk in the event during an emergency water landing.

(h)   **Age Limits.**   Most operators claim that you can parasail at 8 years old.   It is important to understand that there are some basic physical and communication skill requirements when parasailing, especially in an emergency which can become problematic.   Therefore, I would recommend that parasailers be at least 14 years of age to participate and fly only with an adult.

(j)   **Fear of Heights.**   You should not parasail if you panic easily; or have fear of heights; or for any other reason that makes you feel uncomfortable or hesitant to parasail.

SLITHERING

4.   **Definition**.   The literal definition of the word slithering is to slide or glide, like a reptile.   This can be better explained as descending from a height, most of the times a bridge, slowly at a controlled pace and touch the surface underneath.   The thrill in this sport is to see the ground coming closer and closer as you descend down and feel the wind in your hair and with no support besides a rope, which one is tied with.

5.   It is also known as fast roping. Fast-roping, also known as Fast Rope Insertion Extraction System (FRIES) is a technique for descending a thick rope. It is useful for deploying troops from a helicopter in places where the helicopter itself cannot touch down.   First developed by the British with UK rope manufacturer Marlow Ropes, its first combat use was during the Falkland War. The original rope was a thick nylon that could be used in a manner akin to a Firepole. The special ropes used today are braided (plaited), which results in pattern on the outer circumference that is not smooth and so is easier to grip. Originally, each person would hold the rope for the next person; however, this has been phased out.

6.   Slithering is quicker than abseiling (rappelling), although more dangerous, particularly if the person is carrying a heavy load, because the rope is not attached to them with a descender. The person holds onto the rope with his gloved hands and feet and slides down it. The British method advises not to use the feet as this can make the descent for following personnel more dangerous because boot polish or the leather of the boot can make the rope extremely slippery. Several people can slide down the same rope simultaneously, provided that there is a gap of approximately 3 meters (9.8 ft) between them, so that each one has time to get out of the way when they reach the ground. The rope must be thick, typically 40 millimetres (1.6 in) diameter, to prevent it from being wildly jerked about from the rotor blast of the helicopter. It is essential to wear gloves, as sliding down a rope generates great heat from friction. Fast roping onto a ship can take approximately 30 seconds, and is used when a rapid build-up of boarding forces is required.

Uses and Techniques of Slithering

7.   **Uses**.   Slithering is most commonly used in three situations which make landing a helicopter a potential safety hazard which are as follows:-

(a)   When ground is soft or uneven making for a dangerous landing situation.

(b)   Deployment into an urban setting with low building rooftops can be completed using a fast rope without having to find a large clearing to set down the helicopter.

(c)   A slithering deployment can be used when there is risk of fire from the opposition as fast roping shortens the time required to get the soldiers down and on to the ground, then the helicopter moved is out of danger.

8.   **Techniques**.   Proper technique for the sliders is essential in ensuring that an individual on the line does not deploy too fast, risking injury on landing or falling off the line altogether.   Going too slowly can cause a logjam, forcing a longer deployment time.   To fast rope, the soldier grabs onto the rope with both hands then steps out of the helicopter.   Using both feet the soldier pinches the rope between their boots and then increases the pressure on the rope to regulate their speed.

ROCK CLIMBING

9.   **Rock climbing** is an activity in which participants climb up, down or across natural rock formations or artificial rock walls. The goal is to reach the summit of a formation or the endpoint of a pre-defined route without falling. Rock climbing competitions have objectives of completing the route in the quickest possible time or the farthest along an increasingly difficult route.

10.   **Rock Climbing Techniques**   A climbing technique is any type or combination of body posture, movement, or hold used in climbing.   The Rock-Climbing techniques are as follows:-

       (a)   **Foot Jam**.   This technique is also known as the heel-to-toe jam. It involves jamming the foot into a larger crack by twisting the foot into place, the contact with the crack being on the heel and toes.

       (b)   **Toe Jam in a Crack.** When the foot is too large, the toe jam is used by locking the toes into a crack and lowering the heel down.

11.   **Safety Tips**.   Use the following 10 tips to keep safe when you're doing rock climbing:-

       (a)   **Always Check Harnesses**.   After you've geared up, always check that both the climber's and belayers' harness buckles are doubled back.

       (b)   **Always Check Knots**.   Before you start climbing, always double check that leader's tie-in knot right and finished with a backup knot.   Also check that the rope is threaded through both the harness waist loop and the leg loops.

       (c)   **Always Wear a Helmet**.   A climbing helmet is essential if you want to live long and prosper.   Always wear one when climbing or belaying. Helmets protect your head from falling rocks and from the impact of falling.

       (d)   **Always Check the Rope and Belay Device**.   Before you lead a route, always double check that the rope is properly threaded through the device.   Also, always make sure the rope and belay device are attached with a locking carabineer to the belayers' harness.

       (e)   **Always Use a Long Rope**.   Make sure your climbing rope is long enough to reach the anchors and lower back down on a sport route or to reach a belay ledge on multi-pitch routes.

       (f)   **Always Bring Enough Gear**.   Before you climb a route, always eyeball it from the ground and determine what you need to bring.

       (g)   **Always Climb with the Rope Over Your Leg**.   When you're leading, always make sure the rope is over your leg rather than between them or behind one.   If you fall with the rope in this position, you will flip upside down and hit your head.   Wear a helmet for protection.

       (h)   **Always Properly Clip the Rope**.   Make sure you always clip your rope through carabineers on quick draws correctly.

       (j)   **Always Use Safe Anchors**.   At the top of a pitch or route, always use at least two anchors. Three is better. Redundancy keeps you alive. On a sport route, always use locking carabineers if you're lowering down to top-rope off the anchors.

CYCLING AND TREKKING

12.   Cycling expedition refers to cycling over long distances prioritizing pleasure and endurance over utility or speed. Cycling can range from a single day ride to multi-day trips. Trekking is walking for a number of days, usually on uncharted paths, in challenging environments which are likely to be hilly, mountainous or jungle. The Himalayan routes are famous for attracting a large number of trekkers. Tours may be planned and organized by the Cadets for themselves and also for organizing rallies for various social activities to spread awareness as well as to convey a message to people in remote and far flung areas.

13.   Each trek teaches oneself how to appreciate the beauty of nature, how to get adjusted with the situation and the importance of planning.   A well-planned trek will allow you to enjoy it and avoid any inconvenience. A list of items which are essential for such an activity are listed below:-

    (a)   Good rucksack in proper condition.
    (b)   Clothing like wind cheater, woolens as per your requirements of the stay and season in which trek is going to be done.
    (c)   Water, food and cooking utensils (if you are going to cook your own food).
    (d)   Camera and its accessories (if interested in photography, always carry an extra pair of batteries and camera phone).
    (e)   First Aid box.
    (f)   Sleeping Mat or Sleeping Bag.
    (g)   Oral rehydration solution (ORS).
    (h)   Rope.
    (j)   A good pair of shoes.
    (k)   Cap (preferably of cotton).
    (l)   Toiletry items.
    (m)   Torch and batteries.
    (n)   Marker and chalk.

Useful Tips for Trekking

14.   Before setting out for a trek, following hints and tips are required to be considered during the planning phase:-

    (a)   Keep toilet items handy. This will ensure that no germs/infection enters the body through consumption of water or food.
    (b)   Carry all possible essentials in the ruck sack with the expedition. Heavy items could be ferried by road.
    (c)   Carry sleeping mattress or durries for `night halts.
    (d)   Carry adequate woollens for the period of the trek.
    (e)   Take off your shoes at drink and lunch halts. This will give relaxation to your feet.
    (f)   Take small steps when ascending up slope.
    (g)   Ensure good consumption of water at regular intervals.
    (h)   Carry essential medicines to cater for minor injuries or disorders.
    (j)   Acclimatization is a must for high altitude marches.

SUMMARY

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CHAPTER EA - I

WATER AND ENERGY CONSERVATION

WATER CONSERVATION

1.   **Introduction**.   Water is a very important and precious resource for life.   Water Conservation covers policies, strategies and activities to manage fresh water as a sustainable resource, to protect the water environment and to meet current and future human demands.   Population growth, household size effect the quantity of water that is consumed. Factors such as climate change will increase pressures on natural water resources, especially in manufacturing and agricultural irrigation. Water is fast becoming insufficient due to increase in population, industries and agricultural activities and due to poor rainfall.

2.   **Ways to Conserve Water Indoors**.   The best place to start Water Conservation is one's own house. Certain measures which can be adopted at home are:-

   (a)   Ensure that there are no leaks in your house, in the pipelines, taps and toilets.
   (b)   Use water efficient flushes and if possible, toilets with dual flushing systems.
   (c)   Close taps while brushing your teeth, shaving or soaping your face.
   (d)   Use water from washing of clothes for cleaning floors.
   (e)   Use appropriate amount of detergent for washing clothes.
   (f)   Close the shower tap while soaping your body.
   (g)   While washing the dishes by hand, don't let the water run while rinsing. Fill one sink with wash water and the other with rinse water.
   (h)   Monitor your water bill for unusually high use. Your bill and water meter are tools that can help you discover leaks.
   (i)   Water your lawn and garden in the morning or evening when temperature is cooler to minimize evaporation
   (j)   Never throw the water unnecessary on roads which can be used for gardening and cleaning.
   (k)   Avoid unnecessary flushing the toilets. Dispose off the tissues, cigarettes and other waste into the bin instead of toilets.
   (l)   Use minimum amount of water to bathe.
   (m)   Do not leave the tap running while washing the dishes in the kitchen.
   (n)   Install small shower heads to reduce the flow of water.

Other Practices for Water Conservation

3.   **Water Conservation Practices for Water Utilities.**   Common practices used by water supply utilities include metering, leak detection, repairing water lines, well capping, retrofitting programs, pricing, waste-water reuse and developing public education programs and drought management plans.

4.   **Agricultural Water Conservation Practices.**   Practices such as drip irrigation can save large quantities of water. Careful and judicious use of water for irrigation can lead to irrigating much more land.

5.   **Industrial and Commercial Water Conservation Practices.**   Industries could save large amounts of water by installing water recycling systems. Cooling Water Recirculation and Wash Water Recycling are the most widely used water recycling practices.

6.   Additional Methods to initiate Water Conservation would include, public awareness programmes, nukkad natak and community dramas and water audits.   Rainwater harvesting is one of the most successful techniques being used in India.

Rain Water Harvesting

7.   The term rainwater harvesting is being frequently used these days; however, the concept of water harvesting is not new for India. Water harvesting techniques had been evolved and developed centuries ago.   Rainwater harvesting means capturing the runoff of the rainwater in our own house, village, town or city.   It basically means accumulation and storage of rainwater for reuse, before it reaches the aquifer. Utilization includes water for garden, livestock, irrigation, etc.   In many places, the water collected is just redirected to a deep pit with percolation.   The harvested water can be used for drinking water also, if the storage is a tank that can be accessed and cleaned when needed.

8.   **Why Harvest Rain water**.

    (a)   To arrest ground water decline and augment ground water table
    (b)   To beneficiate water quality in aquifers
    (c)   To conserve surface water runoff during monsoon
    (d)   To reduce soil erosion
    (e)   To inculcate a culture of water conservation

9.   **Need for Rainwater Harvesting**.   India is in a state of water crisis, both in rural and urban areas. Floods and droughts go hand in hand in our country, which causes water shortage. Rainwater is a pure form of water if stored properly and can greatly reduce the pressures on treated water supply. Rainwater harvesting is therefore extremely essential for the following reasons: -

    (a)   It helps to recharge sub soil and groundwater thus increasing the level of the water.
    (b)   It helps to create large quantity of pollution free clean water that can be stored in huge tanks or ponds for use later on. In cities, it reduces the dependency on treated water supply to a great extant.
    (c)   It ensures ready supply of water on the land surface thereby reducing dependence on the ground water.

10.   **Types of Rainwater Harvesting Systems**.   There are a number of ways to harvest rainwater, ranging from very simple to the complex industrial systems.   Generally, rainwater is either harvested from the ground or from a roof.   The rate at which water can be collected from either system is dependent on the plan area of the system, its efficiency and the intensity of rainfall.

    (a)   **Ground Catchment Systems.** Channelize water from a prepared catchment area into a storage system. Generally, this method is only considered in areas, where rainwater is very rare and other sources of water are not available. They are more suited to small communities than individual families. If properly designed, ground catchments can collect large quantities of rainwater. This method is ideally suitable for villages in rural India.

    (b)   **Roof Catchment Systems.**   Roof catchment systems channelize rainwater that falls onto a roof, into a storage tank via a system of pipes. The first flush of rainwater after a dry season, should be allowed to run to waste as, it will be impure with dust, bird droppings etc.   Rain Water from the subsequent showers can be harvested.   Roofs and pipes should have sufficient incline to avoid standing water.   They must be strong enough and large enough to carry peak flows. Storage tanks should be covered to prevent mosquito breeding and to reduce evaporation losses, contamination and algae growth.   Rainwater harvesting systems require regular maintenance and cleaning, to keep the system hygienic and in good working order.   This method is most suited for towns and cities.

(c)   **Sub Surface Dyke.**   Subsurface dyke is a barrier impermeable to water, placed underground to control the groundwater flow in an aquifer, and to increase the ground water level. It is also known as ground water dams. Example, the subsurface dyke at Krishi Vigyan Kendra, Kannur under Kerala Agricultural University with the support of ICAR, has become an effective method for ground water conservation by means of rain water harvesting technologies. The dyke is now the largest rainwater harvesting system in that region.

11.   **Groundwater Recharge.**   Rainwater may also be used to recharge groundwater where the runoff on the ground is collected and allowed to be absorbed, adding to the groundwater.   In India this includes Bawdis and Johads, or Ponds which collect the run-off from small streams in a wide area.   In India, reservoirs called tank as were used to store water; typically, they were shallow with mud walls. Ancient tank as still exists in some places.

12.   **Advantages in Urban Areas**. Rainwater harvesting in urban areas can have manifold advantages. Some of the reasons why rainwater harvesting can be adopted in cities are to provide supplemental water for the city's requirements, to increase soil moisture levels for urban greenery to increase the ground water table through artificial recharge, to mitigate urban flooding and to improve the quality of groundwater. In urban areas of the developed world, at a household level, harvested rainwater can be used for flushing toilets, washing laundry, showering or bathing. It may however require some treatment before it can be used for drinking.

ENERGY CONSERVATION

Introduction

13.   "ENERGY" means any form of energy derived from fossil fuels, nuclear substances or materials, hydro-electricity and includes electrical energy or electricity generated from renewable sources of energy or bio-mass connected to the grid.   Energy conservation refers to various ways and methods of reducing energy consumption by economizing on the use of a particular source of energy.

14.   Energy conservation is the management of processes and policies, designed to reduce energy usage.   Energy conservation can be achieved only by reducing consumption of energy by, either preventing wasteful use of energy or by using energy efficient products.

15.   **Energy Conservation Measures**.   An Energy conservation measure (ECM) is any type of project conducted, or technology implemented, to reduce the consumption of energy in a building. The types of projects implemented can be in a variety of forms but usually are designed to reduce utility costs: water, electricity and gas being the main three for industrial and commercial enterprises.   The aim of an ECM should be to achieve a savings, reducing the amount of energy used by a particular process, technology or facility.

    (a)   **Energy Saving Building Designs**.   Construction of industrial / domestic buildings with energy efficient designs, to reduce the consumption of electricity on air conditioning, lighting and proper ventilation.

    (b)   **Use of Energy Efficient Equipment / Implements**.   Use of energy efficient equipment /gadgets like ACs, Heaters, Tube lights, CFLs & LEDs, Frost Free Refrigerators, Distribution Transformers, Induction Motors, Direct Cool Refrigerator, Geysers, Ceiling Fans, TVs / LCDs, Agricultural Pump Sets, LPG Stoves and Washing Machines etc. contribute immensely in reducing the consumption of electricity.   Use of solar lighting / heating gadgets also contributes towards saving large quantity of electricity.

    (c)   **Public Lighting**.   This is a large consumer of electricity.   Hence, energy saving / efficient equipment like CFLs, Halogen Lamps, Distributors and Solar Lighting must be used in a big way to conserve electricity.

    (d)   **Usage Habits**.   Everyone must be passionate about preventing wasteful use of electricity.   Strict measures should be enforced to switch off all lights which are not required during day or at night at homes, offices or public places.

(e) **Public Transport System**. Efficient, speedy and reliable public transport system with fuel efficient vehicles must be employed. This can reduce a large burden of the fuel energy, by reducing the number of personal vehicles on the road.

(f) **Energy Efficient Infrastructure**. This includes creation of high-quality roads, rails and transmission methods to reduce wasteful use of electric and fuel energy.

(g) **Preventing Pilferage**. Large quantity of electricity, coal and fuel is pilfered by people during transmission and transporting causing huge losses. This pilferage must be reduced at all costs.

(h) **Use of Non-Conventional Sources of Energy**. Some of the non-conventional sources of energy are as under:

(i) **Solar Energy**. Solar energy is a renewable energy which is released by the sun as electromagnetic waves and directly collected from the sun light. Solar energy can be used in two ways: Solar heating and Solar electricity. Solar Heating is to capture sun's energy for heating buildings and for cooking / heating foodstuffs etc. Solar Electricity is mainly produced by using photovoltaic solar cells which is made of semi conducting materials that directly converts sunlight into electricity and can provide large amounts of power for the electric grid. As the solar energy is produced when the sun is shining during the day, so solar cells are used to charge batteries which are used either as secondary energy source or for other applications of intermittent use such as night lightening or water pumping etc. Use of solar energy does not produce air or water pollution and greenhouse gases. Solar energy is predictable and is most efficient when utility rates are the highest.

(ii) **Wind Energy**. Wind is air in motion caused by natural factors like the uneven heating of the earth's surface by the sun, the rotation of the earth and the irregularities of the earth's surface. Kinetic energy in the wind can be used to run wind turbines but the output power depends upon the wind speed. Wind turbines operate on a simple principle. The energy in the wind turns two or three propeller-like blades around a rotor. The rotor is connected to the main shaft, which spins a generator to create electricity. Wind turbines convert the kinetic energy in the wind into mechanical power and the generator converts the mechanical power into electricity.

(iii) **Biogas**. It is a mixture of different gases produced by the breakdown of organic matter in the absence of oxygen. Biogas is a renewable energy source and can be produced from raw materials such as agricultural waste, municipal waste, plant material, sewage, green waste or food waste. It can be used for any heating purpose, such as cooking. It can also be used in a gas engine to convert the energy in the gas into electricity and heat.

Conclusion

16. The increasing preference for commercial energy has led to a sharp increase in the demand for electricity and fossil fuels. There is still a considerable potential for reducing energy consumption by adopting energy efficient measures in various sectors of our country including individual and collective community level initiatives.

SUMMARY

1. Water is a very important and precious resource for life. **Water Conservation** covers policies, strategies and activities to manage fresh water as a sustainable resource, to protect the water environment and to meet current and future human demands. No other natural resource has had such an overwhelming response on the history of mankind as much as Water. Water conservation should not be considered an option any longer but is an inescapable necessity. Current circumstances require our full attention, if we hope to thrive as a civilization.

2. **Ways to Conserve Water Indoors**. The best place to start Water Conservation is one's own house. Certain measures which can be adopted at home are:-

(a)   Ensure that there are no leaks in your house, in the pipelines, taps and toilets.

(b)   Use water efficient flushes and if possible, toilets with dual flushing systems.

(c)   Close taps while brushing your teeth, shaving or soaping your face.

(d)   Use water from washing of clothes for cleaning floors.

(e)   Use appropriate amount of detergent for washing clothes.

(f)   Close the shower tap while soaping your body.

(g)   While washing the dishes by hand, don't let the water run while rinsing. Fill one sink with wash water and the other with rinse water.

(h)   Monitor your water bill for unusually high use. Your bill and water meter are tools that can help you discover leaks.

(i)   Water your lawn and garden in the morning or evening when temperature is cooler to minimize evaporation

(j)   Never throw the water unnecessary on roads which can be used for gardening and cleaning.

(k)   Avoid unnecessary flushing the toilets. Dispose off the tissues, cigarettes and other waste into the bin instead of toilets.

(l)   Use minimum amount of water to bath.

(m)   Do not leave the tap running while washing the dishes in the kitchen.

(n)   Install small shower heads to reduce the flow of water.

3.   **Rainwater harvesting** means capturing the runoff of the rainwater in our own house, village, town or city.   It basically means accumulation and storage of rainwater for reuse, before it reaches the aquifer. Utilization includes water for garden, livestock, irrigation, etc.   In many places, the water collected is just redirected to a deep pit with percolation.   The harvested water can be used for drinking water also, if the storage is a tank that can be accessed and cleaned when needed.

4.   <u>**Why Harvest Rain water**</u>.

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(b)   To beneficiate water quality in aquifers

(c)   To conserve surface water runoff during monsoon

(d)   To reduce soil erosion

(e)   To inculcate a culture of water conservation

5.   **"ENERGY"** means any form of energy derived from fossil fuels, nuclear substances or materials, hydro-electricity and includes electrical energy or electricity generated from renewable sources of energy or bio-mass connected to the grid. **Energy conservation** refers to various ways and methods of reducing energy consumption by economizing on the use of a particular source of energy. Energy conservation is the management of processes and policies, designed to reduce energy usage. Energy conservation can be achieved only by reducing consumption of energy by, either preventing wasteful use of energy or by using energy efficient products.

6.   <u>**Energy Conservation Measures**</u>.

(a)   Energy Saving Building Designs.

(b)   Use of Energy Efficient Equipment / Implements.

(c)   Public Lighting.

(d)   Usage Habits.

(e)   Public Transport System.

(f)   Energy Efficient Infrastructure.

(g)   Preventing Pilferage.

(h)   Use of Non-Conventional Sources of Energy:-

(i)   Solar Energy.

(ii)   Wind Energy.

(iii)   Biogas.

CHAPTER OT - I

OBSTACLE TRAINING

Introduction

1.   The training in crossing the obstacles/barriers by NCC cadets is a very important aspect of NCC syllabus. The obstacle course training not only makes the cadets physically strong but also develops a high degree of confidence and develops the qualities of courage and will power to face all types of challenges and barriers in life.

Obstacle Course

2.   The Standard Obstacle Course that the NCC cadets are required to cross consists of ten obstacles. The obstacles, depending upon the structure are constructed of wood, bricks, concrete and mud.   Each obstacle is placed at a distance of about 30 feet from each other. The details of each obstacle are described as below:-

(a)   **Straight Balance**.   It is a wooden slab of 3 inches thick, 4 inches wide and 12 ft long, which is placed 1 ½ ft above ground level. A cadet crosses this obstacle running, keeping his arms open and balancing his body.

(b)   **Clear Jump**.   Its structure is just like a straight bar of 18 ft long. This wooden bar is placed 2 ft above the ground. Cadet has to jump over it without touching or using any part of the body.

(c)   **Gate Vault**.   This is a wooden structure which has two parallel bars at a height of 3 ft and 5 ft respectively, both 18 ft long. One has to cross the gate by holding upper beam with both hands and by putting one's feet on 3 ft bar and jump across.

(d)   **Zig-Zag Balance**.   It is a Zig-Zag like structure made of wooden bar which is 18 ft in length and 3-inch width. The height of the bar above the ground is 1½ ft at the beginning and gradually increases to 3½ ft in the end. The Cadet has to run over the obstacle with open hands and balance the body similar to straight balance and cross it.

(e)   **High Wall**.   It is 6 feet high and 12 feet long bricked wall with plaster on both sides. For crossing this obstacle, a cadet has to run, jump, kick the wall with one leg and take leap putting both hands on the wall and then push his body upwards and jump over the other side.

(f)   **Double Ditch**.   The obstacle is made up of two similar ditches each of approximately 8 ft in long, 6 ft wide and 3-4 ft deep separated by a small gap of approximately 4 feet. The cadet has to jump across the two ditches by jumping over the first ditch, placing one foot on the gap and jumping across the second ditch.

(g)   **Right Hand Vault**.   This wooden slab is 3 ½ ft above the ground and 18 feet long. The cadet is required to jump over using the right hand as support on the beam, throwing both legs up and jump across.

(h)   **Left Hand Vault**.   This wooden structure is 3 ½ ft above the ground just like Right Hand Vault. The Cadet is required to jump over using the left hand as support on the bar, throwing both legs up and jump across.

(j)   **Ramp**. It is 15 feet long, 18 feet wide and 4 ½ feet high sloppy hillock. For crossing it, a cadet has to crawl and climb over the ramp and take long jump after reaching the top and then landing on ground with both the feet.

(k)   **Straight Balance.**   It is piece of wooden 3 inches thick, 4 inches wide and 12 ft in length, which is   above the ground level. A cadet crosses this obstacle running, keeping his arms open and balancing his body.

3.   **Safety Measures.**   Following safety measures must be ensured during the conduct of Obstacle Course training to cadets -

(a)   Suitable and physically fit cadets only to be selected.
(b)   Training to be given first in PT dress, later on with packs and weapon.
(c)   Emphasis to be given on closing of individual timings and later team timings.
(d)   Wet and slippery obstacles and area to be avoided.
(e)   Obstacles to be done under supervision of qualified instructors and correct technique only to be used.
(f)   Arrangement of first aid to be ensured.

4.   **Benefits.** Benefits of Obstacles courses are as under:-

(a)   Ensures physical fitness.
(b)   Ensures flexibility.
(c)   Ensures mental strength.
(d)   Coordination and balance of mind and body.
(e)   Improves risk taking ability.
(f)   Evaluating problem solving skills.
(g)   Over all team spirit.

Conclusion

5.   The training in NCC is comprehensive. The basic training of regular Defence services (Army, Navy and Air force) is given to the students. The cadets receive training throughout the NCC course. Intensive training is given to cadets in the camps especially in Thal Sainik Camps. Obstacle course is one such training activity conducted that makes the NCC cadets physically fit and mentally tough. Obstacle training increases agility, courage, patience and increases their confidence.

SUMMARY

1.   The trainng in NCC is comprehensive. The basic training of regular Defence services (Army, Navy and Air Force) is given to the students. The cadets receive training throughout the NCC tenure.
Obstacle course is one such training activity conducted for making the NCC cadets physically fit and mentally strong. Obstacle training develops courage, patience and makes them physically fit.

2.   **Obstacle Course.**   It consists of the following obstacles.

        (a)   Straight Balance
        (b)   Clear Jump
        (c)   Gate Vault
        (d)   Zig-Zag Balance
        (e)   High Wall
        (f)   Double Ditch
        (g)   Right Hand Vault
        (h)   Left Hand Vault
        (j)   Ramp
        (k)   Straight Balance

CHAPTER GA - I

GENERAL AWARENESS

1.   General Awareness has been defined in differential psychology as "culturally valued knowledge communicated by a range of non-specialist media" and encompassing a wide subject range. This definition excludes highly specialized learning that can only be obtained with extensive training and information confined to a single medium. General Awareness is an important component of crystallized intelligence. It is strongly associated with general intelligence and with openness to experience. Studies have found that people who are highly knowledgeable in a particular domain tend to be knowledgeable in many. General Awareness is thought to be supported by long-term semantic memory ability. The scope of this definition includes all areas of General Awareness available to lay persons without requiring extensive training.

2.   Researchers have acknowledged that other domains of general knowledge may exist.   Factor analysis suggested that the maximum domains could be categorised into six factors; i.e. Current Affairs, Fashion, Family, Physical, Health & Recreation, Arts, and Science.   All six of these factors are highly intercorrelated (i.e. people who scored high in a particular domain tended to score highly in most other domains) and were all related to a single higher-order general awareness factor.   There is plethora of topics in general awareness. The important topics relevant to NCC Cadets are given below: -

(a)   **Country and States General**. Basic facts (Histrocal , Geographical and Economy), India's position in the world, national symbols, population facts, languages, languages in the 8th Schedule, Courts and Tribunals, Formation of states, important information, population, MPs & MLAs, Tribes of India and States and other Facts.

(b)   **Defence Section**.   Military Organisations, Chiefs of Armed Forces, Formations, Mottos of State Police Organisations, Defence Training Institutes, Defence Manufacturing Units, Commands of Army, Air Force & Navy, Air Force & Naval Training Establishments, Aircraft & Submarines of Indian Navy, Aircrafts of the Indian Air Force, Equivalent Ranks in Armed Forces, Important Military Operations and Joint Military Exercises.

(c)   **Rivers Section**.   Facts about Indian Rivers, Rivers and their Origins, Rivers and Cities of India, Rivers and Dams in India, Indian Rivers and Tributaries, Ancient Names of Rivers, Rivers and places of confluence, Facts about World Rivers, Cities and Rivers of the World, Mouths of Rivers of the World, Terminology related to Rivers.

(d)   **Constitution Section**. Facts about Constituent Assembly, Committees of Constituent Assembly, Parts, Articles, Age Limits, Time Periods, Oaths, Resignations, Important Amendments, Important Parliamentary Terms, Finance Related Parliamentary Terms, questions and motions in Parliament.

(e)   **Banking Section**.   Reserve Bank of India, Facts on Coins and Currency, Coins and Currency, Mints of India, Nationalised banks, Slogans, Top Banks, State Bank of India, RRBs under State Bank of India, Taglines of Insurance companies, Central Banks of important countries, International Banks & Headquarters, World Bank and Internation Monetary Fund, International Financial Institutions, Bank Rates and Ratios and Banking Terminologies,

(f)   **Places of Interest Section of India**.   Museums, Gardens, World Heritage Sites, Archaeological Sites, Temples, Forts and Palaces, Mosques and Tombs, Zoos, Jails and Libraries, Caves, Gates and Towers, Commemorative Monuments, Bridges, Statues and Stupas, Old and New Names of Cities, Important Industrial Towns, Cities and their Founders.

(g)   **Minerals Section**.   India's Position in Mineral Wealth, First Ranked States in Mineral Production, Oil Refineries and Oil Fields of India and the World, Steel Plants of India.

(h)   **Inventions & Discoveries Section**.   Discoverers of Elements, Inventors of Home Appliances, Inventors in Aviation Field, Inventors of Vehicles, Inventors of Weapons, Medical Discoveries, Founders of Indian Companies, Founders of Universities and Institutions.

(j)   **Information Technology Section**.   Creators/Founders on the Net, Software Developers, Types of Application Software, Types of Computer Network.

(k)   **Books and Authors Section**.   Books by President, Prime Ministers, Indian Nobel Laureates, Indian Authors, Famous Scientists, Sportspersons, Famous Children Classics, Famous World Classics, Creators of Fictional Characters, Famous Books of 20th Century, Books by Women Authors, Books by Famous Economists, Indian Writers and Languages, Latest Books and Authors, Latest Books in News.

(l)   **Sanctuaries and Animals Section**.   Sanctuaries in India, Sanctuaries and Animals, Biosphere Reserves in India, Forest Cover in India, Largest, Smallest, Fastest Animals, Endemic Animals around the World, Members of Cat Family, Breeds of Domestic Animals, Scientific Names of Common Animals, Differences between Similar Animals.

(m)   **Geographical Features Section**.   Geographical Features of the World, Deserts of the World, Lakes of India and the World, Waterfalls of India and the World, Islands of India, Wetlands of India, Weather Instruments and Climatic Lines, Atmospheric Layers, Facts about the Earth, Important Latitudes and Longitudes, Facts about the Moon, Facts about the Solar System, Straits and Canals.

(n)   **Miscellaneous Section**.   Rocket Launching Stations, Maharatna and Navratna PSUs, PSUs and Ministries, Nuclear Power Plants in India, Utility and Demand, Production in Economics, Competition in Economics, Major Brands of Indian Companies.

(o)   **Diseases Section**.   Types of Diseases, Organisms causing Diseases, Deficiency Diseases, Common Names of Diseases, Diseases and Body Parts Affected, Poisoning Diseases, Diseases transmitted by animals, Rare Diseases and Disorders, Doctors and Specialisations, Types of Medicines, Commonly used Medicines, Names of Vitamins, Standards of Health.

(p)   **Great Personalities Section**.   Great Leaders of India, Indian Leaders - Years of Birth, Real Names of Prominent People, Nicknames of Important Personalities.

(q)   **Art and Culture Section**.   Classical and Folk Dances of India, Dance Forms and Associated Persons, Famous Painter, Sculptors, Architects etc., Famous Painters and their Paintings, Musical Instruments and Associated Persons, Fairs of India, Intangible Cultural Heritage List – UNESCO, Important Facts about Films.

(r)   **Railways Section**.   Important Facts about Indian Railways, Railway Zones and Headquarters, Railway Training & Manufacturing Units.

(s)   **Agriculture Section**.   Important Facts about Soils, Distribution of Soils in India, Facts about Crops in India, Top Crop Producing States in India, Top Crop Producing Countries, Types of Farming, Types of Irrigation.

(t)   **History Section**.   Ancient Texts and Authors, Importance of Ancient Indian Texts, Important Battles in Indian History, Foreign Invaders of India, Visitors to India, Court Poets in Indian History, Dynasties – Capitals, Founders and Temples, Famous Women in Indian History, Delhi Sultanatte – Important Facts, Rulers and Women of Mughal Empire, Battles during Mughal Rule, Nine Gems of Akbar"s Court, Monuments and Books of Mughal Period, Important Treaties in Indian History.

(u)   **Sports Section**.   Major Sports Events, Facts about Olympic Games, Indian Olympic Medallists, First in Sports in India, First in Sports in the World, League Sports and Teams in India, Stadiums in India, Cricket Stadiums of the World, Sports Awards in India, Facts about Open Era Tennis, Grand Slam Tennis Records, Highest Runs in Cricket.

(v)   **Awards Section**.   First in Nobel Prizes, Presidents, PMs – Winners of Nobel Prizes, Nobel Prize Winners from India, Nobel Prize Winners from China, Pakistan, Bangladesh etc., Important International Awards, International Awards - Films, Music and TV, International Awards for Literature, First Winners of Jnanpith Awards in Various Languages, First Winners of Rajiv

Gandhi Khel Ratna Award in Various Sports, First Winners of Arjuna Award in Various Sports, Awards by Home Ministry – Govt of India, Sports Awards by Govt of India, Awards by Various Ministries – Govt of India, Awards by Autonomous Organisations in India, Gallantry Awards by Govt of India

(w) **International Organisations Section**. HQs of International Organisations, Mottos of International Organisations, Facts about U.N.O., SAARC, OPEC, ASEAN Member Countries, Member Countries of European Union, Member Countries – G–8 and G-20.

(x) **Hills and Mountains Section**. Mountains & Hills of India, Hill Stations of India, Highest Mountains of Indian States, Highest Mountains of the World, Mountain Ranges of the World, First Everest Climbers.

(y) **Religions Section**. Sacred Hindu Texts, Important Pilgrimages of Hinduism, Important Facts about Islam, Important Facts about Christianity, Important Facts about Buddhism, Important Facts about Jainism, Important Facts about Sikhism, Judaism, Zoroastrianism & Confucianism.

(z) **Anatomy Section**. Important Facts about Human Anatomy, Important Facts about Blood, Blood Vessels and Functions, Blood Components and Functions, Disorders of the Blood, Disorders of the Eye, Facts about Bones, Number of Bones in Human Body, Types of Bones and Joints, Functions of Enzymes, Functions of Minerals in Human Body, Functions of Hormones in Human Body.

(aa) **Plants Section**. Facts about Plants, Plant Products and Parts, Propagation of Plants, Plant Nutrients and Studies, Scientific Names of Common Plants.

(ab) **"Firsts" Section**. First Appointees in India, First Events in India, First Chief Ministers of Indian States, First Women Chief Ministers and Governors, First in India – Women, First Award Recipients in India, First Indian Recipients of International Awards, First in the World, First in the World – Women, First Men in Space, First Satellites of Countries, First Spacecraft in Space.

(ac) **Abbreviations Section**. Abbreviations - Government Related, Banking related Abbreviations, Commerce related Abbreviations, Technology related Abbreviations, Medical related Abbreviations.

(ad) **Freedom Struggle Section**. Indian National Army, Important Places during Freedom Struggle, Important Freedom Fighters of India, Revolutionary Freedom Fighters of India, Important Facts about Mahatma Gandhi, Important Quotes by Mahatma Gandhi, What others said about Mahatma Gandhi,

(ae) **Countries and Capitals Section**. Capitals of African Countries, Capitals of landlocked African countries, Capitals of Asian Countries, Capitals of Middle East Countries, Capitals of European Countries, Capitals of North and South American Countries, Capitals of Oceania and Australia.

(af) **Physical Sciences Section**. Facts about Gases, Facts about Metals, Metals, Ores and Alloys, Processes related to Metals, Important Scientific Laws, Units of Measurements, Conversion of Measurement Units, Measuring Instruments, Facts about Light, Facts about Sound, Images by Lenses, Images by Mirrors, Electrical & Electronic Components.

CURRENT AFFAIRS

3. Current Affairs is defined as a genre of broadcast journalism where the emphasis is on detailed analysis and discussion of news stories that have recently occurred or are ongoing at the time of broadcast. This differs from regular news broadcasts where the emphasis is on news reports prepared for simple presentation as soon as possible, often with a minimum of analysis. It is also different from the news magazine show format in that the events are discussed immediately. According to the UK's Office of Communications Current Affairs is an explanation and analysis of current events and issues, including

political or industrial controversy or public policy issues.   The office distinguishes Current Affairs from the coverage of news, coverage of special events like parliamentary proceedings, and the coverage of consumer affairs, among other exceptions.   The following topics in general can be covered in general knowledge: -

(a)   Indian Polity.
(b)   **Constitution of India**.   Features borrowed from foreign Constitutions, Important Articles, Important Ammendments, Fundamental Rights, Legal Rights.
(c)   **President of India**.   Executive & Judicial Powers of President, Election of President, Removal (Impeachment) etc.
(d)   **Judiciary.**   Supreme court of India (Its power and Area of jurisdiction), High Courts of India (Their power and Area of Jurisdiction), Lokpal and Lokayukt, Lok Adalat, PIL (Public Interest Litigation), CAT (Central Administrative Turbunal), E-Courts.
(e)   **Indian Geography**.   Ores & Minerals, Oil Mills, Lakes of India, Rivers, Tributaries and their directions, Clouds, Longitude and Lattitude, Islands of India, States Comparisions by Population and Area
(f)   **Indian History**.   Ancient Indian History, Middle Indian History and Modern Indian History (Struggle for Freedom).
(g)   **Military Knowledge**.   Basic knowledge of Indian armed forces, Ranks and Their Equivalent counterparts in Other Force, Commands of Indian Army, Navy, Airforce (with Tri Service Theatre Command) and Regiments.
(h)   **Awards**.   Books (Noble Prize, Man Booker Prize and Pulitzer prize etc.), Indian Padma Awards (Padma Bhushan, Vibhushan, Shri), Achievements of Indian Sports Players.
(j)   Government Welfare Schemes.
(k)   International Trades of India (Bilateral, Trilateral) and FDI.
(l)   Indo US Ties.
(m)   Indo China Ties.
(n)   SAARC Countries.
(o)   G 7 Nations.
(p)   OPEC Countries.
(q)   EU.
(r)   India Space Programme.

4.   Some of the recommended books/magazines for current affairs are:-
(a)   Competition Success review
(b)   UAI Publications of Osmania University, Hyderabad
(c)   Perspective – Natrg Publishers, Dehradun
(d)   Hindu Newspaper.

LOGICAL REASONING

5.   Logical reasoning (or just "logic" for short) is one of the fundamental skills of effective thinking. It works by raising questions like: -

(a)   If this is true, what else must be true?
(b)   If this is true, what else is probably true?
(c)   If this isn't true, what else can't be true?

6.   These are all inferences: they're connections between a given sentence (the "premise") and some other sentence (the "conclusion"). Inferences are the basic building blocks of logical reasoning, and there are strict rules governing what counts as a valid inference and what doesn't — it's a lot like math, but applied to sentences rather than numbers. There are two basic types of logic given as under: -

(a)   **Deduction**.   Deduction is when the conclusion, based on the premises, must be true. For example, if it's true that the dog always barks when someone is at the door and it's true that there's someone at the door, then it must be true that the dog will bark.   Of course, the real world is messy and doesn't always conform to the strictures of deductive reasoning (there are probably no actual dogs who always bark when someone's at the door), but deductive reasoning is still important in fields like law, engineering, and science, where strict truth still hold. All math is deductive.

(b)   **Induction**.   Induction is when the conclusion, based on the premises, is probably the answers are less definitive than they are in deductive reasoning, but they are often more useful. Induction is our only way of predicting what will happen in the future: we look at the way things are, and the way they have been in the past, and we make an educated guess about what will probably happen.   But all predictions are based on probability, not certainty: for example, it's extremely probable that the sun will rise tomorrow morning.   But it's not certain, since there are all sorts of catastrophes that could happen in between now and then.

7.   **Logical Reasoning vs Critical Thinking**.   Logic is one of the main pillars of critical thinking. And there's no question that critical thinking would be impossible without some understanding of logical reasoning.   However, there are many other skills involved in critical thinking, such as:-

(a)   **Empathy**.   Empathy or the ability to imagine what someone else is feeling or experiencing.   This is a crucial skill for critical thinking, since it allows you to broaden your perspective and reflect on your actions and beliefs.   Empathy also makes you a better student of philosophy because it enables you to put yourself in the author's shoes and understand the argument from within.

(b)   **Analogy**.   Analogy or noticing similarities and thinking them through. Analogies allow us to draw conclusions about, for example, the similarity between our own time and some moment in history, and thus try to make better decisions in the future. This skill is closely related to inductive logic.

(c)   **Creativity**.   Creativity or Critical thinking is all about innovative problem-solving and coming up with new ideas, so it's heavily dependent on creativity. Just like a creative art, critical thinking depends on assembling old parts in new ways, working inventively within constraints, and matching moments of inspiration with hours of rigorous craft.

Conclusion

8.   You need to focus on some points to solve logical reasoning questions like simplify the data, find a starting point, use graphical approach, focus on accuracy, not attempts, manage your time, go to the options to acquire the best advantage of logical thinking. Competition success is a good magazine which can makes us practice in logical reasoning.

SUMMARY

1.   General Awareness has been defined in differential psychology as "culturally valued knowledge communicated by a range of non-specialist media" and encompassing a wide subject range. This definition excludes highly specialized learning that can only be obtained with extensive training and information confined to a single medium.

2.   Current Affairs is defined as a genre of broadcast journalism where the emphasis is on detailed analysis and discussion of news stories that have recently occurred or are ongoing at the time of broadcast. This differs from regular news broadcasts where the emphasis is on news reports prepared for simple presentation as soon as possible, often with a minimum of analysis.   It is also different from the news magazine show format in that the events are discussed immediately.

3.   Logical reasoning (or just "logic" for short) is one of the fundamental skills of effective thinking. It works by raising questions like: -

(a)   If this is true, what else must be true?
(b)   If this is true, what else is probably true?
(c)   If this isn't true, what else can't be true?

NATIONAL CADET CORPS
UNITY & DISCIPLINE

CADET'S HAND BOOK (ARMY)

SPECIALISED SUBJECT

SD / SW (ARMY) SPECIALISED SUBJECTS

BLOCK SYLLABUS

S.No	Subject	Periods			
		First Year	Second Year	Third Year	Total Periods
1	Armed Forces	3	3	3	9
2	Map Reading	9	9	6	24
3	Field Craft & Battle Craft	8	8	6	22
4	Introduction to Infantry Weapons & Equipment	3	2	1	6
5	Military History	7	8	8	23
6	Communication	1	1	4	6
	Total	**31**	**31**	**28**	**90**

SD/SW (ARMY) SPECIALISED SUBJECTS

INDEX

INDEX

CHAPTER 1 : ARMED FORCES : ARMY, POLICE AND CENTRAL ARMED POLICE FORCES (CAPF)

INTRODUCTION

1.   Defence Services plays a vital role in maintaining sovereignty and territorial integrity of our nation and responsibility is with Ministry of Defence along with Ministry of Home Affairs.   All elements of national defence and national security strive in achieving the assigned role and task.   A Defense University has also been established in Delhi.   Based on the major wars fought, struggles and the present-day relations with our neighbouring countries and strategic allies, an overview of the structure shows how finely organisations have emerged to meet India's national security, integration and for maintenance of law and order requirements.   It is essential that as a Cadet of NCC understands the basic organisation of our Armed Forces, Police organisations and Central Armed Police Forces of our country.

Armed Forces

ARMY

2.   Indian Army is the land-based branch and the largest component of the Indian Armed Forces and The President of India is the Supreme Commander.   It is headed by The Chief of Army staff (COAS), who is a four-star general.   The Chief of Army Staff is responsible for all Army activities and senior officers who assist him are: -
       (a)   Vice Chief of Army Staff.
       (b)   Three Deputy Chiefs of Army Staff.
       (c)   Principle Staff Officers (PSOs).
       (d)   Heads of Arms and Services.
       (e)   Field Army (Commands).

Command Headquarters

3.   Command Headquarters is commanded by an officer of the rank of 'Lieutenant General', who is known as the Army Commander or General Officer Commanding – in - Chief.   The whole country is divided into eight theatre Commands who have subordinate formations under them.   These are: -

Command Insignia	Command Name	Headquarters
	Integrated Headquarters of Ministry of Defence (Army)	New Delhi
	Central Command	Lucknow
	Eastern Command	Kolkata
	Northern Command	Udhampur
	Southern Command	Pune
	South Western Command	Jaipur
	Western Command	Chandimandir
	Army Training Command	Shimla
	Andaman & Nicobar Command	Andaman
	Strategic Force Command	New Delhi

NAVY

4.   Our country is covered almost from three sides with water with a coastline of approximately over 6000 Km. The sea around India has impact / effect on India's freedom, trade, commerce, and culture. The Indian Navy (Bhartiya Nau Sena) is the naval branch of the Indian Armed Forces. The President of India serves as Supreme Commander of the Indian Navy. The Chief of Naval Staff, usually a four-star officer in the rank of Admiral, commands the navy. The Indian Navy is the seventh largest in the world. The primary objective of the navy is to secure the nation's maritime borders.

Constituents of the Navy

5.   As of 2018, the Indian Navy has a strength of 67,228 personnel and a large operational fleet consisting of one aircraft carrier, one amphibious transport dock, eight landing ship tanks, 11 destroyers, 14 frigates, one nuclear-powered attack submarine, one ballistic missile submarine, 13 conventionally-powered attack submarines, 23 corvettes, six mine countermeasure vessels, 29 patrol vessels, four fleet tankers and various other auxiliary vessels.

Organisation and Administration

6.   Chief of Naval Staff commands Indian Navy. Integrated Headquarters of the Ministry of Defence (Navy) is located in New Delhi. The Navy is divided into three commands: -

Command	Headquarter
Western Naval Command	Mumbai
Eastern Naval Command	Vishakhapatnam
Southern Naval Command	Kochi

AIR FORCE

7.   Indian Air Force is the youngest of the three Services. It is the air arm of the Indian armed forces. It is the world's fourth largest air force in terms of both personnel and aircraft. Its primary responsibility is to secure Indian airspace and to conduct aerial warfare during a conflict It came into existence in the year 1932. Indian Air Force comprises of fighter aircrafts, transporter aircrafts, bombers and helicopters. The President of India serves as Supreme Commander of the IAF.

Air Headquarters

8.   Indian Air Force is commanded by Chief of the Air Staff. The staff of Air Headquarters consists of three branches: -
      (a)   Air Staff branch.
      (b)   Administrative branch.
      (c)   Maintenance branch.

Commands

9.   The Air Force is organized into seven commands which are controlled by Air HQ.   Each Command is placed under the command of an Air Officer Commanding-in-Chief.   The Commands are: -

Command	Headquarter
Operational commands	
Central Air Command (CAC)	Allahabad, Uttar Pradesh
Eastern Air Command (EAC)	Shillong, Meghalaya
Southern Air Command (SAC)	Thiruvananthapuram, Kerala
South Western Air Command (SWAC)	Gandhinagar, Gujarat
Western Air Command (WAC)	New Delhi
Functional Commands	
Training Command (TC)	Bangalore, Karnataka
Maintenance Command (MC)	Nagpur, Maharashtra

POLICE ORGANISATIONS & CENTRAL ARMED POLICE FORCES

10.   The principal national-level organization concerned with law enforcement is the Ministry of Home Affairs (MHA) with all matters pertaining to the maintenance of public peace and order.   In addition to being the cadre controlling authority of the IPS, the Ministry of Home Affairs maintains several agencies and organizations dealing with police and security.   Police in the union territories comes directly under MHA.   The Home Secretary, an Indian Administrative Service (IAS) officer, acts as the administrative head of Ministry of Home Affairs.

Central Armed Police Forces & Other Police Organisations

11.   The Central Armed Police Forces and other policing agencies have many elements and branches to national security. The details are as under: -

- (a)   Border Security Force.
- (b)   Central Industrial Security Force.
- (c)   Central Reserve Police Force.
- (d)   Indo-Tibetan Border Police.
- (e)   National Security Guards.
- (f)   Special Protection Group.
- (g)   Sashastra Seema Bal (SSB).
- (h)   Assam Rifles (AR).

12.   Central Investigation and Intelligence Institutions of Police Organisations:-

- (a)   Central Bureau of Investigation.
- (b)   Indian Income-tax Department.
- (c)   Directorate of Revenue Intelligence.
- (d)   Central Economic Intelligence Bureau.
- (e)   Directorate General of Central Excise Intelligence.
- (f)   National Investigation Agency.
- (g)   Narcotics Control Bureau.
- (h)   Bureau of Police Research and Development (BPRD).
- (j)   National Crime Records Bureau (NCRB).

13.   Central Forensic Institutions of Police Organisations :-

- (a)   Central Forensic Science Laboratory.
- (b)   LNJN National Institute of Criminology and Forensic Sciences (LNJN-NICFS).

State Police Organisations

14.   The controlling authority of a State Police force is the Department of the Home of the State Government. The additional chief secretary (Home) or Principal Secretary (Home), generally an Indian Administrative Service (IAS) officer, acts as the executive agency of the State Home Department.   Each state and union territory of India has a state police force, headed by a director general of police ranked officer.

15.   Under the inspector general are a number of police "Ranges" composed of three to six districts, headed by Deputy Inspectors General. District police headquarters are commanded by Superintendents of Police (SP).

16.   **Other Elements of State Police & Hierarchy**.   Each district is divided into sub-divisions or circles headed by a Deputy Superintendent of police (DSP).   Each sub-division is made up of several police stations under the command of an Inspector of police.   In rural areas, a Sub-inspector is in-charge of a police station.

BADGES OF RANKS, HONOURS AND AWARDS IN ARMED FORCES, POLICE AND CENTRAL ARMED POLICE FORCES

17.   The Indian Armed Forces, Central Armed Police Forces and Police organisations consist of three services, the Indian Army, Indian Navy, and Indian Air Forces, eight Central Armed Police Forces and other Police organisations in our nation.   All the services have distinct badges of ranks with different colours which

help in identifying soldiers / policemen and their commanders. The ranks of badges are given as per professional competence and length of service in Armed Forces and in other police organisations.

BADGES OF RANK - ARMY

Commissioned Officers - Army

18. Commissioned Officers of Indian Army are those who command their troops from Platoon or equivalent up to armies and hold Presidents commission. Field Marshal is an honorary rank and is given to a General for his valuable services. The badges of rank worn by commissioned officers are as shown:-

Junior Commissioned Officer (JCO) Army

19. The second set of officers in the Army is Junior Commissioned Officers. The soldiers who become JCOs come up through the Non-Commissioned Officer's ranks. The badges of rank worn by the JCOs are as shown:-

Non-Commissioned Officer (NCO) Army

20. The third set of officers is the Non-Commissioned Officers (NCOs). These ranks are given to jawans according to their merit and seniority. The badges of ranks for NCOs are as shown:-

BADGES OF RANK- NAVY

Commissioned Officers Navy

21. Admiral of the Fleet is an honorary rank given to an Admiral for his invaluable services and will continue to serve the rest of his term with the honorary rank. This rank has not been used in the Indian Navy. The badges of rank worn by Naval Officers are: -

Junior Commissioned Officers (JCOs) Navy

22. The badges of rank worn by Junior Commissioned Officers (JCOs) Navy are as shown:-.

Non-Commissioned Officers (NCOs) Navy

23.   The badges of rank worn by the NCOs are as shown:-

BADGES OF RANK- AIR FORCE

Commissioned Officers Air Force

24.   Marshall of the Air Force is an honorary rank given to an Air Chief Marshall for his invaluable services.   In recognition of his services the Government of India gave the rank of Marshall of the Air Force to Arjan Singh in January 2002 making him the first and the only "Five Star" rank officer with the Indian Air Force. The badges of rank worn by officers are as shown:-
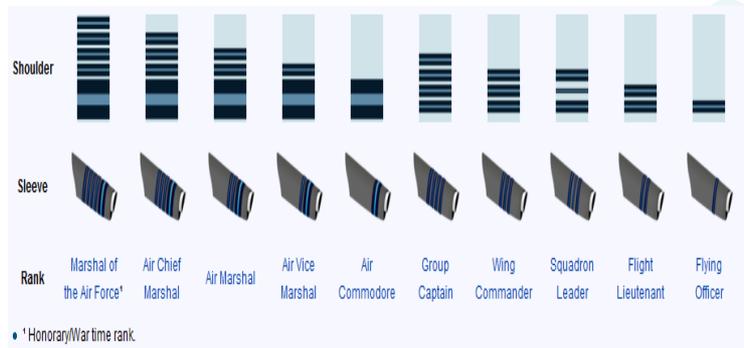
Junior Commissioned Officers (JCOs) Air Force

25.   The badges of rank worn by these Officers are as shown:-

Non-Commissioned Officers (NCOs) Air Force

26.   The badges of rank worn by these NCOs are as shown:-

BADGES OF RANK- POLICE & CENTRAL ARMED POLICE FORCES

27.   The badges of ranks worn by CAPF & Police are as shown:-
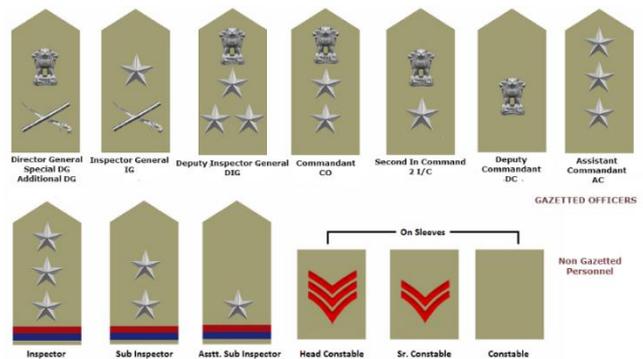
HONOURS AND AWARDS

28.   The Armed Forces, Police and CAPF are also awarded decorations, honours and awards for extraordinary contribution, bravery and courage, as well as for distinguished service during times of war and peace. For the purpose of classification, Civilian's category, Armed Forces, Police and Central Armed Police Forces honours and awards can be divided into following categories: -

- (a)   Gallantry Awards of Armed forces.
- (b)   Padma Awards.
- (c)   President's Police Medal (PPM) for Distinguished Service.
- (d)   President's Police Medal (PM) for Meritorious Service.
- (e)   Distinguished Service Awards of Armed Forces.
- (f)   Governor's Police Medals for Gallantry & Distinguished Service.
- (g)   Union Home Minister's Medal for Excellence in Investigation.
- (h)   Antrik Suraksha Seva Medal.
- (j)   Police Special Duty Medal.
- (k)   Parakram Padak.
- (l)   Kabir Puraskar
- (m)   Communal Harmony Awards
- (n)   Fire Service Medals
- (o)   Home Guard & Civil Defence Medals.

29.   These awards are given on occasions of various felicitation ceremonies organized at Rashtrapati Bhawan, New Delhi, on Republic Day and on various occasions.   Here are the awards given to Armed Forces, CAPF & Police enumerated below: -

30.   **Gallantry Awards in the Face of Enemy (War Time**).

- (a)   Param Vir Chakra.
- (b)   Maha Vir Chakra.
- (c)   Vir Chakra.
- (d)   Sena Medal / Nau Sena Medal / Vayu Sena Medal.
- (e)   Mention in Dispatch.
- (f)   Chief of Staff Commendation Card.

31.   **Gallantry Awards Other than in the Face of Enemy (Peace Time)**.

- (a)   Ashoka Chakra.
- (b)   Kirti Chakra.
- (c)   Shaurya Chakra.
- (d)   President's Police Medal (PPM) for Gallantry.
- (e)   President's Police Medal (PPM) for Distinguished Service.

32.   **Non-Gallantry Awards /Distinguished Service Awards**.

- (a)   Sarvottam Yudh Seva Medal.
- (b)   Param Vishisht Seva Medal.
- (c)   Uttam Yudh Seva Medal.
- (d)   Ati Vishisht Seva Medal.
- (e)   Yuddh Seva Medal.
- (f)   Vishisht Seva Medal.

ROLE AND TASK OF ARMY, POLICE & CAPF

33.   The primary role of the services is to ensure national security and territorial integrity, defending the nation from external aggression and internal threats, and maintaining peace and security within its borders.   It conducts humanitarian rescue operations during natural calamities and other disturbances, and also requisitioned by the government to cope with internal threats.   In a similar manner primarily central armed police forces and police are meant for national security and for maintenance of public order as well as peace and harmony with in country.   During the time of need the Armed Forces are employed in Aid to Civil Authorities if situation is beyond control of CAPF and police forces. The Army since independence has taken part in the following major operations:-

- (a)   Kashmir Operations against Pakistan 1947-48.
- (b)   Sino-Indian War in NEFA (Arunachal) and Ladakh 1962.

(c)   Indo-Pak war 1965.
(d)   Indo-Pak war 1971.
(e)   Sri Lanka 1987-1990 (Operation Pawan).
(f)   Kargil War 1999 (Operation Vijay).

Command and Control

34.   The Integrated Headquarters of Ministry of Defense (Army) functions under the Ministry of Defence and is located at New Delhi. Command HQs have field formations and static formations under them to execute the role and tasks assigned.

Field Formations

35.   These are the field forces for the battle, grouped into following three categories:-

(a)   **Corps**.   Commanded by an officer of the rank of Lieutenant General. It has 3-4 Divisions under its command. The Corps are of two types depending on their role:-

(i)   "Holding" (Defensive) Corps.
(ii)   "Strike" (Offensive) Corps.

(b)   **Divisions**.   Commanded by an officer of the rank of Major General. It has 3-4 Brigades under its command.

(c)   **Brigades**.   Commanded by an officer of the rank of Brigadier. It has 3-4 Battalions under its command. Each Battalion has six companies commanded by a Company Commander.

Static Formations

36.   Area Headquarters, Sub Area Headquarters and Station Headquarters are commanded by an officer of the rank of Lieutenant General, Major General and Brigadier respectively. These formations are extended all over the country and look after the infrastructural assets, lines of communication logistics, administration and all civil-military matters.

FIGHTING ARMS, ROLE AND TASKS

Armoured Corps

37.   The Armoured Corps is one of the combat arms of the Indian Army. Formed in 1947, it has battle tanks which provide the mobility and fire power. It currently consists of 63 armoured regiments; including the president's bodyguards. Armour is best suited for present day battle field environment because of its mobility, fire power, protection and shock action. An Armoured Regiment has 45 tanks. In India we have Tank T-72, Tank T-90, MBT Arjun and Bhishma tanks.

38.   **Role & Tasks**.   To destroy the enemy by relentless mobile and offensive action in both offensive as well as defensive operations.

Infantry

39.   Infantry is the main combat arm, best arm suited for close battle. Its role is to close in with the enemy and destroy him or capture his territory. In Defence, they hold the ground against all types of attack. They also take part in counter insurgency and counter terrorist operations. Infantry also provides assistance in aid to civil authorities when called for.

40.   **Role & Task**. Infantry is essential arm of close combat. Its role in attack is to close in with the enemy and destroy or capture him; in defence it is to hold ground against all forms of attacks by the enemy.

Mechanised Infantry

41.   It is infantry with more mobility and fire power. Mechanized Infantry operates in armoured personnel carrier (APC) which has enough protection against small arms fire. They operate along with Armour in battle field. Equipments used are BMP- I and II.

42.   The concept of mechanised infantry is based on the need to provide protection with added mobility, radio communications and firepower to enable the infantry to operate effectively in mobile operations with armour.

Role & Tasks of the Mechanized Infantry

43.   **Primary Role**.   The primary role of the mechanised infantry is to close with the enemy in coordination with armour and destroy or capture the enemy.

44.   **Secondary Role**.

    (a)   Destroy the enemy over run by armour.
    (b)   Hold ground temporarily.
    (c)   Reconnaissance.
    (d)   For counter infiltration and against parachute and heliborne landings.

SUPPORTING ARMS, ROLE AND TASKS

Artillery

45.   The role of Artillery is to provide such fire power in the battle area that enemy neither interferes with our operations, nor develops his own effectively. It comprises of light, medium and field guns, howitzers, missiles, mortars, multi barrel rocket launchers and missiles.

46.   **Role & Tasks**.   The tasks of Arty are as follows: -

    (a)   To provide heavy volume of fire at long ranges.
    (b)   To provide fire power to advancing Infantry in offensive operations and defensive support to keep enemy head down with shocking firepower.
    (c)   To provide fire power to fighting arms.
    (d)   Surveillance and Target Acquisition.

Army Air Defence

47.   Army Air Defence is equipped with air defence guns and Short and Medium range surface to air missile systems. Along with Air force it provides air defence to mobile forces, Vulnerable Areas and Vulnerable Points.

48.   **Role & Tasks**.   The tasks of Air Defence are :-

    (a)   To safeguard against hostile aircrafts, helicopters and drones attacking high value targets including Fighting Arms.

    (b)   To ensure early detection and destruction of enemy aircrafts.

Army Aviation Corps

49.   **Role & Task**.   The role of Army Aviation corps is to carry out recce and observation and also to provide commanders and staff, rapid means of communication for liaison visits and reconnaissance. It is ideally suited for evacuation of battle casualties.

Corps of Engineers

50.   It is one of the oldest supporting arms of the Indian army.   The role of Engineers in War is to provide support for offensive and defensive operations in mine warfare, bridging, demolition, constructions of field fortifications and operational roads/tracks.

51.   **Role & Tasks**. The task of Engineers are as follows :-

(a) To provide mobility to own forces by constructing bridges, tracks and helipads; on the other hand the Corps denies the same to the enemy by creating obstacles such as laying mine-fields and carrying out demolition of bridges.

(b) To lay mine fields during War and also removing the mines and maintenance of records thereof.

(c) To create water sources during operations.

(d) To help in transportation of explosives and undertake bomb disposal activities during peace and war.

Corps of Signals

52. **Role & Task** They are the communicators of Indian Army and provide Radio, Radio Relay, data and line communication and establish Signal Centres during war and peace. It also monitors enemy's communication systems.

Intelligence Corps

53. **Role & Task**. The main task of Intelligence Corps is to gather intelligence of the enemy and prevent the leakage of own information to the enemy.

SUPPORTING SERVICES, ROLE & TASKS

54. The following are Supporting Services, as they provide logistical support to fighting & Supporting Arms:-

Corps of Electrical and Mechanical Engineering

55. **Role & Tasks.** The major role of EME is repair, recovery and maintenance of all vehicles, arms, electrical, electronic and mechanical equipment.

Army Service Corps

56. **Role & Tasks.** ASC is responsible for: -

(a) The supply and provision of ration to the Army during peace and war.

(b) To provide fuel oil and lubricants to the entire Army.

(c) To provide transport for conveyance of troops during movement.

(d) Transportation of heavy equipment and machineries including ammunition during war.

Army Medical Corps

57. **Role & Tasks**. It provides medical facilities during war as well as in peace stations to troops and their families.

Army Dental Corps

58. **Role & Tasks**. This Corps provides dental hygiene and treatment to the soldiers.

Military Nursing Service

59. **Role & Tasks**. They provide nursing and care to the sick and wounded army personnel.

Army Ordinance Corps

60. **Role & Tasks**. It is responsible to provide equipment support to the Army during war & peace which are not the responsibility of ASC, AMC and that of ENGINEERS.

Remount and Veterinary Corps

61. **Role & Tasks**. It deals with caring and training of animals. It is employed with Army Supply Corps for transportations of Weapons, ammunitions, explosives, stores in forward area where vehicles cannot be employed economically.

Military Farms

62.   **Role & Tasks**.   They provide the Indian Army with dairy products and fodder for the animals maintained by the Army.

Army Education Corps

63.   **Role & Tasks**. AEC is responsible for imparting Military & Civil education to troops which helps them in passing promotion exams required in their career and profession. They impart higher education to JCOs and NCOs.

Corps of Military Police

64.   **Role & Tasks**.   Its role is to provide security to Army personnel and their families and maintain law and order in the Army area. It also helps in movement of men, material and vehicles during peace or war.

Judge Advocate General Branch

65.   **Role & Tasks**. Deals with Justice System and legal matters relating to all Arms, Services and branches of the Armed Forces.

Military Engineering Services

66.   **Role & Tasks**. They are responsible for the design, construction and maintenance of all works, buildings, airfields, dock installations and also with accessory services for the Army.

Border Roads Organisation

67.   **Role & Tasks**. Their main purpose is to create national highways, airfields, buildings and bridges.

Army Pioneer Corps

68.   **Role & Tasks**. Civilian labour is either not available or it is not required for security reasons. The Pioneer Corps provides disciplined and well trained manpower for load carriage. They are mostly committed in operational areas during war.

ROLE AND TASK OF CENTRAL ARMED POLICE FORCES & POLICE

Central Armed Police Forces & Other Police Agencies

69.   The central agencies are controlled by the central government.   The majority of federal law enforcement agencies are controlled by the Ministry of Home Affairs.   The head of each of the federal law enforcement agencies is always an Indian Police Service (IPS) officer and in case of Assam Rifles it is regular army officer.

70.   **Assam Rifles (AR)**.   Assam Rifles (AR) is the oldest paramilitary force in India whose primary role is to protect part of India's North eastern borders and also the internal security also.   It also maintained law and order in the tribal areas.   The organisation is headed by DGAR appointed from Serving Regular Army cadre.   The personnel are recruited from all over India in all ranks and Officers are from the regular army and also from Assam Rifles cadre.

71.   **Border Security Force**.   The Indian Border Security Force (BSF) is responsible for policing India's land borders during peacetime and preventing trans-border crimes along Pakistan and Bangladesh.   It is a central police force operating under the MHA.   It performs a variety of duties ranging from VIP security to election duties, from guarding of vital installations to counter-Naxal operations etc.

72.   **Central Industrial Security Force**.   The primary task of CISF is providing industrial security. The Central Industrial Security Force (CISF) guards industrial installations around the country owned by the Central government as well as securing seaports and airports.   The CISF also provides security to certain NGOs. They provide security for atomic power plants, space installations, mints, oil fields and refineries, major ports,

heavy engineering plants, steel plants, barrages, fertilizer units, airports, hydroelectric/thermal power plants and other installations partially or wholly run by the government.

73. **Central Reserve Police Force**. The Central Reserve Police Force (CRPF) is one of the largest Central Police organizations in the world. Its main objective is to assist and help states and union territories' law enforcement agencies in maintaining law and order and to contain insurgency. It is also deployed as an anti-terrorist unit in various regions. It is even operating abroad as part of United Nations peacekeeping missions. It performs a variety of duties ranging from VIP security to election duties, from guarding of vital installations to the counter-Naxal operations etc.

74. **Indo-Tibetan Border Police**. The Indo-Tibetan Border Police (ITBP) is responsible for security along the Indo-Tibetan Border. The ITBP personnel are trained in the fields of law and order, military tactics, jungle warfare, counter-insurgency, and internal security ITBP is an elite and agile force. It is involved in war-time and peace-time duties at the border and the surrounding areas.

75. **National Security Guards**. The National Security Guards (NSG) is a commando unit originally created for counter-terrorism and hostage rescue missions. Raised in 1986, it is popularly known as the "Black Cats" for the uniform worn by its operators. The NSG draws its core members from the Indian Army and the balance support staff from various central police units. It is India's premier counter-terror outfit and is typically deployed in situations that would be beyond the capabilities of regular police units. An NSG team with a dedicated transport aircraft is always stationed at Palam airport in New Delhi, ready to deploy in 30 minutes. The NSG has also been increasingly tasked with the protection of VIPs.

76. **Special Protection Group**. The Special Protection Group (SPG) is the executive protection agency of the Government of India. It provides the security 24 by 7 all over India to Prime Minister including ex-prime Ministers and their Family Members at any location across India.

77. **Sashastra Seema Bal (SSB)**. The Sashastra Seema Bal, formed in the year 1963, deployed at the Indo-Nepal and Indo-Bhutan borders. The SSB personnel are trained in the fields of law and order, military tactics, jungle warfare, counter-insurgency, and internal security.

OTHER CENTRAL INVESTIGATION AND INTELLIGENCE AGENCIES

78. **Central Bureau of Investigation**. The Central Bureau of Investigation (CBI) is India's premier investigative agency, responsible for a wide variety of criminal and national security matters. The CBI is a formal and authorized agency of the Central government to carry out policing all across the nation. The Central Bureau of Investigation is controlled by the Department of Personnel and Training in the Ministry of Personnel, Public Grievances and Pensions of the Government of India usually headed by the Prime Minister as the Minister of Personnel, Public Grievances and Pensions. It is India's official Interpol unit. The CBI draws its officers from the IPS and IRS officers around the country.

79. **Indian Income-tax Department**. The Tax Department is controlled by the Department of Revenue in the Ministry of Finance of the Union Government headed by a Union Minister who reports directly to the Prime Minister. The officials of the Board in their ex-officio capacity also function as a Division of the Ministry dealing with matters relating to levy and collection of direct taxes and matters of tax evasion and revenue intelligence.

80. **Directorate of Revenue Intelligence**. The Directorate of Revenue Intelligence (DRI) is an intelligence-based organization responsible for the coordination of India's anti-smuggling efforts.

81. **Central Economic Intelligence Bureau**. The Central Economic Intelligence Bureau (CEIB) is an Indian intelligence agency responsible for gathering information and monitoring the economic and financial sectors for economic offenses and warfare

82. **Directorate General of Central Excise Intelligence**. The Directorate General of Central Excise Intelligence (DGCEI) earlier known as the Directorate General of Anti-Evasion is an intelligence-based organization responsible for the detection of tax evasion cases related to Central Excise Duty and Service tax.

83. **National Investigation Agency**. National Investigation Agency (NIA) is the central agency to combat terror in India. The agency is empowered to deal with terror-related crimes across states without special permission from the states.

84.   **Narcotics Control Bureau**.   The NCB is responsible for anti-narcotic operations all over the country.   It checks the spread of contraband as well as the cultivation of drugs.

85.   **Bureau of Police Research and Development (BPRD)**.   The Bureau of Police Research and Development (BPRD) was set up on 28 August 1970 in furtherance of the objective of the Government of India for the modernization of Police Forces.   It is involved in research, relating to problems confronting the Indian police, the training of different ranks of Police in India, and the introduction of technology at both federal and state levels.

86.   **National Crime Records Bureau (NCRB)**.   The National Police Commission in 1979 recommended the creation of a "Nodal Agency" which suggested the maintenance of criminal records at all the police stations in the country and to create shareable databases at police stations and districts and at state and federal Level.

87.   **Central Forensic Science Laboratory**.   The Central Forensic Science Laboratory (CFSL) is a wing of the Indian Ministry of Home Affairs, which fulfills the forensic requirements in the country.   It houses the only DNA repository in South and Southeast Asia.   There are eight central forensic laboratories in India, at Hyderabad, Kolkata, Bhopal, Chandigarh, Pune, Nagpur, Gauhati, and New Delhi.   CFSL Hyderabad is centre of excellence in chemical sciences, CFSL Kolkata in biological sciences and CFSL Chandigarh in physical sciences.   These laboratories are under the control of the Directorate of Forensic Science (DFS) of the Ministry of Home Affairs. The laboratory in New Delhi is under the control of the Central Bureau of Investigation (CBI).

88.   **National Institute of Criminology and Forensic Sciences**.   The National Institute of Criminology and Forensic Science (formerly the "Institute of Criminology and Forensic Science") came into existence in 1972 to look into the applied aspects of education, training and research in the fields of Criminology and Forensic Science for Criminal Justice System in India, headed by senior IPS officers.   The Institute also has a capacity for training and teaching roles for cybercrime investigations, conducts research in various aspects of criminology and forensics including cyber forensics.

89.   **State Police**.   At all levels, the senior police officers in chain of command and respond to the general direction and control of designated civilian officials.   District superintendents of police (SP) are not empowered as executive magistrates, in districts, the district magistrate and collector (DM or collector), who is an IAS officer, exercises these powers, such as promulgating Section 144 of the Code of Criminal Procedure (CrPC) and granting arms licenses.

90.   **Reserved State Armed Police Forces & their Role**.   The Provincial Armed Constabulary is an armed reserve maintained at key locations in some states and active only on orders from the deputy inspector general and higher-level authorities.   Armed Constabulary are not usually in contact with the public until they are assigned to VIP duty or assigned to maintain order during fairs, festivals, athletic events, elections, and natural disasters.   They may also be sent to quell outbreaks of student or labour unrest, organized crime, and communal riots; to maintain key guard posts, and to participate in anti-terrorist operations.

91.   **Criminal Investigation Department.**   CID is constituted in each district under a deputy inspector general for the purpose of collating and distributing information regarding organized crimes.

92.   **Traffic police.**   Highway police and traffic police in the small towns come under the state police, but traffic police in the cities come under the metropolitan police and state police. The traffic police are responsible for maintaining the smooth flow of traffic and stopping offenders in the city or town, Highway Police are responsible for securing the highways and for catching speeding offenders. Accidents, registrations, vehicle data are all looked by the traffic police.

CONCLUSION

93.   The organisation of the Armed Forces, Police organisation and Central Armed Police Forces is structured in a manner to facilitate coordination of the functioning of all the services with the nucleus being the Headquarters and various formations down the chain of command in all the services. As NCC cadets and responsible youth it is must to understand these organisations, playing major role in national security, development as well as in nation building.

CHAPTER 2 : MODES OF ENTRY TO ARMY, CAPF AND POLICE

Army

1.   The Indian Army's primary mission is to ensure the national security and defence of the Republic of India from external threats and maintaining peace and security. It also provides aid to civil authorities in maintaining essential services and conduct operations during Natural calamities (earthquake, flood, drought etc.) and other disturbances such as communal riots.

Types of Commission

2.   The Army offers both Permanent and Short Service Commission. Permanent Commission (PC) is granted through the Indian Military Academy (IMA) Dehradun and Short Service Commission (SSC) is granted through Officers Training Academy (OTA) Chennai:-

     (a) **Permanent Commission.**

          (i)   NDA / AFMC - after 10+2 (Through UPSC).
          (ii)   Direct Entry (Through UPSC).
          (iii)   Engineering Graduates – TGC.
          (iv)   University Entry Scheme.
          (v)   Technical Entry Scheme 10 +2.
          (vi)   Army Cadet College Wing, after 10+2.
          (vii) SCO / PCSL Entry from Regular Army.

     (b) **Short Service Commission**.

          (i)   Non-Tech (Both Men & Women).
          (ii)   Tech (Both Men & Women).
          (iii)   NCC Special Entry (Both Men & Women).
          (iv)   Law Graduates (Both Men & Women).

Note. Details of eligibility criteria, duration and venue of training and other information is freely available through newspapers or may be obtained from www.joinindianarmy.nic.in.

ENTRY SCHEMES OFFICERS (MEN AND WOMEN)

3.   **National Defence Academy (NDA)**.

Vacancies Per Course	320 (Twice a year) Army – 208, Air Force – 70, Navy - 42
Notification Published in Employment News and leading Daily news Paper	Jun and Dec, Notified by UPSC
Eligibility Criteria	
Age	16 ½ to 19½ yrs as on first day of the month in which course is due to commence
Qualification	12th Class of 10+2 System of Education of Equivalent for Army and with Physics and Maths for AF/Navy
Marital Status	Un Married
How to Apply	Apply Online on UPSC Website as per dates given in the Notfication in the months of Jun and Dec.
Likely SSB Date	Sep to Oct for Jan Course and Jan to Apr for Jul Course
Date Commencement of Training	Jan and Jul
Training Academy	NDA , Khadakwasla, Pune
Duration of Training	3 Yrs at NDA and 1 Yr at IMA

4.   **10+2 Technical Entry Scheme (TES)**.

Vacancies Per Course	90 (Twice a year)
Notification Published in Employment News and leading Daily news Paper	Notified by DG Rtg AG's branch IHQ of MOD(Army) in May/Jun & Oct/Nov
Eligibility Criteria	
Age	16 ½ to 19½ yrs as on first day of the month in which course is due to commence
Qualification	10+2 Physics, Chemistry & Maths (aggregate 70% and above to apply)
Marital Status	Un Married
How to Apply	Apply online on Official website of DG Rtg www.joinindianarmy.nic.in as Notified in the Notification.
Likely SSB Date	Aug to Oct and Feb to Apr
Date Commencement of Training	Jan and Jul
Training Academy	OTA Gaya
Duration of Training	5 Yrs (1 Yr OTA GAYA & 4 Yrs CTWS) Permanent Commission after 4 Yrs. **Phase-I**- 01 Year Pre-commissioning Training at OTA Gaya & 03 Years at CME Pune/MCTE Mhow/MCEME Secunderabad **Phase-II**- 01 Year Post commission training at CME Pune/MCTE Mhow/MCEME Secunderabad

5.   **Indian Military Academy Direct (IMA)**.

Vacancies Per Course	200 (Twice a year).
Notification Published in Employment News and leading Daily news Paper	Notified by UPSC under the aegis of CDSE in Jul and Nov
Eligibility Criteria	
Age	19 to 24 years
Qualification	Graduation from Recognised University.
Marital Status	Un Married
How to Apply	Apply Online on UPSC Website as per dates given in the Notfication in the months of Jul and Nov.
Likely SSB Date	Aug / Sep and Feb / Mar
Date Commencement of Training	Jan and Jul
Training Academy	IMA, Dehradun
Duration of Training	1 ½ Years

6. **Officers Training Academy (Non-Technical Men)**.

Vacancies Per Course	175 (Twice a year)
Notification Published in Employment News and leading Daily news Paper	Notified by UPSC under the aegis of CDSE in Jul and Nov
Eligibility Criteria	
Age	19 to 25 yrs
Qualification	Graduation from Recognised University.
Marital Status	Un Married
How to Apply	Apply Online on UPSC Website as per dates given in the Notfication in the months of Jul and Nov.
Likely SSB Date	Nov / Dec and May / Jun
Date Commencement of Training	Oct and Apr
Training Academy	OTA Chennai
Duration of Training	49 Weeks

7. **Judge Advocate General (JAG) Men**.

Vacancies Per Course	10(As Notified)(Twice a year)
Notification Published in Employment News and leading Daily news Paper	Notified by Directorate General Recruiting / AG Branch in Jul/Aug and Jan/Feb
Eligibility Criteria	
Age	21 to 27 years
Qualification	Graduate with LLB with 55% marks. Eligible for Registration with Bar Council of India / State.
Marital Status	Un Married
How to Apply	Apply online on Official website of DG Rtg www.joinindianarmy.nic.in as Notified in the Notification.
Likely SSB Date	Dec / Jan and Jul / Aug
Date Commencement of Training	Apr and Oct
Training Academy	OTA, Chennai
Duration of Training	49 Weeks

8. **NCC (Spl) Entry Men**.

Vacancies Per Course	50 (Twice a Year)
Notification Published in Employment News and leading Daily news Paper	Notified by Directorate General Recruiting / AG Branch in Jun and Dec
Eligibility Criteria	
Age	19 to 25 years
Qualification	Graduate with 50% Aggregate marks, Two Years' service in NCC Senior Div Army with minimum 'B' Grade in 'C' Certificate Exam.
Marital Status	Un Married

How to Apply	Apply offline as Notified in the Notification through NCC Dte
Likely SSB Date	Dec / Jan and Jun / July
Date Commencement of Training	Apr and Oct
Training Academy	OTA, Chennai
Duration of Training	49 Weeks

9. **University Entry Scheme (UES)**.

Vacancies Per Course	60 (As Notified) (Once a Year)
Notification Published in Employment News and leading Daily news Paper	Notified by Directorate General Recruiting / AG Branch in Jun/Jul
Eligibility Criteria	
Age	18 to 24 years
Qualification	Pre Final year students of Notified Engineering Streams
Marital Status	Un Married
How to Apply	Apply online on Official website of DG Rtg www.joinindianarmy.nic.in as Notified in the Notification.
Likely SSB Date	Nov to Feb
Date Commencement of Training	Jul
Training Academy	IMA, Dehradun
Duration of Training	One Year

10. **Technical Graduate Course (TGC) Engineers**.

Vacancies Per Course	60 (As Notified) (Twice a Year)
Notification Published in Employment News and leading Daily news Paper	Notified by Directorate General Recruiting / AG Branch in Mar/Apr and Sep/Oct.
Eligibility Criteria	
Age	20 to 27 years
Qualification	BE / B Tech in notified streams of Engineering
Marital Status	Un Married
How to Apply	Apply online on Official website of DG Rtg www.joinindianarmy.nic.in as Notified in the Notification.
Likely SSB Date	Mar / Apr and Sep / Oct
Date Commencement of Training	Jan and Jul
Training Academy	IMA, Dehradun
Duration of Training	One Year

11.   **Short Service Commission Tech (Men)**.

Vacancies Per Course	100 (As Notified) (Twice a year)
Notification Published in Employment News and leading Daily news Paper	Notified by Directorate General Recruiting / AG Branch in Jun / Jul and Dec/Jan
Eligibility Criteria	
Age between	20 to 27 years
Qualification	Engineering Degree in notified stream
Marital Status	Un Married
How to Apply	Apply online on Official website of DG Rtg www.joinindianarmy.nic.in as Notified in the Notification.
Likely SSB Date	Dec-Jan and Jun-Jul
Date Commencement of Training	Apr and Oct
Training Academy	OTA, Chennai
Duration of Training	49 Weeks

12.   **Army Education Corps (AEC) Men**.

Vacancies Per Course	20 (As Notified) (Twice a Year)
Notification Published in Employment News and leading Daily news Paper	Notified by Directorate General Recruiting / AG Branch in Mar/Apr and Sep/Oct
Eligibility Criteria	
Age	23 to 27 years
Qualification	MA / MSc in 1st or 2nd division in notified subjects from recognised university.
Marital Status	Married and Un Married
How to Apply	Apply online on Official website of DG Rtg www.joinindianarmy.nic.in as Notified in the Notification.
Likely SSB Date	Mar / Apr and Sep / Oct
Date Commencement of Training	Jan and Jul
Training Academy	IMA, Dehradun
Duration of Training	One Year

13.   **Army Cadet College (ACC)**.

Vacancies Per Course	75 (Twice in a Year)
Tentative Month of Publication of Notification	Notified by MP Directorate / AGs Br through Units in Mar and Aug
Eligibility Criteria	
Age	20 to 27 years , minimum service of two years one can apply
Qualification	10+2 Pattern Class with 12th pass or Equivalent. Should have qualified ACC written test
Marital Status	Unmarried / Married
Likely Date of SSB	Sep to Nov for Jan Course Mar to May for Jul Course
Training Academy	ACC Wing at IMA, Dehradun

| Duration of Training | Four Years (Three Years in ACC Wing & One Year at IMA) |

14. **Permanent Commission (PC SL)**.

Vacancies Per Course	100 (Once in a Year)
Tentative Month of Publication of Notification	Notified by MP Dte / AGs Br through Units in Apr and Jul
Eligibility Criteria	
Age	Maximum age 42 years, 45 years for Engineers & 45 years for IOB Minimum service 10 years
Qualification	Matric & Above
Marital Status	Unmarried / Married Serving JCOs / NCOs excluding Sepoys
Likely Date of SSB	Sep and Oct for Jul Course
Training Academy	AEC Centre & College, Pachmarhi & IMA, Dehradun
Duration of Training	Eight Weeks at AEC Centre & College, Pachmarhi & Four Weeks at IMA

15. **Special Commissioned Officer (SCO)**.

Vacancies Per Course	100 (Twice in a Year)
Tentative Month of Publication of Notification	Notified by MP Directorate / AGs Br through Units in Apr and Jul
Eligibility Criteria	
Age	Between 30 to 35 years. minimum service of five years can apply
Qualification	Matric with One Year Diploma or above
Marital Status	Unmarried / Married
Likely Date of SSB	Jul/Aug for Jan Course & Nov/Dec for Jul Course
Training Academy	OTA, Gaya
Duration of Training	Eight Weeks at AEC Centre & College, Pachmarhi & One Year at OTA, Gaya

16. **Territorial Army (TA)**.

Vacancies Per Course	Notified by Line Directorate (Twice in a Year)
Tentative Month of Publication of Notification	Notified by TA Directorate
Eligibility Criteria	
Age	18 to 42 years
Qualification	Graduate from a recognised university
Marital Status	Unmarried / Married
Likely Date of SSB	Aug / Sep & May / Jun
Training	**Recruit Training.** 30 days under TA Battalion. **Annual Training Camp**. Two calendar month in each training year. **Post Commission Training**. Three month in IMA within two years of commissioning.

17.   **Remount & Veterinary Corps (RVC)**.

Vacancies Per Course	Notified by Line Directorate
Tentative Month of Publication of Notification	Nov / Dec , Notified by RVC Directorate
Eligibility Criteria	
Age	21- 32 years
Qualification	BVSc & AH
Marital Status	Unmarried / Married
Likely Date of SSB	Sep / Oct
Training Academy	RVC, Meerut
Duration of Training	Three months

18.   **Army Medical Corps (Non-Technical)**.

Vacancies Per Course	Notified by Line Directorate
Tentative Month of Publication of Notification	Notified by AMC Directorate
Eligibility Criteria	
Age	Max 42 years
Qualification	Minimum Matric
Marital Status	Unmarried / Married
Likely Date of SSB	Nov / Dec
Training Academy	AMC Centre & College.
Duration of Training	Three months

19.   **Army Postal Service (APS)**.

Vacancies Per Course	Notified by Line Directorate
Tentative Month of Publication of Notification	Notified by APS Directorate
Eligibility Criteria	
Age	Max 45 years
Qualification	Minimum Matric
Marital Status	Unmarried / Married
Likely Date of SSB	Sep /Oct

WOMEN ENTRY SCHEMES

20.   **Short Service Commission (Non-Technical) Women**.

Vacancies Per Course	12 (Twice a year)
Notification Published in Employment News and leading Daily news Paper	Notified by UPSC under the aegis of CDSE in July and Nov

Eligibility Criteria	
Age	19 to 25 years
Qualification	Graduation from Recognized University.
Marital Status	Un Married
How to Apply	Apply Online on UPSC Website as per dates given in the Notfication in the months of Jul and Nov.
Likely SSB Date	Jun / July and Nov / Dec
Date Commencement of Training	Oct and Apr
Training Academy	OTA Chennai
Duration of Training	49 Weeks

21. **NCC Special Entry Scheme (Women)**.

Vacancies Per Course	Four (Twice a year)
Notification Published in Employment News and leading Daily news Paper	Notified by Directorate General Recruiting / AG Branch in Jun and Dec
Eligibility Criteria	
Age	19 to 25 years
Qualification	Graduate with 50% Aggregate marks, Two Years service in NCC Senior Div Army with minimum 'B' Grade in 'C' Certificate Exam.
Marital Status	Un Married
How to Apply	Apply online as Notified in the Notification through NCC Dte.
Likely SSB Date	Dec / Jan and Jun / July
Date Commencement of Training	Apr and Oct
Training Academy	OTA, Chennai
Duration of Training	49 Weeks

22. **Short Service Commission for Women (SSCW) JAG**.

Vacancies Per Course	Four (As Notified) (Twice a year)
Notification Published in Employment News and leading Daily news Paper	Notified by Directorate General Recruiting / AG Branch in Jul/Aug and Jan/Feb.
Eligibility Criteria	
Age	21 to 27 years
Qualification	Graduate with LLB with 55% marks. Eligible for Registration with Bar Council of India / State.
Marital Status	Un Married
How to Apply	Apply online on Official website of DG Rtg www.joinindianarmy.nic.in as Notified in the Notification.
Likely SSB Date	Dec / Jan and Jun / Jul
Date Commencement of Training	Apr and Oct
Training Academy	OTA, Chennai
Duration of Training	49 Weeks

23. **Short Service Commission (Technical) Women.**

Vacancies Per Course	20 (As Notified) (Twice a year)
Notification Published in Employment News and leading Daily news Paper	Notified by Directorate General Recruiting / AG Branch in Jun / Jul and Dec/Jan
Eligibility Criteria	
Age	20 to 27 years
Qualification	Engineering Degree in notified stream.
Marital Status	Un Married
How to Apply	Apply online on Official website of DG Rtg www.joinindianarmy.nic.in as Notified in the Notification.
Likely SSB Date	Dec-Jan and Jun-July.
Date Commencement of Training	Apr & Oct
Training Academy	OTA Chennai
Duration of Training	49 Weeks

JCOS & OTHER RANKS

24. **Educational Qualification and Age Criteria**.

Ser. No	Category	Education	Age
(1)	Soldier (General Duty) (All Arms)	Cl 10th /Matric pass with Min 45% mks in aggregate and Min 33% in each subject.	17 ½ - 21 Yrs
(2)	Soldier Technical (Technical Arms, Artillery, Army Air Defence)	(a) **Sol Tech** 10+2/Intermediate Exam pass in Science with Physics, Chemistry, Maths and English with min 50% marks in aggregate and min 40% marks in each subject. (b)**Sol Tech (Aviation & Ammunition Examiner)**10+2/Intermediate Exam pass in Science with Physics, Chemistry, Maths and English with min 50% marks in aggregate and min 40% marks in each subject.	17 ½ - 23 Yrs
(3)	Soldier Clerk / Store Keeper Technical (All Arms)	10+2/Intermediate Examination Pass in any stream (Arts, Commerce, Science) with min 60% marks in aggregate and min 50% in each subject. Securing 50% in English and Maths/Accounts/Book keeping in Class 12th is mandatory.	17 ½ - 23 Yrs
(4)	Soldier Nursing Assistant (Army Medical Corps)	10+2/Intermediate Exam pass in Science with Physics, Chemistry, Biology and English with min 50% marks in aggregate and min 40% in each subject.	17 ½ - 23 Yrs
(5)	Sepoy Pharma (Army Medical Corps)	10+2 or equivalent exam passed with Physics, Chemistry, Biology and English, qualified in D Pharma with minimum 55% marks in aggregate and registered with State Pharmacy Council/Pharmacy Council of India. Individual qualified in B Pharma with minimum 50% marks and registered with State Pharmacy Council/Pharmacy Council of India will also be eligible.	19 - 25 Yrs

(6)	Soldier Nursing Assistant Veterinary (Remount Veterinary Corps)	10+2/Intermediate Exam pass in Science with Physics, Chemistry, Biology and English with min 50% marks in aggregate and min 40% in each subject.	17 ½ - 23 Yrs
(7)	Soldier Tradesmen (All Arms except Syce, Mess Keeper and House Keeper)	i) 10th Simple Pass. ii) No stipulation in aggregate percentage but should have scored min 33% in each subject.	17 ½ - 23 Yrs
(8)	Soldier Tradesmen (Syce, Mess Keeper and House Keeper)	i) 8th Simple Pass. ii) No stipulation in aggregate percentage but should have scored min 33% in each subject.	17 ½ - 23 Yrs
(9)	Survey Automated Cartographer (Engineers)	BA/BSc with Maths. Must have also passed 12th class(10+2) or equivalent with Maths and Science as main subjects.	20-25 Yrs
(10)	Junior Commissioned Officer Religious Teacher (All Arms)	As per the Notification.	25-34 Yrs
(11)	Junior Commissioned Officer Catering (Army Service Corps)	Diploma in Hotel Management and Catering Technology.	21-27 Yrs
(12)	Havildar Education (Army Education Corps)	Group X - MA / MSc / MCA or BA / BSc / BCA / BSc (IT) with B Ed Group Y - BSc/BA/BCA/B Sc (IT) (w/o B Ed.)	20-25 Yrs
(13)	Soldier (General Duty) Women Military police	Minimum education qualification is Matric /10th/SSLC or equivalent with 45% marks in aggregate and minimum 33% marks in each subject studied at matric/10th/SSLC level, without mentioning any specific subjects. (Note: # Upper Age limit will be relaxable upto 30 yrs of age (as on date of joining training) in respect of widows of Defence personnel who have died in harness.)	17 ½ - 21 Yrs #

POLICE ORGANISATIONS AND OTHER CENTRAL ARMED POLICE FORCES

Entry into Police Services as an Officer

25.   A career in Police or Law Enforcement Service holds huge prospects for courageous and dedicated candidates. The constant increase in crime rates, and the resulting security conscious society, has increased the demand for police jobs in India and across the world. Indian Police Services (IPS) is the premier and apex police service of the country. The Indian Police Service (IPS) was formed in the year of 1948 under the cadre Ministry of Home Affairs.

26.   There are two ways of getting into Indian Police Services: -

(a)   Passing All India Civil Services Examination conducted by All India UPSC Civil Services Examinations.
(b)   Promotions from State Cadre Police Services.

27.   A candidate recruited in the IPS has to undergo a tough schedule of training at the police Academy, and within 4 to 5 years one can expect to be a Superintendent of police or Deputy Commissioner of Police. An IPS officer in due course of time may expect to rise to the levels of Director General of Police in a State or Directorate General of any Central Para Military Forces or Other investigating / law enforcement agencies. After IPS, comes the State Police Service (SPS), The Policing is a State subject and all States and Union territories has its own police forces headed by a Directorate General of Police. The recruitment to SPS is also on the same pattern as that of IPS. The only difference is that the recruitment of SPS is made by the state

public service commission concerned, through usually a combined competitive examination for state civil services. However in case of union territories, recruitment of SPS is also made by Union Public Service Commission through the civil services examinations as one of the Group 'B' services. The candidates selected for State Police Services are usually posted as Deputy Superintendent of Police (Deputy SP) or Assistant Commissioner of Police. On prescribed satisfactory service in the SPS, the officers are nominated for the IPS.

Central Armed Police Forces Cadre and Personnel

28.   The Central Armed Police Forces have their own officers and personnel to these forces are recruited directly as well as obtained from respective departments.   Recruitment is conducted mainly in three modes.

(a)   **Gazetted Officers**.   Officers in CAPFs are recruited through Central Armed Police Forces (Assistant Commandants) Examination conducted by UPSC.   They are appointed as Assistant Commandants and are Gazetted Officers generally referred as DAGOs (Directly Appointed Gazetted Officers). DEGOs (Departmental Entry Gazetted Officers) are those who have been promoted through departmental exams conducted internally for Subordinate Officers.

(b)   **Subordinate Officers**. Sub Inspectors are recruited through competitive examination conducted by Staff Selection Commission and they are referred as DASOs (Directly Appointed Subordinate Officers). DESOs (Departmental Entry Subordinate Officers) are those who have been promoted through departmental exams conducted internally for Constables, Head Constables and Assistant Sub Inspectors.

(c)   **Constables**.   Constables are recruited through competitive examination conducted by Staff Selection Commission. Apart from above modes, CAPFs conduct recruitment for specialized posts such as Engineers, Doctors etc. among DAGOs and Wireless operators, Technicians, Nursing Staff etc amongst subordinate officers and constables directly under their own authority.

Assistant Commandant

29.   Out of total vacancies of Assistant Commandants in CAPF, 50% are filled by Direct Recruitment (including 10% from SSCO), 33% by promotion from Inspector to AC & 17% by limited Departmental Competitive examination conducted by CAPFs.

Assistant Commandant (Technical)

30.   Minimum qualifications is BSc (Physics, Chemistry & Mathematics) and above with Electronics stream are deputed for appointment in the rank of Assistant Commandant (Technical) form the executive posts, after they undergo Battalion Signal Officers Course. These officers later on work in higher posts in hierarchy, apart from performing General duties in various ranks, since these Officers are also part of General Cadre of Officers.

31.   **Eligibility Criteria for Entries into Police & CAPF**.

Rank	Age	Educational Qualification	Enrolment Criteria	Relaxation	Physical Standards	
Inspector	20 to 25 years	Degree of a recognized University or equivalent	33% of SI (GD) are filled by Direct recruitment (Including 10% from ESM), 50% by promotion, 17% by limited Departmental	Relaxable for SC/ST/OBC in accordance with the instructions issued by the Govt from time to time.	Height -170 Cms	Relaxable by 5 cms for candidates from Hill areas
					Chest - 80-85 Cms	77-82 cms for STs
					Weight - Proportionate to height	-do-
Assistant Sub Inspector	18 to 25 years	Matric with 3-year Diploma in Radio and TV technology / Electronics / Tele-Communications / Computer		Relaxable for SC/ST/OBC in	Height Gen-170 Cms	Tribal/Adivasi-162.5 Cms

				Chest - 80-85 Cms	77-82Cms for STs
Radio Mechanic		/ Electrical / Mechanical / Engineering / Domestic appliance from an Institution recognized by State/Central Government or 10+2 or Intermediate or equivalent with Physics, Chemistry and Mathematics, having 50% marks in Physics, Chemistry and Mathematics from a recognized Board		accordance with the instructions issued by the Govt from time to time.	
				Weight - Proportionate to height	-do-
Head Constable (Operator)	18 to 23 years	Matric or equivalent plus two years ITI certificate in Radio and TV/ Electronics or Intermediate or 10+2 or equivalent with Physics, Chemistry and Mathematics from a recognized Board of Education		Relaxable for SC/ST/OBC in accordance with the instructions issued by the Govt from time to time.	Height -170 Cms
					Relaxable by 5 Cms for candidates from Hill areas
				Chest - 80-85 Cms	77-82Cms for STs
				Weight - Proportionate to height	-do-
Head Constable (Fitter)	18 to 23 years	Matric or equivalent plus two years ITI certificate in engine/fitter/Diesel Mechanic/Automobile/Motor Mechanic from an Institution recognized by State/Central Government or equivalent or 10+2 or Intermediate or its equivalent with Physics, Chemistry and Mathematics from a recognized Board of Education		Relaxable for SC/ST/OBC in accordance with the instructions issued by the Govt from time to time.	Height -170 Cms
					Relaxable by 5 Cms for candidates from Hill areas
				Chest - 80-85 Cms	77-82Cms for STs
				Weight - Proportionate to height	-do-
Constable	18 to 23 years	Matriculation/10th / 12th class pass		Relaxable for SC/ST/OBC in accordance with the instructions issued by the Govt from time to time.	Height (cms) Male -170 Female – 157
					Relaxable by 5 Cms for candidates from Hill areas
				Chest - 80-85 Cms	77-82Cms for STs
				Weight - Proportionate to height	-do-

32.   The aspirants seeking employment into the Police & CAPF must go through their respective websites of Police & CAPF to ascertain the latest enrolment conditions which are notified from time to time.

CONCLUSION

33.   Career prospectus into armed forces, police, other Police Investigation agencies, law enforcement agencies, Central Para Military Forces and State Police organizations are controlled and recruited by their respective head of departments by online registrations.   A candidate if desirous mandatorily has to register individual online after entering his criteria. As and when the vacancies are allotted by UPSC, Central Staff Selection Commission, State Public Service commission or any other Government agencies, intimation to individual is given via Email or in website. Service in Police organization and Central Para Military Forces is also a better career options to serve the country

SUMMARY

1.   The Indian Army has seven Commands ie. Northern, Western, Central, Southern, South Western, Eastern and Training Command.

2.   The Navy is organised into three Commands i.e Western Naval Command, Eastern Naval Command and Southern Naval Command.

3.   The Air Force is organized into seven commands i.e Western Air Command, Central Air Command, Eastern Air Command, South Western Air Command, Southern Air Command. Training Command and Maintenance Command.

4.   The Combat Commands of Indian Army comprises Corps, Division and Brigades. These are commanded by an Officer of the rank of Lieutenant General, Major General and Brigadier respectively.

5.   There are three major categories of army based on their role:-

(a)   Fighting arms   - Armour, Infantry and Meachanised Infantry.
(b)   Supporting Arms- Artillery, Engineers, Army Aviation, Army Air Defence and Signals.
(c)   Supporting Services – Army Service Corps, Army Medical Corps, Army Ordnance Corps, Corps of Electronic and Mechanical Engineers etc.

6.   Field Marshal is an honorary rank given to a General for his invaluable services rendered to our country.

7.   Admiral of the Fleet is an honorary rank given to an admiral for his invaluable services and will continue to serve the rest of his term with the honorary rank.

8.   Marshal of the Air Force is an honorary rank given to an Air Chief Marshal for his invaluable services.

9.   Indian Armed Forces render honours and awards to the personnel excelling during peace and war.

10.   **Entry into Police Services as an Officer**.

(a)   Passing All India Civil Services Examination conducted by All India UPSC Civil Services Examinations.
(b)   Promotions from State Cadre Police Services.

11.   The other Police organizations are as under:-

(a)   Border Security Force.
(b)   Central Industrial Security Force.
(c)   Central Reserve Police Force.
(d)   Indo-Tibetan Border Police.
(e)   National Security Guards.
(f)   Special Protection Group.
(g)   Sashastra Seema Bal (SSB).
(h)   Central Bureau of Investigation.
(j)   Indian Income-tax Department.
(k)   Directorate of Revenue Intelligence.
(l)   Central Economic Intelligence Bureau.
(m)   Directorate General of Central Excise Intelligence.
(n)   National Investigation Agency.
(o)   Narcotics Control Bureau.
(p)   Bureau of Police Research and Development (BPRD).
(q)   National Crime Records Bureau (NCRB).
(r)   Central Forensic Science Laboratory.
(s)   National Institute of Criminology and Forensic Sciences.
(t)   State & Union Territory Police.

12.   Other Central Investigation and Intelligence Agencies are as under:-

    (a)   Central Bureau of Investigation.
    (b)   Indian Income-tax Department.
    (c)   Directorate of Revenue Intelligence.
    (d)   Central Economic Intelligence Bureau.
    (e)   Directorate General of Central Excise Intelligence.
    (f)   National Investigation Agency.
    (g)   Narcotics Control Bureau.
    (h)   Bureau of Police Research and Development (BPRD).
    (i)   National Crime Records Bureau (NCRB).
    (j)   Central Forensic Science Laboratory.
    (k)   National Institute of Criminology and Forensic Sciences.
    (l)   State Police.
    (m)   Reserved State armed police forces & their Role.
    (n)   Criminal Investigation Department.
    (o)   Traffic police.

13.   **Central Armed Police Forces Cadre and Personnel**.

    (a)   Gazetted Officers.
    (b)   Subordinate Officers.
    (c)   Constables.

CHAPTER I: INTRODUCTION TO MAP READING

MAPS, CONVENTIONAL SIGNS, SCALE AND GRID SYSTEMS

Definition of Map

1.   A map represents selected natural and manmade features of the whole or part of the earth's surface on a sheet of paper.   It has a definite scale and correct relative geographical positions and elevations. Symbols, colour differences and contours on map help to show the physical features *i.e.* mountains, valleys and plains.   Maps show important natural and cultural features such as relief, vegetation, water bodies, cultivated land, settlements, and transportation networks, etc.   These maps are prepared and published by the National Mapping Organisation of each country.   The science of making maps is called as Cartography. For example, the Survey of India prepares the topographical maps in India for the entire country.   A map, however, has one major limitation that it cannot show everything that exists on the ground.

Conventional Signs

2   Conventional signs are symbols used to represent certain artificial or natural features/objects on the map.   Some common types of conventional signs are listed as follows in Figure - 1

(a) Roads-metalled with Km-stone.	
(b) Roads-unmetalled with Km-stone.	
(c) Cart track, camel track, mule path.	
(d) Footpath, road in bed of stream, Level crossing.	
(e) Bridges with pier sand without, Causeway, Ford.	
(f) Stream-Approx water course, canal River banks, shelving, steep 10 to 20 feet,, over 20 feet.	
(g) River beds-dry, with stream, With island and rocks.	
(h) Tidal river-shoal-submerged rocks.	
(i) Wells-lined and unlined, spring, Tanks- perennial and dry.	
(j) Kaeaz - in, flow and dry, swamp, Reeds.	
(k) Embankments, road or rail, tank cutting tunnel.	
(l) Broken ground, camping ground, Vineontrellis.	
(m) Railways, broad gauge, Double, Single (Station), under construction.	
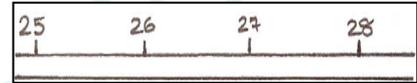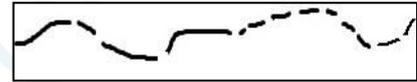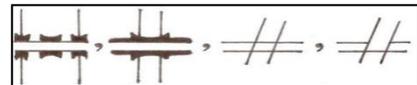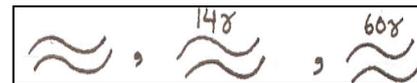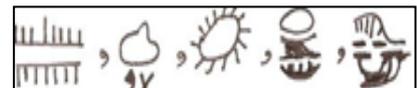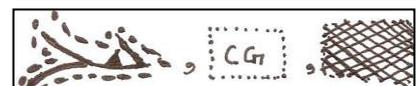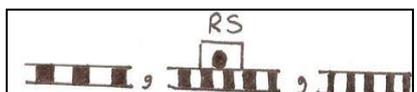
(n)	Railways other Gauges, double, Single (milestone) and under Construction.	
(o)	Light railway or tramway, Telegraphline.	
(p)	Circuit house, Dak, Travellers, Bungalow, Rest House.	CH , DB, TB , RH
(q)	Inspection bungalow, Police station, Buddhist Kyaung.	IB (Cenal) , PS, kg
(r)	Post office, telegraph office, Combined office.	PO , TO , PTO
(s)	Forest-reserved, state and protected.	RP , SR , PF.
(t)	Spaced names, Administrative, Locality, tribal.	KIKRI , DUAR, HAGIA
(u)	Villages: open, walled, ruined, Deserted antiquities.	
(v)	Huts, permanent and temporary, Fort, Tower chhatvi.	
(w)	Church, Mosque, Temple, Pagoda, Idgah, tomb.	
(x)	Dams, masonry and Earthwork-work.	
(y)	Grass high and low cane, Bamboo plantation.	
(z)	Palms, Areca, palmyra, Other conifer, other trees, scrub.	
(aa)	Contours, Form lines, Rocky slopes.	
(ab)	Cliffs-sand features.	
(ac)	Moraine, Glacier, Screen.	
(ad)	Boundary demarcated; International.	
(ae)	Boundary demarcated; Province or state.	
(af)	Boundary un-demarcated; International, province or state.	
(ag)	Boundary; district or Tribal.	
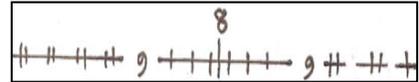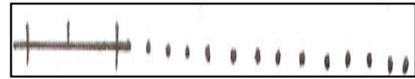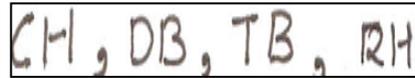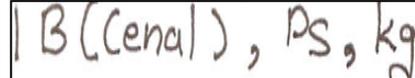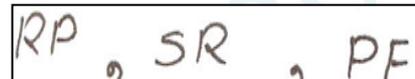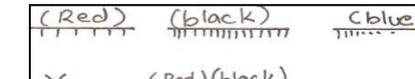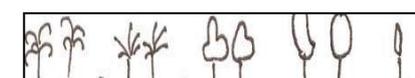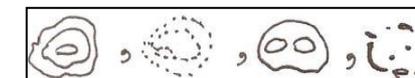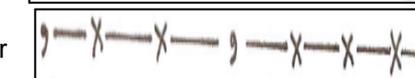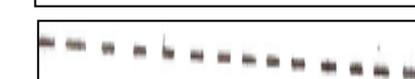
(ah)   Boundary; Sub Divisional, Tehsil, Taluka or township forest.

(aj)   Boundary pillars, surveyed, not found.

(ak)   Graves, oil wells, Mine-Battle field with year.

(al)   Heights triangulated, Bench Mark.

△ -   200, BM200

SCALES AND GRID SYSTEMS

Scale

3.   Scales help us work out distance to our destination and therefore how long it will take us to get there. The smaller the area a map covers, the larger the scale will be.   So if you have a map on a square meter of paper and the scale of the map is 1:50,000 and another map on the same size paper with a scale of 1:25,000, the area covered by the first map will be 4 times the area covered by the second map. Every map will carry a scale, not just the value of say 1:50,000, but also a depiction of that scale.

Definition

4.   Scale is the proportion which the distances between the two points on the map that relates to the distance between two points on the ground. Everything on the map must be reduced and the extent to which the size is reduced makes the scale of the map.
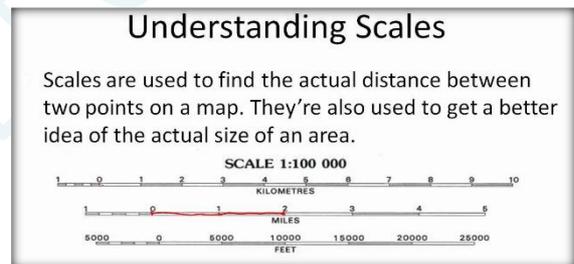
Methods of Expressing a Scale

5.   There are two methods of expressing a scale:-

(a)   **In Words**.   1 inch to 1 mile, it means that 1 inch on the map represents 1 mile on the ground.

(b)   **As a Representative Fraction (RF)**.   This is the scale expressed in the form of a fraction. If the scale of a map is given as 1/100000 this means that one unit of the map represents 100000 of the same unit on the ground. It could mean that one centimetre on the map represents 100000 cm on the ground.

Scale Line

6.   Below the scale is the scale line by means of which distance on the map can be measured. In this scale 2 cm on map is equal to 1 km on ground. An example of the scale line for a scale "2 cm to 1 km" is as shown.
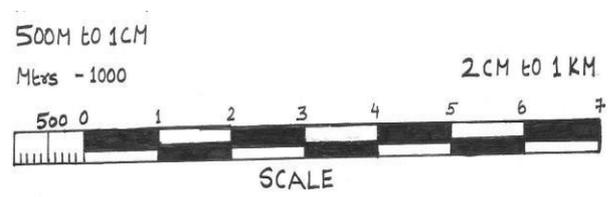
Definition of Grid and Grid Lines

7.   The 'Grid' is a systematic pattern on Earth by laying a vertical and horizontal grid over the Earth's layout.   The vertical lines are called the longitude and the horizontal lines are known as the latitude. Combinations of these lines are known as Grid Lines.

Purpose

8.   The purpose of Grid Lines is to make possible giving and reading Grid References and to facilitate measurement of bearings.

Method of Grid Reference

9. In giving a Grid Reference following rules should be remembered:-

    (a) A reference must always contain an even number of figures, normally it contains six figures.
    (b) EASTING lines are the black colour vertical lines.
    (c) NORTHING lines are the black colour horizontal lines.
    (d) Always count along the **EASTING** lines first from the WEST to EAST and then **NORTHING** from SOUTH to NORTH.
    (e) Grid References are of different types viz. Four Figure, Six Figure, Eight Figure and Ten Figure.
    (f) Mostly Six Figure Grid Reference is used.
    (g) For six figure Grid Reference the third and the Sixth figure represent the divisions of 1000 meters square to the nearest 10th part, so they have to be estimated and for these figures a slight latitude is allowed.
    (h) If a general Grid Reference is to be given or there is only one such object in one square e.g. bridge, temple, road junction then its identity and four figure grid reference would suffice.
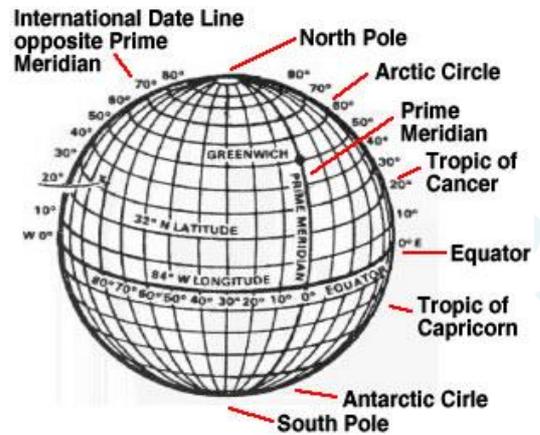
10. **Example**

    (a) As we already said when giving a four figured grid reference, always give the Easting number first and the northings number second. In the diagram, the number 4 is in square 28 across (on the horizontal) and square 54 up (on the vertical) and therefore, the four-figure grid reference is '2854'.

    (b) The other number in the square above would get the following grid:- 2755; 2855; 2754; 2854.

    (c) In order to be little more precise with your grid references, you can give a 6 figure grid reference as shown in diagram 5b.

    (d) Here, we have taken the lower right square from the previous diagram and divided it by 10 in each direction. The circle is in the four-figure grid reference square '2552', but more accurately it is 2 tenth across and 7 tenths up with in that enlarged grid square, therefore the six-figure map reference is '252527'. The circle has 6 figure grid references of 257522.
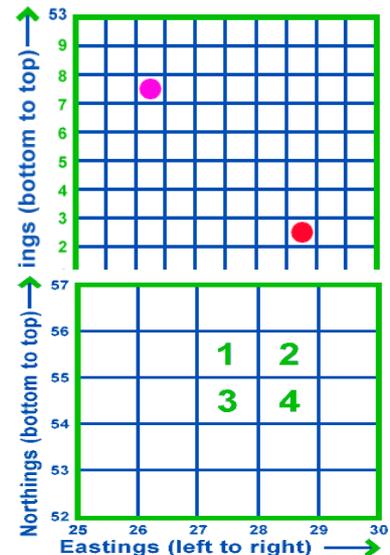
Topographical Forms and Technical Terms

11. **Topographical**. forms are names used to describe geographical features which occur on the ground. The following are more commonly used:-

S No	Topographical Forms	Samples
(a)	**Basin:** An area of fairly level ground surrounded by hills or the area drained by a river or its distributaries.	

(b)	**Col or saddle:** A narrow ridge of high land joining up to higher hills.	
(c)	**Crest:** A highest part of hill or mountain range. It is that line on the range of hills or mountains from which the ground slopes down in opposite direction.	
(d)	**Dead Ground:** Ground which because of undulations or hills is not visible to the observer.	
(e)	**Knoll:** A small isolated hill.	
(f)	**Plateau:** A table land, an elevated region of considerable extent generally of same level.	
(g)	**Ridge:** A line along a hill or range of hills or mountains from which water flows in opposite directions.	
(h)	**Spur:** A piece of high ground jutting out of range of hills into lower ground.	
(i)	**Watershed:** The line separating the water flowing in two different rivers systems, the edge of a river basin.	
(j)	**Defile:** Any feature whether natural or artificial which could cause a body of troops to contract its front. An example of a natural defile is mountain pass while bridge is an example of an artificial defile.	
(k)	**Escarpment:** The steep hill side formed by a sudden drop in the general ground level usually from a plateau.	
(l)	**Bearing:** The angle formed by a line joining two points and the North and South line. Bearings are always measured clockwise.	
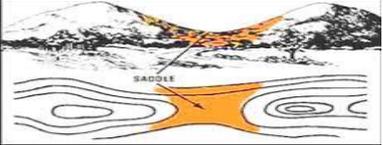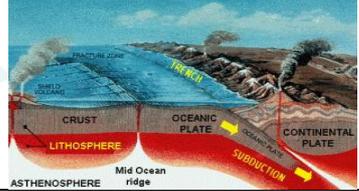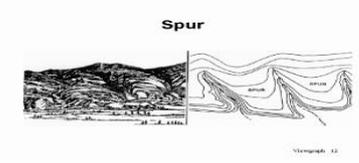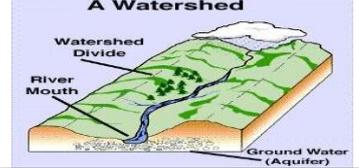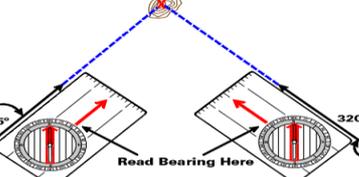
(m)	**Bench Mark:** A permanent mark usually cut into a wall recording exact height for future reference. It is marked as BM with height on Ordnance Survey Maps.	
(n)	**Gradient:** The slope of a hill expressed as a fraction.	
(o)	**Spot Height:** A point on a map whose height has been determined by Survey methods. These are usually shown as block dot with a number giving exact height above sea level in meters.	
(p)	**Trigonometric Point:** A point fixed during the triangulation at the beginning of a survey, marked on Ordnance Survey Maps by a small triangle with the height.	
(q)	**Contours:** A line drawn on the map joining up all points of equal height above sea level.	
(r)	**Grid Lines:** Lines running parallel to and at right angle to a North and south or East and West, Grid North is the direction of the North South grid lines on a map.	
(s)	**Magnetic Variation:** The difference between True North and Magnetic North.	
(t)	**Horizontal Equivalent:** The distance measured on the map between adjacent contour lines. It varies according to the nature of the relief.	
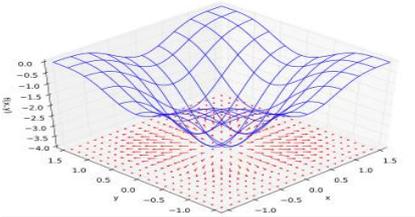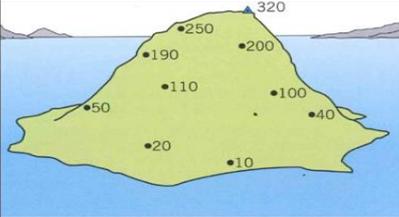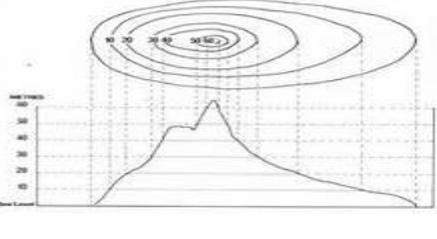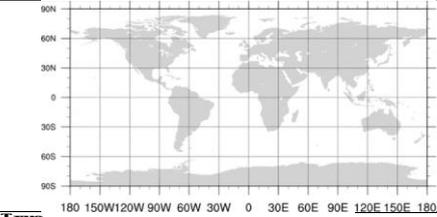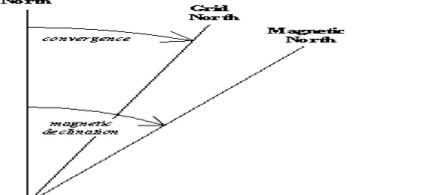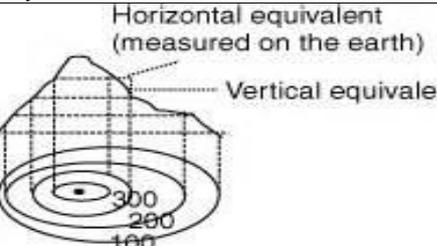
Relief, Contours and Gradients

12. **Relief** means the shape of the ground in a vertical plane. Representation of a relief on a map means showing of heights and shape of the ground above or below or datum which is normally sea level. Thus it shows the broad features and relative heights of highlands and low lands which are portrayed on the map. **Relief** is shown with means of hachure, shading, form lines, layer tints, contours, spot heights, trig heights, bench marks and relative heights.
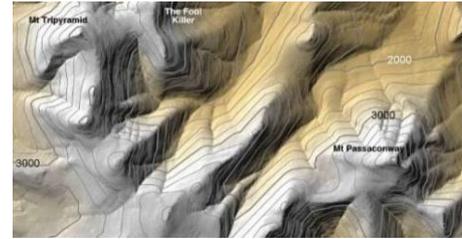
13. **Contour** is an imaginary line drawn on map showing same height from mean sea level. If you walk along a contour line you neither gain nor loose elevation. The Contours have following characteristics:-

    (a)   Contours accurately show height, shape and slope of the ground.
    (b)   Contours are shown generally in brown.
    (c)   Height is marked on every fifth contour.
    (d)   Contour lines vary in appearance.
    (e)   These lines never touch or cross each other.
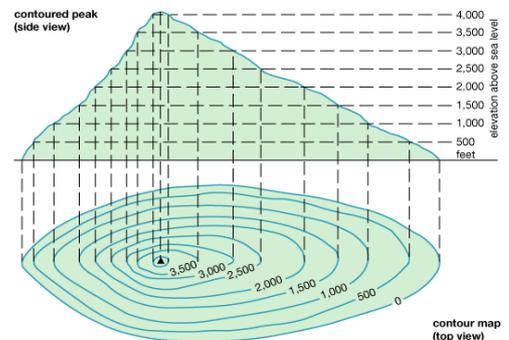
14. **Slope** means a surface of which one end or side is at a higher level than another. Contour lines represent to slope that is, closer the contour lines are, the steeper is the slope of the hill. If representation of slopes the contour lines are far apart, the slope down is gradual. The slopes are of two types, convex and concave. A convex slope is the one which bulges outwards and concave slope is the one which curves inwards.
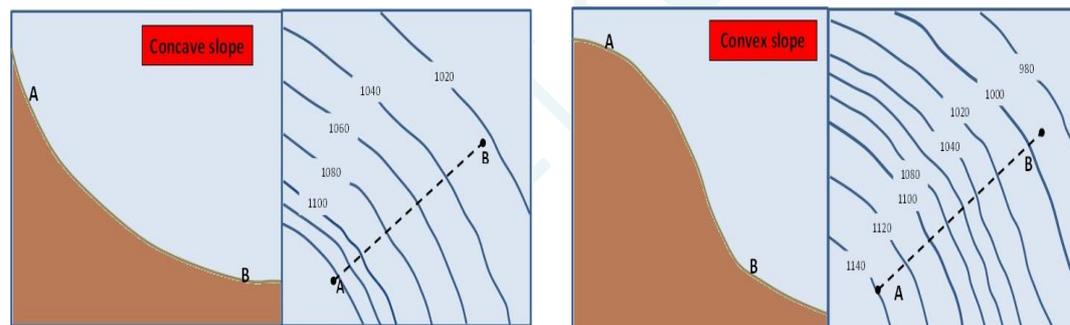
15. **Gradient** is the slope of the ground expressed as the angle the ground makes with the horizontal A gradient of 1 in 15 means that in a horizontal. The horizontal equivalent is obtained by measuring on the map and vertical interval by subtracting the contour heights. You may often need to know just how steep a piece of ground is, whether a road is too steep for a certain type of vehicle to negotiate. The gradient can be worked out quickly from a contoured map. The rise or fall of a slope can be expressed in following two ways:-

    (a)   In an Angle or Degree of Slope.
    (b)   The tangent of the Angle or Gradient.

CARDINAL POINTS AND TYPES OF NORTH

16. **Cardinal Points**. North, South, East and West are known as the cardinal points. If the North point is taken as zero degrees, East will be 90^0, South will be 180^0, and the West point forms an angle of 270^0. In addition to four Cardinal Points and four intermediate four major directions, there are eight minor directions. The names and degrees are as under:-

(a)	North North East	-	22 & ½ Degrees
(b)	East North East	-	67 & ½ Degrees
(c)	East South East	-	112 & ½ Degrees
(d)	South South East	-	157 & ½ Degrees
(e)	South South West	-	202 & ½ Degrees
(f)	West South West	-	247 & ½ Degrees
(g)	West North West	-	292 & ½ Degrees
(h)	North North West	-	337 & ½ Degrees
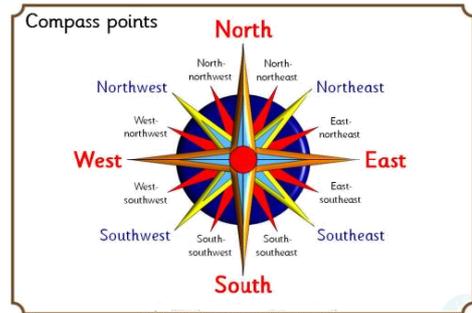
17.   **Types of North** There are three types of North :-

(a)   **True North**.   The direction of North Pole from the observer.
(b)   **Grid North**.   North as per the Grid on map.
(c)   **Magnetic North**.   It is the point to which a magnetic needle points, when freely suspended.
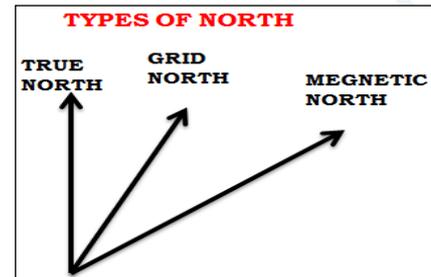
Magnetic Variation and Grid Convergence

18.   **True North is Constant**.   Magnetic North is the point to which the compass needle points. The needle does not point directly to True North, but a little West or East of True North. The point towards which the needle swings is known as Magnetic North and the difference between True North and Magnetic North is called Magnetic Variation. The amount of the Magnetic Variation depends upon two factors, time and place as at Fig below.
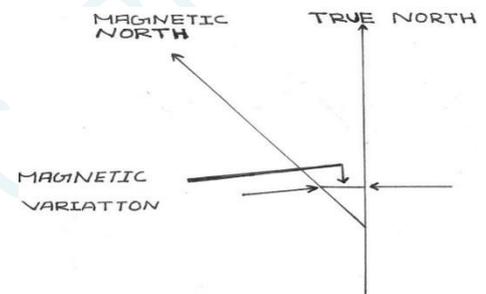
Magnetic Variation

19.   **Time**.   The Variation is not constant but is, gradually changing and even the change each year is not constant but the difference being negligible it is taken to be constant. On the top margin of a map will be found a statement giving the Magnetic Variation. To bring this up-to-date, the year of issue of the map must be noted and for every year that has passed since then the applicable change annually subtracted or added from the figure given as applicable.

20.   **Place.** The amount of the Magnetic Variation also changes in different parts of the world and indeed in different parts of the country.

Grid Convergence

21.   The angular difference between Grid and True North is called the Angle of Convergence or the Grid Convergence.

CONCLUSION

22.   Knowledge about Cardinal points and types of North is the first step towards learning map reading. This knowledge is necessary not only with respect to maintaining direction during navigation; but also comes handy in our other daily activities. A good navigator has the ability to quickly orient himself as per the cardinal directions almost naturally; this helps in getting a sense of direction and helps to find out our own position subsequently.

CHAPTER II : CONDUCT OF MAP READING

TYPES OF BEARING AND USE OF SERVICE PROTRACTOR

Bearing and Its Conversion Methods

1.   **Types of Bearing.**   The clock wise angle formed by a straight line joining two points and direction of NORTH, is called the bearing between the two points. A bearing is always measured clockwise. They are three types as given below:-

(a)   **Grid Bearing**. Measured on the map from the Grid North by the help of a protractor.
(b)   **Magnetic Bearing**. Measured from Magnetic North by the compass.
(c)   **True Bearing**. Calculated by finding out the relation of True NORTH and Grid NORTH or Magnetic NORTH.
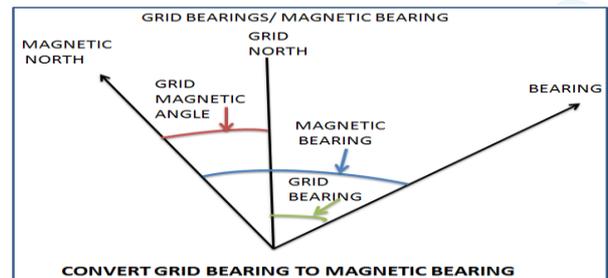
2.   **To Convert a Magnetic Bearing to a Grid Bearing**. Suppose the bearing of a certain point P is measured with a compass and is found to be 160^0. To convert this Magnetic Bearing to a True Bearing, follow under mentioned steps:-
(a)   First find out the Magnetic Variation of the Area. Magnetic Variation is given on the Top Right corner of each Map.
(b)   Suppose 5^0 is the Magnetic Variation of the area. Now subtract this Magnetic Variation to the Magnetic Bearing.
(c)   The resultant is the Grid Bearing i.e. 155^0

3.   **To Convert Grid Bearing to Magnetic Bearing**.

(a)   Measure the Grid Bearing of an object on the map with help of the service protractor from your own position.
(b)   Suppose the Grid Bearing of the object is 150^0.
(c)   Now, find out the Magnetic Variation of the area with the help of Map (Magnetic Variation is given on the Top right corner of the map). Suppose Magnetic Variation of the area is 6^0.
(d)   Now, add this Magnetic Variation to the Grid Bearing.
(e)   The resultant will be the Magnetic Bearing of the object i.e. 156^0.

4.   **Back Bearing**. It is bearing taken opposite of original position of object. The rule is that if the bearing is less than 180^0 add 180^0 and if bearing is more than 180^0 then subtract 180^0. For example:-
(a) If forward bearing of an object is 70^0 then its back bearing will be 180^0 + 70^0 = 250^0.
(b) If forward bearing of an object is 240 then its back bearing will be 240^0- 180^0= 60^0.
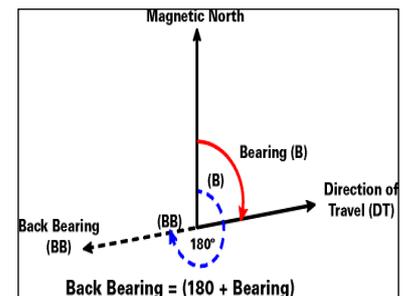

Service Protractor and its Uses

5.   The service protractor "A" Mark IV is an instrument used for plotting and measuring bearing on the map. It is an essential link between the compass and the map. With the help of the protractor the magnetic bearings have been converted to grid bearing and transferred to the map.

Description

6.   The protractor is made of cardboard or ivories (flexible material) and it measures 6 inches long and 2 inches wide.
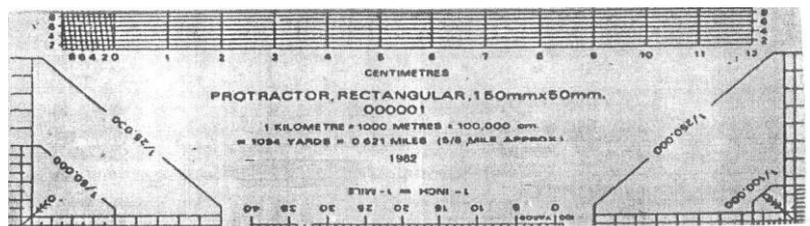
Scale of Protractors

7.   The main purpose of the protractor is to measure angles and bearings as described in the preceding

paragraphs. The protractor also shows on both its faces a number of the more common map scales. The respective scale lines are drawn out and divided into primary and secondary divisions in exactly the same way as at the bottom of the map.

Measuring a Bearing

8.   The angle can be measured by drawing a line from the graduation to the point zero on the protractor. The required angle will be the gap between this line and the line joining the zero.

Uses of Protractor

9.   The service protractor is an essential item of Map Reading.   With its help one can:-

(a)   Plot and measure bearing on paper or on a map. For bearing between 0 and 180 degrees their Zero edge must be on the LEFT and for 180 degrees -360 degrees it must be on the RIGHT.
(b)   Measure distance in inches / cm correct up to l/100th
(c)   Measure distance in yards, meters or miles on a map by using the appropriate scale
(d)   For using the diagonal scale one must use an intermediate agent. Mark off the distance to be measured on the straight edge of a paper or by means of a divider and then put the paper or divider on the diagonal scale and measure.

Prismatic Compass & Its Use and GPS

10.   The magnetic compass an instrument containing a magnetized pointer which shows the direction of magnetic north and bearings from it.   The magnetic compass is used extensively in ships, aircraft and the various branches of the army to find and maintain direction.   The Prismatic Compass is an accurate and reliable instrument of great value except during a "magnetic storm" or when subject to strong local magnetic field e.g. in polar regions.   With the prismatic compass one can measure magnetic bearing on the ground.

Types of Compass and Acquiring A Bearing

11.   **Types of Compass and Taking Bearing**. There are two types of prismatic compass, the dry and liquid filled. Liquid type is easier to use though it is less sensitive.

12.   **Description**. Various parts are shown below:-

13.   **How to Take a Bearing**

(a)   Open the lid of compass.
(b)   Turn the prism casing over.
(c)   Put your thumb through the ring.
(d)   Put your forefinger underneath the compass & hold it to horizontal level.
(e)   Bring the prism up to the eye.
(f)   See through the prism via hairline to object.
(g)   Read the bearing.
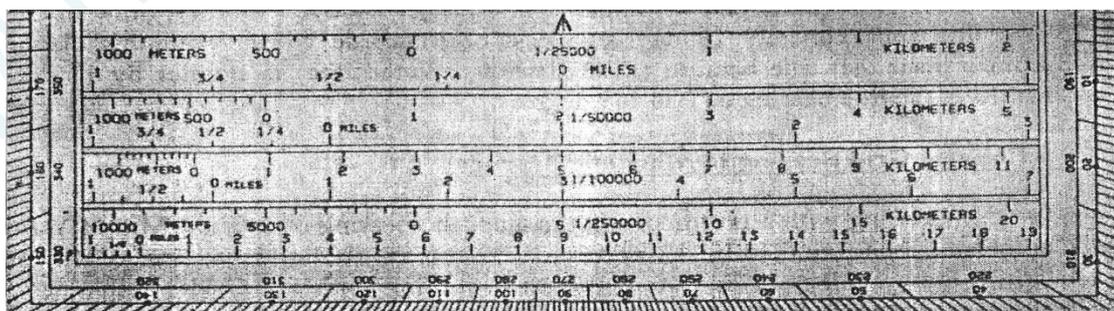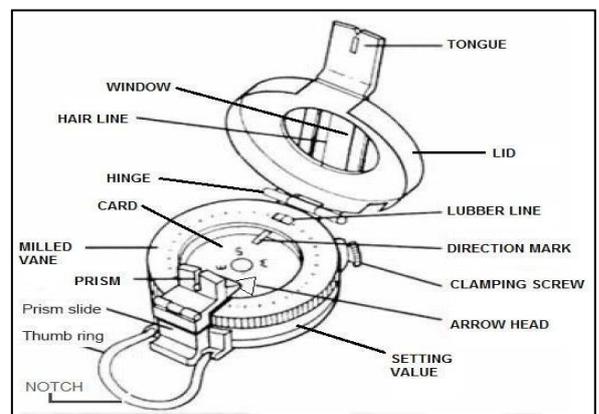
Navigation by compass and GPS

14.   **Navigation by Compass.**   Sometimes it may be necessary to march by night or in thick jungle area in the direction of a certain point; since the point may not be visible in darkness or thick vegetation. In such a situation follow the steps mentioned below:-

      (a)   Calculate the bearing from the Map i.e Grid Bearing
      (b)   Convert it to the magnetic bearing and cater for the compass error to arrive at a figure (say 250 degree), the compass must now be set to this figure to march on it.
      (c)   Unscrew the clamping screw
      (d)   Rotate the milled vane to 25 till it comes exactly on the "lubber line"
      (e)   Tighten the clamping screw
      (f)   Compass is now set for 250 degree
      (g)   To obtain the direction of march, open the lid fully and keep the compass on the palm.
      (h)   Now turn left or right till arrow head comes under the direction mark
      (i)   Direction of march is given by the direction in which tongue is pointing.
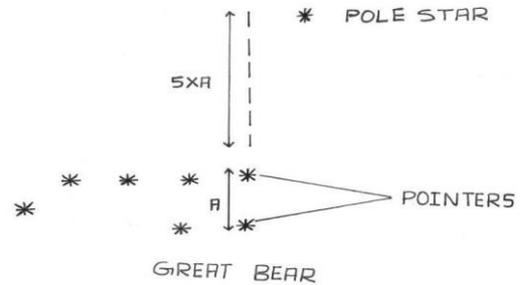
15.   **Compass Error**.   Sometimes due to the presence of impurities in the material of which a compass is made or other reasons, the magnetic needle may not point toward the magnetic NORTH but a little to the EAST or WEST of it. This deviation of the magnetic needle in the compass from the magnetic NORTH is termed compass error.

16.   **Global Positioning System**.   Global Positioning System (GPS) refers to a system of satellites and receivers that allows people and devices to pin point their precise location on the earth. The first GPS satellite was launched in 1974. GPS is funded and controlled by the United States, Department of Defence. Present technology provides very handy and accurate navigation. GPS is used by:-

      (a)   Commonly used in day to day life by general public like.
      (b)   Commonly used in day to day life by general public like for travelling purposes.
      (c)   Fishermen and hikers to navigate.
   (d)   Armed Forces, inbuilt its equipment and in uses in battlefields.

SETTING OF A MAP, FINDING NORTH AND OWN POSITION

Map Setting by Various Methods

17.   **Setting of Map**.   A map is said to be set or oriented when it is placed such that it corresponds directly with the ground i.e. when true NORTH on the map points to true NORTH on the ground.   There are two methods of setting a map - by compass and by objects on the ground.

Setting by Compass

18.   Draw a line showing magnetic NORTH from a point on a grid line. Open the compass and lay it flat on the map over the above drawn diagram, which will show the magnetic variation so that the hair line on the window lies along the magnetic NORTH line on the diagram.   Then turn both the map and the compass till the needle points along the hair line. The map is now set, since the magnetic NORTH line on the map is pointing in the direction of magnetic NORTH as indicated by the compass needle.
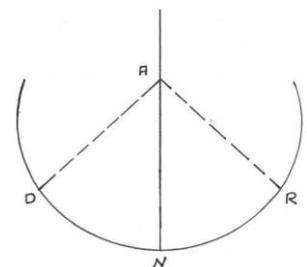
19.   **Finding North and own Position Without Compass**.   The position of NORTH can be discovered by one of the following methods :-

      (a)   **Equal Altitude Method**.

            (i)   Take a fairly large piece of paper or card board and spread it flat on the ground. In the centre fix a pencil or piece of wood perpendicular to the ground. It can be done with the

help of a coin fixed at the base of pencil or wood with sealing wax or by directly pushing it in the ground.

(ii)   Wait till after mid-day until the sun has moved around sufficiently to throw another shadow as indicated by the dotted line AD i.e. of the same.

(b)   **By Stars**. In the Northern hemisphere, the Pole star indicates the position of True North to within 2 degree. It is a bright star and it can be found by protruding a line from Great Bear. The pole star will be found slightly off this line on the side remote from the remaining stars of the Great Bear.

20.   **Methods of Finding own Position on Map**.

(a)   By resection method or Compass method.
(b)   By Inspection method.

21.   **Resection with Compass Method**.

(a)   Recognise three prominent features (A, B, C) on map and on the ground as well. These three prominent features must not be more than 180 or less than 30 apart. They should be as far as possible and clearly visible. The bearing of these points be taken and converted into Grid bearings.

(b)   Then, on the map the back bearings from these points must be plotted, and the point of intersection will be the required position.

(c)   In order to do an accurate resection, three or more objects are necessary. But in that case if the three rays do not intersect at the same point, a triangle of error is obtained. The centre of triangle is the point of your own position.
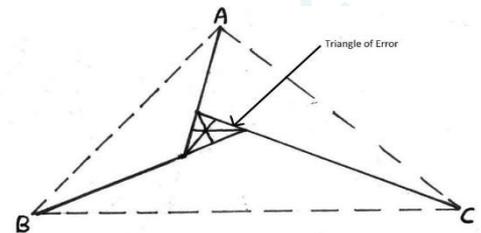
22.   **By Inspection Method**.   By inspections is meant a careful and detailed study of the ground and features both on the map and the ground and features on the map and on the ground.   The method consists of:-

(a)   Setting the map.
(b)   Recognition of general area of own position on the map.
(c)   A close study of the ground details.

MAP TO GROUNG, GROUND TO MAP

Map to Ground

23.   To find out the details of map on ground is known as map to ground.   Following methods are used to identify objects from map to ground:-

(a)   **Bearing and Distance Method**.   With the help of bearing and distance, find out own position. Find out the distance of the object to be identified on ground with the help of a scale on the map. Using service protractor, find out the bearing of the object and convert it into magnetic bearing. Set the magnetic bearing on compass and look for the object in the given bearing. Estimating the distance on ground the object will be identified.

(b)   **Direction and Distance Method.**   Draw a line on the map between own position and object to be identified. Calculate its distance and using any of the following methods find the direction of the object:-

(i)   With the help of a sight rule find the ground direction of the object.

(ii)   With the help of two points on the map estimate the ground direction.

(iii)   Place a foot ruler /pencil at own position and align it with line of the map.

(iv)   Place a pin each at own position and at the object on the map. Align both pins and find general direction.

(c)   **By Estimation Method.** In this method measuring bearing, distance and direction, object is identified with the help of other details in the proximity of the object.

Ground to Map

24.   To find out an object indicated on ground on the map is called ground to map.

GOOGLE MAPS & APPLICATIONS

Google Maps

25.   Google Maps is a web mapping service developed by Google. It offers satellite imagery, aerial photography, street maps, 360° panoramic views of streets (Street View), real-time traffic conditions, and route planning for traveling by foot, car, bicycle and air (in beta), or public transportation. Google Maps' satellite view is a "top-down" or "birds eye" view; most of the high-resolution imagery of cities is aerial photography taken from aircraft flying, while most other imagery is from satellites. Google Maps used a variant of the Mercator projection, and therefore could not accurately show areas around the poles.

Use of Goggle Maps & Applications

26.   **Directions and Transit**.   Google Maps provide a route planner, allowing users to find available directions through driving, public transportation, walking, or biking. Screen shot of Google Maps with traffic option enabled traffic conditions. Google offering traffic data as a coloured overlay on top of roads and motorways to represent the speed of traffic. Crowd sourcing is used to obtain the GPS-determined locations of a large number of cellphone users, from which live traffic maps are produced.

Business Listings

27.   **Google**   collates business listings from multiple on-line and off-line sources. To reduce duplication in the index, Google's algorithm combines listings automatically based on address, phone number, or geo code, but sometimes information for separate businesses will be inadvertently merged with each other, resulting in listings inaccurately incorporating elements from multiple businesses. Google allows business owners to verify their own business data through Google My Business, and has also recruited volunteers to check and correct ground truth data.

Indoor Maps

28.   In March 2011, indoor maps were added to Google Maps, giving users the ability to navigate themselves within buildings such as airports, museums, shopping malls, big-box stores, universities, transit stations, and other public spaces (including underground facilities).

Google Local Guides

29.   Google Local Guides is a program launched by Google Maps to enable its users to contribute to Google Maps and provide them additional perks and benefits for the work. The program is partially a successor to Google Map Maker as features from the former program became integrated into the website and app. The program consists of adding reviews, photos, basic information, videos and correcting information such as wheelchair accessibility.

Mobile App

30.   Google Maps is available as a mobile app for the Android and iOS mobile operating systems. The Android app was first released in September 2008, though the GPS-localization feature had been in testing on cellphones since 2007.Up until iOS 6, the built-in maps application on the iOS operating system was powered by Google Maps. However, with the announcement of iOS 6 in June 2012, Apple announced that they had created their own Apple Maps mapping service, which officially replaced Google Maps when iOS 6 was released on September 19, 2012. However, at launch, Apple Maps received significant criticism from users due to inaccuracies, errors and bugs.

Features

31.   The Google Maps apps for iOS and Android have many of the same features, including turn-by-turn navigation, street view, and public transit information.   Google Maps announced its new offline functionality, but with various limitations downloaded area cannot exceed 120,000 square kilo meters and require considerable amount of storage space.   In January 2017, Google added a feature exclusively to Android that will, in some U.S. cities, indicate the level of difficulty in finding available parking spots, and on both Android and iOS, the app can, as of an April 2017 update, remember where users parked.   In August 2017, Google Maps for Android was updated with new functionality to actively help the user in finding parking lots and garages close to a destination.   In December 2017, Google added a new two-wheeler mode to its Android app, designed for users in India, allowing for more accessibility in traffic conditions.
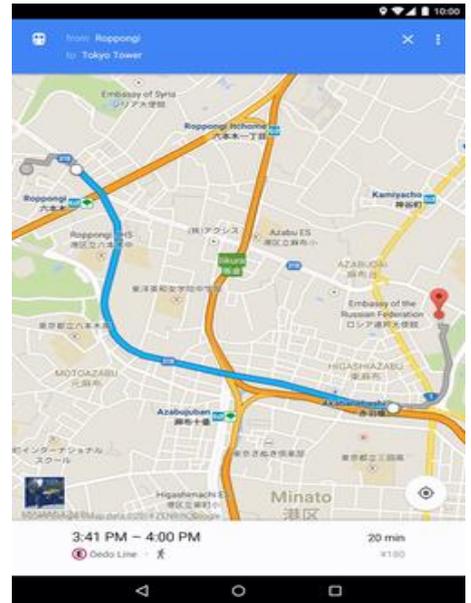
Applications

32.   Here are eight off-the-beaten-path Google apps that'll help you do all sorts of interesting things with your Android device. And yes, they're all free. (Some, but not all, are also available for iOS.)

(a)   **Google Handwriting**. Input ever feel like scribbling something out on your smartphone's display? Google Handwriting Input gives you a blank slate for writing with your finger or a stylus and then converts your illegible chicken scratch into actual send able text. It works surprisingly well, and it can even handle e- mails (if you for some reason are inspired to draw those). The best part about Handwriting Input is that it works, hand-in-hand with Google's regular, fully-featured G-board keyboard.   Once you install and activate the app on your phone, you'll see a new globe-like icon in G-board's bottom row.
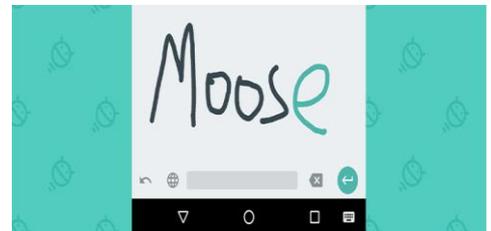
(b)   **Trusted Contacts**.   This so-new-it-still-has-that-new-app-smell tool is one of those things that's so practical, you'll wonder why your phone hasn't always had it.   Trusted Contacts lets you establish location-sharing relationships with your friends, family members, or anyone else you know and love (or maybe just kind sort like).   Once both people have installed the app and approved the relationship, either person has the ability to request the other's location at any time.   If the recipient doesn't respond after five minutes, his last known location will automatically be sent.   And it works even if his phone is off or out of range.   Take this mobile device management course from Plural Sight and learn how to secure devices in your company without degrading the user experience.   Peace of mind has never been easier.

(c)   **Google Trips**.   Organizing travel can be a pain but if you're already using Gmail, Google's new-ish Google Trips app makes everything super simple.   Trips automatically finds and imports all your travel info as it arrives in your inbox travel reservations, hotel reservations, and any other related confirmations and bundles it all together into neatly organized trip-based portfolios.   It even adds in extra little goodies like suggestions for nearby attractions, popular
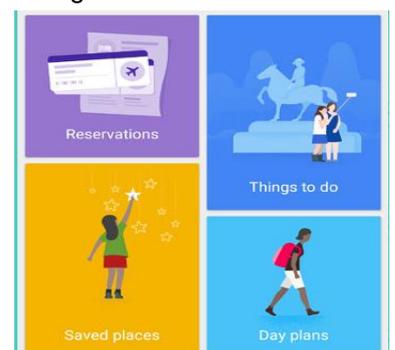
(and customizable) day plans, and restaurant recommendations. Once your data's pulled over, everything works offline.

(d)   **Google Arts & Culture**.   Google Arts & Culture lets you explore national parks and monuments, zoom up close into famous works of art, and even take virtual tours of entire museums right from your mobile device. The app views of fascinating things from around the world, and it's something you really have to experience for yourself.
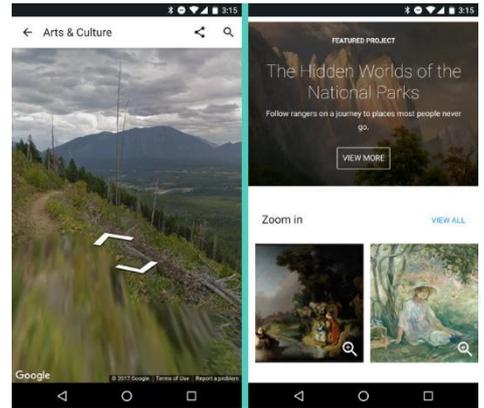
(e)   **Chrome Remote Desktop**.   Chrome Remote Desktop is one of Google's most powerful cross-platforms tools and yet it doesn't get nearly enough attention.   The app makes it dead-simple to remotely access any desktop computer from your Android phone. All you do is install the companion desktop Chrome extension, set up a PIN, and that's it: You can pull up your desktop on demand and access files, open programs, or do anything else you need from the palm of your hand.
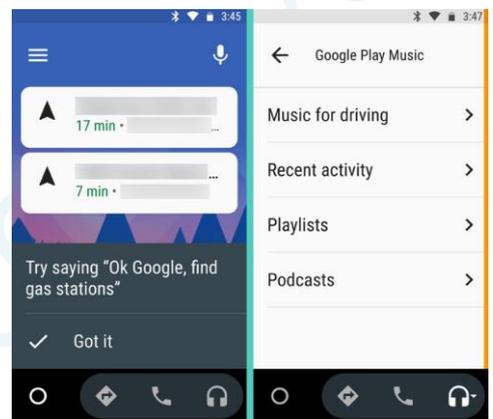
(f)   **Google Opinion Rewards.**   You answer a handful of questions about a recent shopping experience or your thoughts on some type of merchandise, and then the app puts a credit on your Play Store account.   It might be for 10 cents or it might be for a dollar.   Either way, it takes practically no time to do, and the credits add up fast meaning your next app purchase or movie rental can be on the house.

(g)   **Android Auto**.   Google revamped its Android Auto app a few months ago and made it into something anyone who drives should have standing by.   The new Auto app is basically a "car mode" for your phone an interface that's optimized for driving, with large buttons for commonly used commands and simplified access to the sort of stuff you might need while behind the wheel.(And yes, long time Android fans, that *should* sound familiar.)

(h)   **Wallpapers**   This last selection is actually the app that controls wallpaper picking for Google's new Pixel phone but if you have any other device, you can think of it as an upgrade to your system's built-in wallpaper picker.   The aptly named Wallpapers makes finding a background for your home screen a fun adventure, with options for selecting stunning images from sources like Google Earth or the photographer-favored galleries of Google.   The best part is that all of Wallpapers' categories   Earth, Landscapes, Cityscapes, and so on include a "Daily wallpaper" option that'll automatically change your background to a different purity image every single day.

CONCLUSION

33.   Map reading plays very major role in services as well as in governance system. These days digital maps and artificial intelligence has taken over majority usage thereby making such task easy and user friendly along with information technology.   Setting of map and finding own position is the essence of the map reading training.It is important for the cadets to understand the methods and the procedure to find objects from map to ground and from ground to map. With the help of satellites and information technology companies like Google have taken over mapping system by using artificial intelligence making life faster and user friendly connecting Smart Phones with applications for map reading, navigation, tracking system, traffic and basic usage of our daily life.

SUMMARY

1.   Map is the geographical representation of land on a paper.

2.   Scale is a proportion of two points on map and two points on the ground.

3.   Relief is applied to the shape of the ground in a vertical plane.

4.   Contour is an imaginary line following surface of the ground at a certain level.

5.   Gradient is the slope of the ground expressed as the angle the ground makes with the horizontal.

6.   Cardinal Points are the four major directions North, South, East and West.

7.   There are three types of North, True North is the direction of North pole. Magnetic North is the direction which a magnetic needle points, Grid North is the direction of the North South grid lines on a map-point.

8.   Magnetic Variation is the difference between True North and Magnetic North. It depends on time and place.

9.   Grid Convergence is the angular difference between Grid North and True North.

10.   Bearing: The clock wise angle formed by a straight line joining two points and direction of North.

11.   The service protractor "A" Mark IV is an instrument used for plotting and measuring bearing on the map.

12.   Setting of Map: A map is said to be set or oriented when it is placed such that it corresponds directly with the ground. There are two methods of setting a map- by compass and by objects on the ground.

13.   Methods to find own position on map are- by resection, by map spotting or by bearing and distance.

14.   Types of navigation: Navigation during day and Night navigation.

15.   Methods are used to identify objects from map to ground.
        (a)   Bearing and Distance Method.
        (b)   Direction and Distance Method.
        (c)   By Estimation Method.

16.   To find out an object indicated on ground on the map is called ground to map.

17.   **Use of Goggle Maps & Applications Directions and Transit. Business Listings**.
        (a)   Indoor Maps
        (b)   Google Local Guides
        (c)   Mobile App
        (d)   **Applications**.

                (i)   Google Handwriting.
                (j)   Trusted Contacts.
                (k)   Google Trips.
                (l)   Google Arts & Culture.
                (m)   Chrome Remote Desktop.
                (n)   Google Opinion Rewards.
                (o)   Android Auto.
                (p)   Wallpapers

CHAPTER- I : INTRODUCTION TO FIELD CRAFT AND BATTLE CRAFT

INTRODUCTION

1.   Field Craft is an important aspect of military training as it is the art of using the ground and the weapon to the best of one's own advantage.   A quick, accurate and standard procedure is necessary to enable a commander to describe an area to his men and the men to understand it correctly.   An individual should be able to judge distance accurately with his eyes so that the individual can decide on the following:-
    (a)   Know when to open fire.
    (b)   Know which weapon to be used.
    (c)   Can indicate targets to other men in his section.
    (d)   Pass back accurate information when acting as an observer.

Field Craft and Battle Craft

2.   Field Craft includes the following subjects: -
    (a)   Visual Training.
    (b)   Recognition and description of targets.
    (c)   Personal camouflage and concealment.
    (d)   Judging distance.
    (e)   Movement with and without arms.
    (f)   Fire discipline and control.

3.   Battle craft is nothing but set of drills which are essential for conduct of successful operations in the battle field. These battle drills are very useful in tackling minor tactical problems.   They save time, ensure rapid action and avoid confusion. Knowledge of field signals and section and platoon formations, however, is essential in the execution of various battle drills.   Battle Craft includes the following subjects:-
    (a)   Field Signals.
    (b)   Section Formations.
    (c)   Fire control orders.
    (d)   Fire and move.
   (e)   Section battle drills.

Judging Distance

4.   An individual should be able to judge distance accurately with his eyes so that the individual can decide on the following:-
   (a)   Know when to open fire.
    (b)   Know which weapon to be used.
    (c)   Can indicate targets to other men in his section.
    (d)   Pass back accurate information when acting.
    as an observer.

Judging Distance

5.   **Methods of Judging Distance**. There are six methods of Judging distance. These are as under:-
    (a)   Unit of measure.
    (b)   Appearance method.
    (c)   Section average.
    (d)   Key range.
    (e)   Halving.
    (f)   Bracketing.
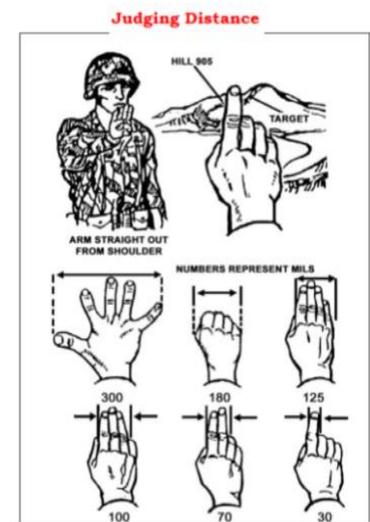
6.   **Unit of Measure**.   This method is also termed as the 100 yards method.   The unit of measure chosen is normally 100 yards and therefore one should form a good idea of 100 yards distance on the ground.   The length of a hockey field is the best yard stick for this purpose.   The distance of a given object will be a multiple of the imaginary unit of 100 yards, as placed between the observer and the object.

Unit of Measure Method
100m to 500m unit-of-measure method.
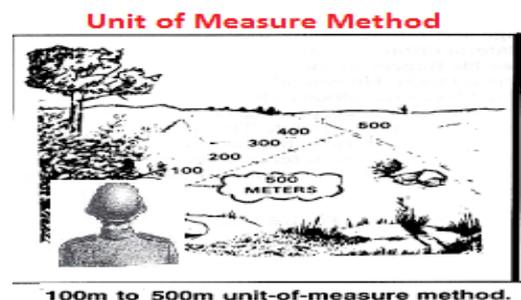
7.   **Appearance Method**. The distance can be judged by noting the detailed appearance of man at various ranges.

Appearance Method

At 100m - clear in all details.

At 200m - clear in all details, colour of skin and equipment identifiable.

At 300m - clear body outline, face colour cisible, remaining details blurred.
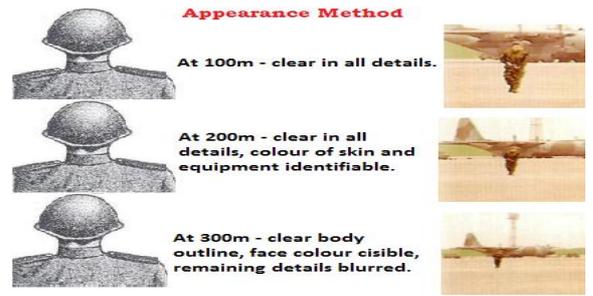
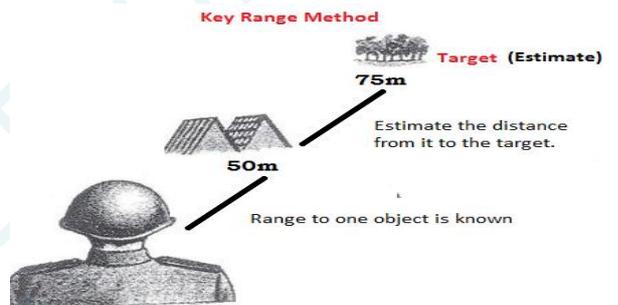8.   **Section Average**.   Each man in the section is asked to judge the distance of a given object.   The average of the answers given by the whole section is then accepted as the distance.

Section Average Method

150m

125m

75m

50m

$$\frac{50m + 75m + 125m + 150m}{4} = 100m$$
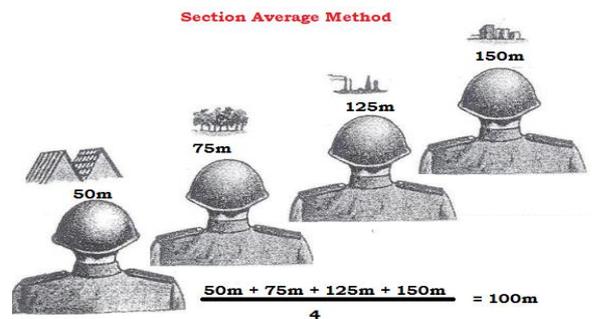
9.   **Key Range**.   If the range of the certain object is known, distance to other objects can be found in relation to the known range.   This method is called "Key Range" method.

Key Range Method

Target (Estimate)

75m

Estimate the distance from it to the target.

50m

Range to one object is known

10.   **Halving**.   An object is selected half way between the observer and the target, the distance to the selected object is judged and doubled to get the distance to the target.

Halving Method

Target

HALF WAY POINT
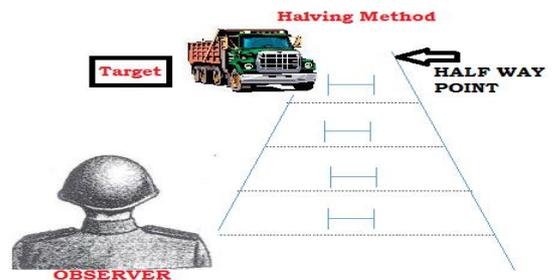
OBSERVER

11.   **Bracketing**.   The observer works out the maximum and the minimum possible distances of the object and then accepts the mean as the distance.

Bracketing Method

Maximum = 600M
Minimum = 400M

Range = 500M
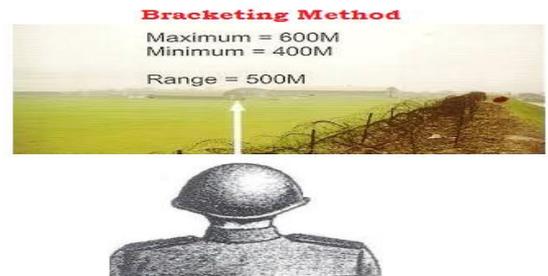
Practical Hints

12.   **During Night**. Judging distance at night will depend upon the visibility.   The only suitable method is the "Key Range". Therefore mark prominent objects and work out their distances while there is still day light.
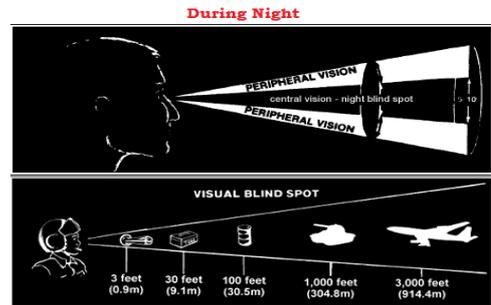
During Day.   Conditions which mislead the observer when judging distances are as follows:-
        (a)   Distances are overestimated when:-

                (i)   Light is bad.
                (ii)   The sun is in the observer's eye.
                (iii)   The object is small in relation to its surroundings.
                (iv)   Looking through a valley of narrow lane e.g. street.
                (v)   Lying down.

        (b)   Distances are underestimated when:-

                (i)   The light is bright or the sun is shining from behind the observer.
                (ii)   The object is large in relation to its surrounding.
                (iii)   There is some dead ground between observer and the object.
                (iv)   (iv)Looking uphill.
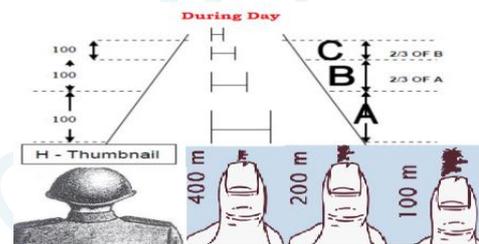
CONCLUSION

1.   To achieve success in war it is very important that the target is correctly understood for mechanics of field and battle crafts are understood clearly.   Knowledge of ground along with basic skills would be beneficial to cadets in all respect.

CHAPTER II – INDICATION OF LANDMARKS AND TARGETS

Introduction

1.   Landmarks and other objects on the ground or a battle field may be either unclear due to climatic conditions or other reasons.   Every effort should, therefore be made to indicate their location and size carefully and accurately.   To ensure quick and accurate indication by commanders and recognition by individual soldiers a standard procedure has been laid down in the Army.

Definitions

2.   **Landmarks**.   An object, which is important on the ground and which is used in verbal orders to explain the ground in front.

3.   **Target.**   It is an object having a technical significance which is indicated with a view to bring down fire on it.

4.   **Reference Point**.   An important and unmistakable object, with the help of which you can indicate other land marks or targets.   A reference point should be specific.

Types of Ground

5.   **Broken Ground**   It is uneven and is generally scattered with nullahs, bump sand fields in the ground. It is suitable for move of infantry.

6.   **Flat and Open Ground**.   It is even ground with little cover e.g. bushes, hedges and other foliage. It is not suitable for move of Infantry by day.

7.   **High Ground**.   Ground far above the general level of the area e.g. hill. It facilitates control of area around it by observation or fire.

8.   **Dead Ground**.   Ground that is hidden from an observer's view. It cannot be covered by flat path weapons.

9.   Though an open ground is easy to travel, it is dangerous to do so in the locality of the enemy.   Whether moving or taking fire position in an open area one is exposed to enemy from view and fire. Broken ground when correctly used affords protection from flat path weapons.   It does not afford cover from air or protection from high path weapons.   Dead ground does not afford cover from high path weapons.

10.   **Procedure Of Description**.   The normal method of scanning and describing ground is by dividing it as follows:-
      (a)   Fore Ground up to 300 yards.
      (b)   Middle Distance from 300 yards to 500 yards.
      (c)   Distance beyond 500 yards.

Indication Of Landmarks

11.   **General Line of Direction**.   Start by giving the **general** line of direction by pointing out a centrally located, if possible, prominent land mark, e.g. No 1 section 500, RED HOUSE, class Red House and line beyond General Line of Direction (GLD).

General Line of Direction
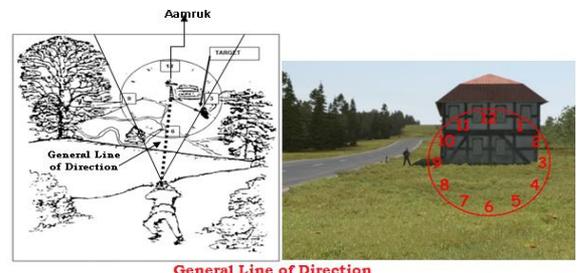
12.   **Boundaries**.   After giving general line of direction give LEFT and RIGHT boundaries of your area. Divide the ground into foreground, middle and distance.   Having done so start from LEFT to RIGHT systematically in a clockwise direction and describe the ground.

13.   **Sequence of description**.   While describing the ground bounded by particular arc after giving the boundaries start from LEFT to RIGHT.   If the ground all around is to be described, start after general line of direction to the right and finish at general line of direction by completing the indication all around.

Methods of Indication Targets

14.   **Easy Targets**.   Can be indicated by the following methods:-

    (a)   **Indication by Description**.   A noticeable target can often be described directly.   For example "No. 1 Section BRIDGE". Here BRIDGE is so noticeable that nobody can make a mistake in recognizing it.

    (b)   **Indication by Direction or Range or Both**.   In slightly less obvious cases other aids should be used e.g. direction or range or both.   An example of each is given below:-

        (i)   Indication by Direction   :No 1 Section BAEN BAGHICHA.
        (ii)   Indication by Range   :No 1 Section 600 BAGHICHA.
        (iii)   Direction and Range   :When indicating a landmark, indicate direction first and then range e.g. BAEN-600, BAGHICHA.

15.   **Difficult Targets**   The targets which cannot be indicated by the methods given above are termed difficult targets.   The methods to indicate these are explained by Direction Method as given below:-

    (a)   The general line of direction.
    (b)   A known reference point.
    (c)   Another landmark.

16.   Unless otherwise stated all directions are taken to be with reference to the general line of direction. The following direction will be used:-

Direction	**Measuring**
Slight Left/Right	Approximately 10 degrees.
Quarter Left/Right	Approximately 22 ½ degrees.
Half Left/Right	Approximately 45 degrees.
Three Quarter Left/Right	Approximately 67 ½degrees.
Full Left/Right	Approximately 90 degrees.

CONCLUSION

17.   To achieve success in war it is very important that the target is clearly understood and recognized by the troops. By using the methods of indicating the target the cadets can easily indicate and identify the target.

CHAPTER III: OBSERVATION, CAMOUFLAGE AND CONCEALMENT

Introduction

1.   The term camouflage comes from French word "Camoufler" meaning "to blind or veil".   It means to disguise an object in plain sight in order to conceal it from something or someone.   The object loses its three dimensional qualities and appears flat.   Camouflage is defined as action of misleading enemy by concealing or misrepresenting the identity of own troops, equipment, installations and activities.

2.   **Why Things are seen**.   Various factors responsible for things to be seen are as follows:-

        (a)   Shape.
        (b)   Shine.
        (c)   Shadow.
        (d)   Surface.
        (e)   Spacing.
        (f)   Smoke.
        (g)   Sound.
        (h)   Movement.

3.   You have seen as to why things are visible during day or in clear moonlit night.   Now let us see why things are visible at night.   There are two factors which are given below:-
        (a)   Sound.
        (b)   Light.

4.   **Personal Camouflage**. Camouflage means to disguise an object in plain sight in order to conceal it from something or someone.   Personal camouflage can be done by following methods:-

        (a)   Use of Disruptive Pattern.
        (b)   Clothing and Local Vegetation.
        (c)   Camouflage of Face.
        (d)   Camouflage of Equipment.

5.   **Camouflaged of Equipments**:-

        (a)   Helmet. Use of Hessian Cloth & Use of Camouflage Net.

        (b)   **Camouflage of Back Packs**.   Packs have square outline which is broken by tying thin ropes on the packs and branches of local vegetation are stuck in the ropes.

        (c)   **Camouflage of Rifle**.   Metal parts of rifles are phosphate coated and hence shine is reduced.   Garnish of suitable colour should be wrapped over wooden parts / plastic parts to contrast with surroundings.

(d)   **Camouflage of LMG**. Wooden/plastic parts of the LMG should be covered by garnish.   LMG trench is camouflaged by use of a net.

(e)   **Camouflage of Equipment**.   Equipment like binocular, map case, Radio Set should also be camouflaged by breaking its outline and preventing shine.

Concealment

6.   If the enemy can see you, he can hit you with his fire. So you must be concealed from enemy observation and have cover from enemy fire. When the terrain does not provide natural cover and concealment, you must prepare your cover and use natural and man-made materials to camouflage/ conceal yourself, your equipment, and your position.

7.   **TYPES OF COVER AND CORRECT USE**.   There are of following types:-

(a)   **Cover from View.** A person is concealed only from view and not from fire.

(b)   **Cover from Fire.** This means that the concealed person is protected both from view and fire of weapon.

(c)   **Look Through or Around Cover**. Whenever possible look through or around the cover but not over it.

(d)   **Avoid Breaking a Straight Line.** Skyline/light coloured background is the worst background as the object against it will be found out because of contrasting background and shape.

(e)   **Isolated Cover is Dangerous**. Eye catches isolated cover easily especially if there is any movement near it.

CONCLUSION

8.   To conclude, the importance of camouflage and concealment can be realized from the following:-

(a)   In earlier days it was said "If it can be seen, it can be hit, if it can be hit it can be killed".
(b)   But now in the modern warfare "If it can be seen it will be killed".

9.   Therefore, camouflage needs greater emphasis and the art of camouflage and concealment reduces the different varieties of soldiers into two main categories viz, "The good and the dead."   Concealment is an aid to tactical deception and misinforms the enemy about our intentions and strengths.

CHAPTER IV : FIRE AND MOVE CAPSULE

1. The primary aim of infantry is to close in with the enemy & destroy him. The aim of getting close is achieved by making skilful use of ground. A clever enemy will however, deny you the use of such ground which you may need. When such a cover is denied by the enemy, we may have to movement in open. Once we are forced to movement in open, a part of our force will have to fire on en position & force him to keep his head down. This would render the en incapable of bringing down aimed fire at us while we are on the movement. This process of keeping one element on the ground to give covering fire, while the other element is on movement, is called fire & movement. This is the basic tactics of all infantry and mechanised ops. To understand the fire and move as capsule cadets has to understand basics nuances.

Field Signals

2. Whenever someone wants to convey his message one has to raise his voice. In olden days smoke, sound of drum was the mode to convey messages from one village to another. In Army, different methods are used to convey messages. Today, you will learn one of these methods called Field Signals.

SIGNALS WITH HAND AND WEAPONS

3. **Signals with Hands**.

Ser No	Name Of Signal	Signals With Hand	Illustrations
(a)	Deploy	Right arm fully extended above head and waved from side to side, palm open.	
(b)	Advance	Right arm swung from rear to front in "under arm blowing" fashion.	
(c)	Halt	Right arm raised to full extent above head.	
(d)	Turn About	Right arm raised and bent above head.	

(e)	Change Direction	Right arm raised to front in line with shoulder. Body then turned in required direction.	
(f)	Close	Right hand place on top of head, elbow to the right.	
(g)	Follow me	Right arm swung from rear to front above the shoulder in "over arm bowling" fashion.	
(h)	Enemy Approaching	Both hands open, palm inwards at waist level, with inwards scooping motion.	
(i)	Enemy LMG firing	Right hand thumb down signal.	

(j)	Attack	Punching motion with Right or Left hand according to direction of attack.	
(k)	Closed to Rendezvous	Close sign followed by both hands clasped in front of body at waist level.	
(l)	Infantry obstacle ahead	Both hands crossed in front of body at the waist, palm open downwards.	

4.   **Signals with Weapons**.

Ser No	Name Of Signal	Signals with Weapons	Illustrations
(a)	Enemy in Sight	Rifle held above the head parallel to the small number muzzle in the direction of the enemy.	
(b)	Enemy in Sight in large number	As per (a) above, but arm moved up and several times.	

(c)	Advance	Both arms raised to form the letter U	

5.   **Signals with Whistle**.

Ser No	Name Of Signal	Signals With Hand
(a)	Cautionary Blast	A short blast to draw attention to a signal or order about to be given.
(b)	The Alarm Blast	A succession of alternate long and short whistle blasts.
(c)	Enemy Aircraft	A succession of short blasts.
(d)	Enemy Aircraft departed	Two long blasts repeated at interval of five seconds.

Field Signals As Means Of Giving Orders

6.   Field signals are alternate means of giving orders and to control troops when voice control is not possible.   Control over troops deployed can be done better by field signals than by voice control.   There are various occasions when voice control is not possible. They are:-

        (a)   **Battle Noises**.   In war, due to firing and vehicle movement very high noise will be produced, so it may not be possible for a Commander to give voice message.

        (b)   **Need for Silence**.   There are certain operations which, by design are carried out in utmost silence, eg:-

                (i)   Ambush.
                (ii)   Patrolling.
                (iii)   Raid.
                (iv)   Cordon.

        (c)   **Intervening Distances are Too Large**.   When Infantry takes the battle field they come across many obstacles in ground such as the ditch, rivers, and mountains.   Under such circumstances we will have the only choice left with us is field signals for communication.

7.   **Methods to Attract Attention Of Troops**.   Before any field signal is executed, the commander has to attract the attention of troops. Methods to attract attention of troops are :-

        (a)   A Short Blast of Whistle.
        (b)   A Bird Call.
        (c)   Whistle by Mouth.
        (d)   Clicks(By using tongue).
        (e)   Clicks by Fingers.

8.   **Other Methods of Communication**.   Besides field signals there are various other means of communication in the Army which are as follows:-

    (a)   Dispatch Runners.
    (b)   Dispatch Rider.
    (c)   Radio Sets.

9.   **Field Signals By Day**.   Some of the visual signals used during the day are flags and mercury coated mirrors.   Flags are very effectively used by Navy on board a ship by following ways:-

    (a)   Flags: (Red, Green and White flags).
    (b)   Mercury coated mirrors.
    (c)   Smoke.
    (d)   Miscellaneous: Various signals can be improvised and pre-arranged as under:-

        (i)   Clothes superficially hung out to dry.
        (ii)   Hurricane lamp, kept in the window.
        (iii)   Flashing of torch is used as Morse Code.
        (iv)   Applying various colours / signs on forehead and arms.

10.   **Field Signals By Night**.   Some of the field signals that can be used at night are:-
    (a)   Pre decided signals on a walkie talkie.
    (b)   Click by fingers.
    (c)   Clicks by using tongue.
    (d)   Whistle by the mouth.
    (e)   Use of rope.
    (f)   Use of colour light.
    (g)   Use of blacked out torch.
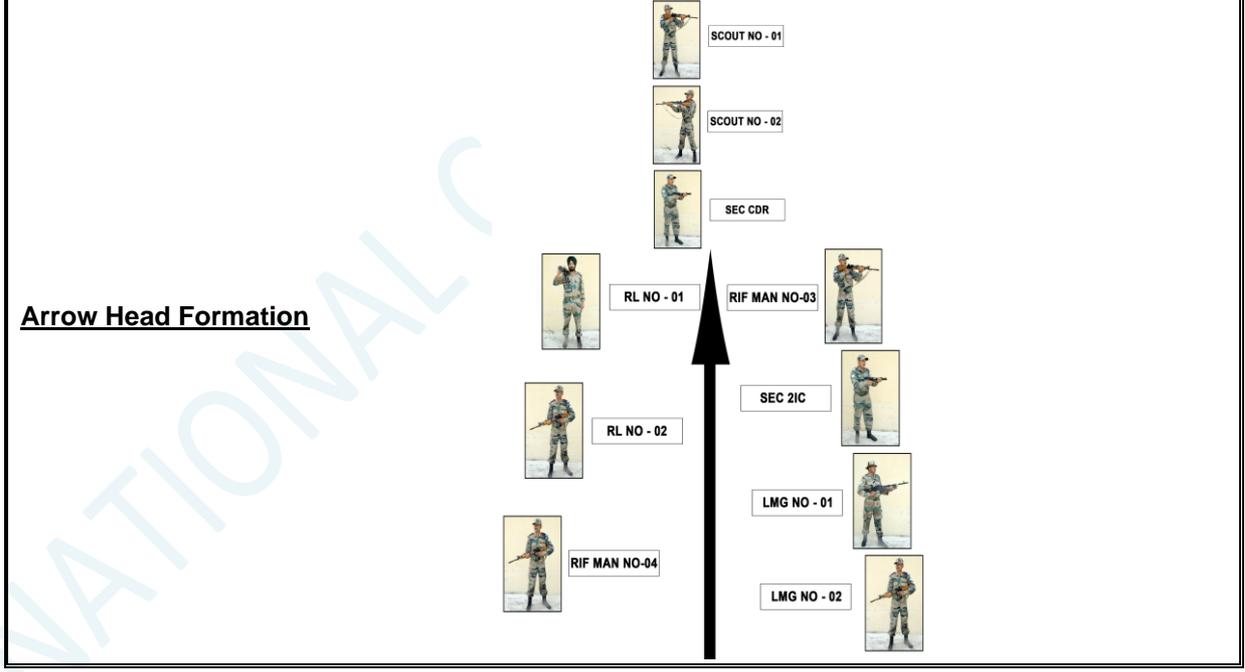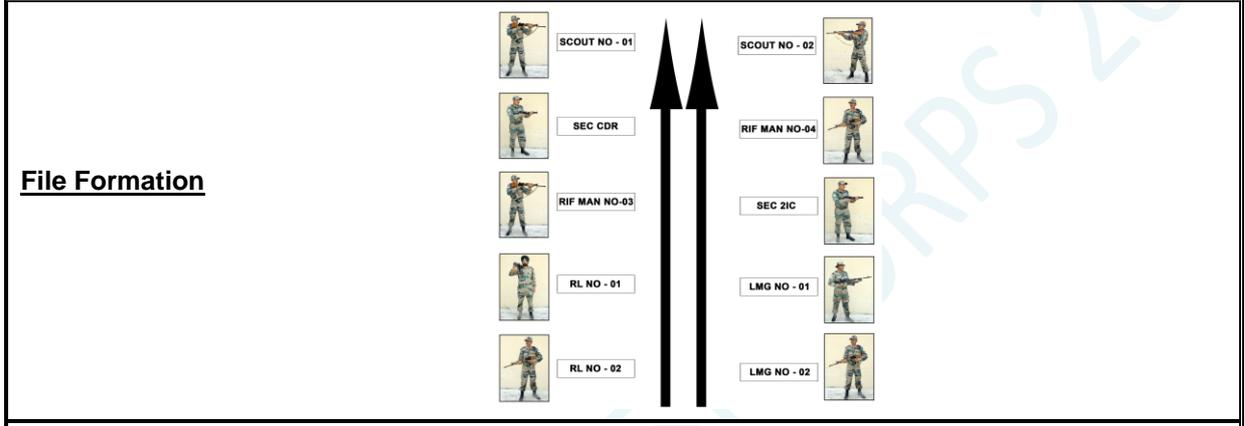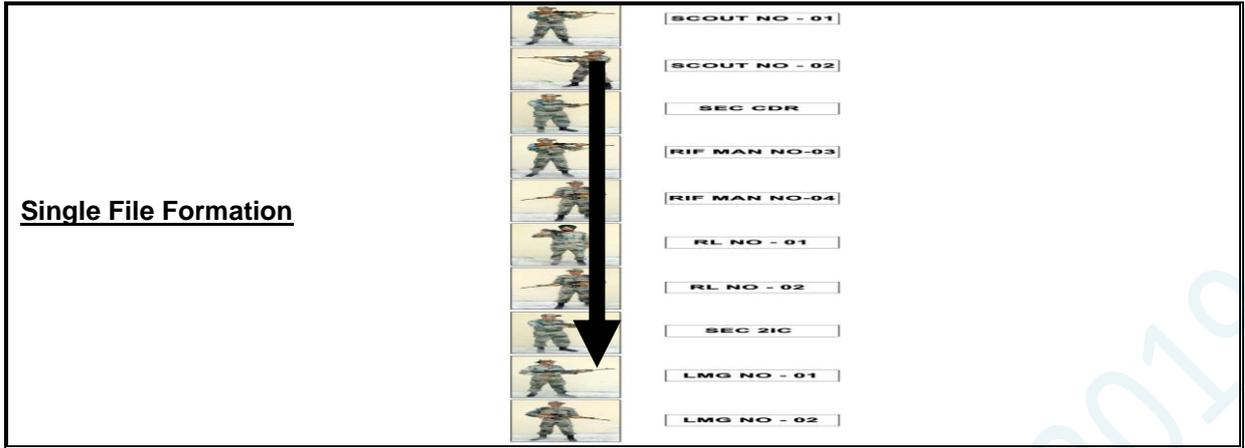   (h)   Firing of weapon.

11.   The fighting efficiency of a unit/sub unit depends on sound communication system which helps commanders at all levels to exercise command and control effectively.   Every commander must influence the battle by his personal touch which is achieved by good signal communications.   Field signals become a part of movement of a good section/platoon commander.   At section/platoon level, the commander directly influences the battle by the use of field signals.   Victory in battle will come to that section/platoon whose men are familiar in the use of field signals.
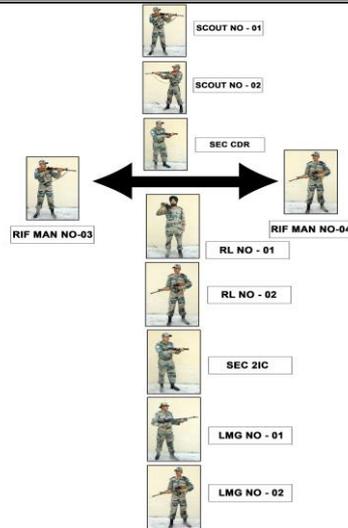
SECTION FORMATION

12.   **Introduction**.   Various formations are used when troops come in contact with the enemy and the type of formation adopted is entirely dependent on the following four basic factors:-

    (a)   Degree of control required to be exercised by the Section Commander.
    (b)   Type of ground.
    (c)   Necessity of bringing down maximum fire with minimum delay.
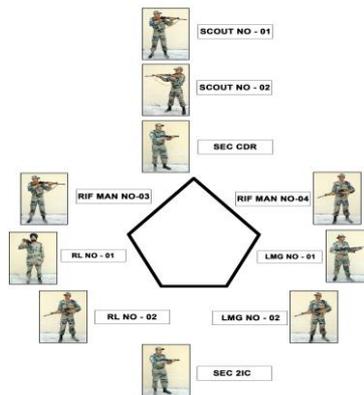   (d)   Task.

13.   A Section is the smallest sub unit of an Infantry Battalion and is capable of undertaking independent task.   It consists of ten persons who are organized in Rifle group and Support Group.   Different types of formations adopted by a section are as under:

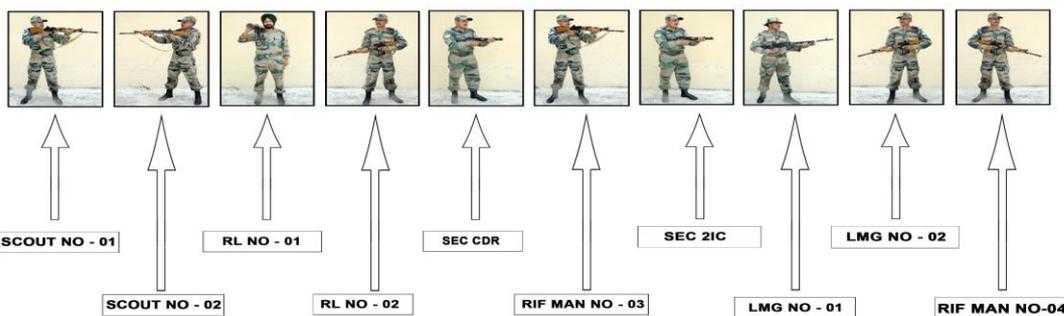|	
Single File Formation	SCOUT NO - 01 SCOUT NO - 02 SEC CDR RIF MAN NO-03 RIF MAN NO-04 RL NO - 01 RL NO - 02 SEC 2IC LMG NO - 01 LMG NO - 02
File Formation	SCOUT NO - 01 SCOUT NO - 02 SEC CDR RIF MAN NO-04 RIF MAN NO-03 SEC 2IC RL NO - 01 LMG NO - 01 RL NO - 02 LMG NO - 02
Arrow Head Formation	SCOUT NO - 01 SCOUT NO - 02 SEC CDR RL NO - 01 RIF MAN NO-03 SEC 2IC RL NO - 02 LMG NO - 01 RIF MAN NO-04 LMG NO - 02

Spear Head Formation

Diamond Formation

Extended Line Formation

Scout

14.   Now you have seen section formation, a word about the scouts. Scouts are the eyes and ears of the section.   Scouts always work in pairs.   They work ahead of the leading section and advance from bound to bound. As scouts, one must always be alert.

15.   You have so far learnt the organisation of a section and the various formations adopted by a section in battle.   Remember, a section is organised into the Rifle Group and Fire Support Group to facilitate fire and move, the basic of all tactics.   As for the section formations, each formation has its peculiar advantages and disadvantages.   Remember, need for command and control and the necessity of developing the maximum fire quickly, will determine the formation you as a section commander must adopt.

FIRE CONTROL ORDERS

16.   By opening of fire indiscriminately, too early or at too great a range, the defender's position will be disclosed prematurely which will mean wasting of ammunition without advantage.   This means Section Commander should be able to control the fire of his section by exercising good fire discipline.

17.   It is the duty of the commander to ensure that the enemy is engaged effectively by bringing down the correct volume of fire at the most effective range by using the most appropriate weapon(s).   Also in the battle, all personnel of a section / platoon may not be able to observe the enemy and even if they can, they may either not open fire thinking that others would do so or all of them may open fire resulting in wastage of ammunition.

18.   It is also the duty of a commander to assess the effect of fire on the en and then either stop the fire, or re-adjust it or add the fire of additional weapons to make it effective.   Therefore, the commander ensures effective fire and judicious expenditure of ammunition.

Importance Of Fire Discipline And Fire Control Orders

19.   Fire discipline is a battle winning factor which will stand you in good stead, especially in situations where surprise is of paramount importance.   Indisciplined firing starts with an individual and spreads like wild fire. Should the troops have confidence of correct, accurate and effective fire orders, they may not indulge in opening of premature/indiscriminate firing, thereby giving away position or wasting ammunition.   Fire discipline and fire control orders are very important in all operations of war.

20.   **Defence**.   In defence, if fire is opened up prematurely, it will give away the defender's location allowing the enemy to change his plan and surprise the defender subsequently.   Moreover, fire opened up at long ranges, is rarely effective and results in leaving the defender with less ammunition for the eventual attack by the enemy.   Therefore good fire discipline and correct fire orders, assumes added significance in the following cases:-

    (a)   During hours of poor visibility/darkness when men are jittery and tend to fire at imaginary targets.

    (b)   When enemy patrols try to draw fire from the defender in order to find his disposition.

21.   **Important Terms**.   Certain terms connected with fire control orders are:-

    (a)   **Fire Unit**. Any number of men firing under a commander, usually a section.   The personal responsibility for giving them the executive order to fire is the fire unit commander.

    (b)   **Fire Direction Orders**. These are the orders which the fire unit commander receives from his superior, telling him when, at what target, and with what intensity to open fire.   A section commander will receive fire direction orders from his Platoon commander.   They may include key ranges and any specific direction about withholding of fire.

    (c)   **Fire Control Orders**. These are the orders given by the fire unit commander to direct and cont the fire of his fire unit.Emphasis should be on control and surprise.   These orders are the final and complete instructions after all factors have beenconsidered and before fire is actually opened.

    (d)   **Arc of Fire**. This denotes the area of ground for which the fire unit is responsible and within which it will engage targets.   An arc of fire must not be confused with a field of fire, which is the area over which it can fire effectively.

22.   **Points for Section Commander**.   There are certain factors which must be remembered before giving fire control orders.

    (a)   **Indication**. No fire order can be effective unless the target is clearly indicated and can be easily recognised by the men of the fire unit.

    (b)   **Range.**   Do the range, visibility and vulnerability of the target justify fire at all? Would it be better to wait and get a more vulnerable target or achieve more/complete surprise?

(c) **Best Weapons to Use.** What is the best weapon or weapons to use? Although the LMG is the main weapon of the section, the target may be more suitable for rifle fire only or possibly for a combination of weapons, eg a LMG and rifle grenade.

(d) **Rate of Fire**. Should the fire be in single round or in bursts? Should it be rapid or at the normal rate? Rapid rate is justified only on a few occasions, when it allows the max effect to be gained from surprise and volume of fire or when an especially vulnerable target presents itself or to cover move of troops in the final stages of an assault.

23.   **Method of Giving the Orders**.   Having decided to open fire, there is then the need to give orders.   The four main rules which must be adhered to are: -
(a)   The orders should be given clearly, calmly and concisely.
(b)   It should be given loudly so as to be heard above the noises of the battle.
(c)   It must be given as an order, to be obeyed as such.
(d)   It should be given with adequate pauses, so that those being addressed may have the time to take the correct action. For example there must be time for sight adjustment after the range is given.

Sequence of Fire Control Orders

24.   Fire control orders must be given in the laid down sequence so as to avoid confusion and misunderstanding. For ease of remembering the sequence for giving fire control orders, remember the catch word `GRIT'.
(a)   **G**   The Group of the section which is addressed, i.e the LMG group, the rifle group or the whole section. An order starting 'No 1 Section indicates that the whole section will fire, `LMG Group' or 'Rifle Group' means that group only is to fire.

(b)   **R**   The range to the target should be given next. It is to ensure accuracy of fire and to draw attention on a limited area of ground (Instructor to explain why range has to be given before indicating the target).

(c)   **I**   The indication of the target by the simplest form of indication.

(d)   **T**   The type of fire to be emp. i.e open fire at once, or on further orders, or when the opportunity arises.

Types of Fire Control Orders

25.   There are four types of fire control orders as under :-

(a)   **Delayed Fire Control Orders**. These orders are given as an early warning when enemy is seen approaching at a longer range so that necessary preparations are made by the troops to open fire, as soon as the enemy appears within the effective range of weapons. Delayed fire control orders are executed in two manners:-
(i)   When the initiative to open fire is left to the man eg:-

"No 1 Sec - 800 - JUNGLE se dushman ka ek sec adv kar raha hai. Jab mar ke ilake men aye to FIRE".
(ii)   When initiative to open fire is with fire unit commander. Eg

"No 1 Sec - 800 - JUNGLE se dushman ka ek sec adv kar raha hai– mere agale hukam ka intizar karo".

(b)   **Full Fire Control Orders.** As the name suggests these are orders complete in all respects. These fire control orders are given when fire is to be brought down immediately on a target within the effective range of weapons. There are two types of full fire control orders.

(i)   **Distributed Area Target**. This is when the enemy presents itself over an area. e.g.

"No 1 Sec - 200 - JHARI - DAINE tin baje DARKHT –tak dushman ki position. LMG Group char burst, rifle group tin tin round FIRE".
(ii)   **Pin Point Target.** This is when enemy presents itself atone.
place only. e.g.

"Rif Gp 300 AkelaDarkhat, Darkhat ke niche dushman ka sniper, Rfn No 1 - tin round „FIRE".

(c)   **Opportunity Fire Control Orders.**   These orders are given when the   target is not continuously seen by everyone in the section or when the enemy has taken cover, eg:-

"No 1 Sec 400 tuti futi zamin me dusman chhupa hua hai, nazar ane per FIRE".

(d)   **Brief Fire Control Orders**. These are given when time is not available to give out a full fire order. In this only essential details are given. This type of order is normally given when enemy appears at close range and surprises us. eg
"LMG group sights down enemy running left to right - FIRE (Instructor to explain significance of the phrase sights down".

26.   **Fire Control Orders are necessary to achieve the following**:-

(a)   Maintain fire discipline.
(b)   Conserve and expend ammunition and use it judiciously and effectively.
(c)   Not to disclose own position prematurely at long ranges, as chances of enemy escaping are more and they would have taken away information of your dispositions, which is not desirable.
(d)   Engage targets with speed.
(e)   Maintain surprise.

FIRE AND MOVEMENT

27.   **When to use Fire and Movement Tactics**.   Fire & movement tactics may be used in following circumstances: -

(a)   The enemy has opened SA fire which is effective.

(b)   When own troops have seen the en first - within 400 to 700 meters.

(c)   When the en is known or suspected to be in a certain area, then fire & movement tactics may be adopted when the troops reach within the effective range of en weapons/observation. (Instructor to explain as to what could be the effective range of enemy's personal weapon)

(d)   To cross obstacles by day or by night, e.g. nullahs /rivers.

28.   **Basic Considerations**.   There are five basic considerations for fire & movement. These are as under:-

(a)   **No movement on exposed ground without covering fire**.   The Advantages of covering fire are obvious, but this does not mean that fire will be brought down continuously when you are moving. Whenever you have ground providing you cover, you must use it. Whenever you have to move in open, fire must be brought down on the en in small bursts to keep his head down.

(b)   **Control by the Commander**. The sec can remain a viable force only when it is under the control of its commander. Otherwise, it is likely that the required fire support will not be brought down at the required place & time. In a section, control is ex by voice command & hand signals. As a rule, sec commander must keep his section within range of voice or visible control.

(c)   The angle of covering fire from direct firing weapons should be as wide as possible w/o loss of control or time. It is to ensure that own troops are not coming under effective fire of own fire sp. It also ensures that the fire support is provided till as late as possible so that assault troops are able to close in with the en.

(d)   **Full use of Available Cover.** Full use should be made of cover provided by the ground. Various types of cover have already been taught to the cadets.

(e)   **Optimum use of all Available Weapons.**   All available weapons should be used for producing covering fire.

29.   **Appreciation of Ground and Cover**.   In battle, fire & movement is applied according to the type of ground over which we are operating. In open country, the problem is to find cover; in close country, there is

difficulty in finding positions with good observation & field of fire. Skillful use of ground can help achieve surprise & save lives. It is therefore required to develop an eye for ground. Ground should be considered from the enemies' point of view & it should be appreciated for the following:-

    (a)   Fire positions.
    (b)   Observation positions.
    (c)   Cover from fire.
    (d)   Cover from view.
    (e)   Obstacles.

(Instructor to explain that while movement, sec commander & every member of the sec is responsible to continuously look for nearest cover which he may have to take once en opens effective fire. He is also responsible to appreciate various fire positions & types of cover being provided by that particular cover).

30.   **Types of Cover**.   Cover from view is often not cover from fire, especially if the movement has been seen by the enemy. Concealment from enemy air and ground observation is the chief means of gaining surprise. Some of the main types of cover are:-

    (a)   Undulating ground which is the least obvious form of cover; when skillfully used, it protects from direct fire and gives no ranging marks to the enemy.

    (b)   Sunken roads, beds of streams and ditches which give good cover from view and often from fire as well. However, the reis always a danger that the enemy may pay special attention to them; they may be mined or booby-trapped and precautions must be taken. If the roads or ditches are straight, the enemy will be able to fire down the min enfilade.

    (c)   Hedges and bushes give cover from view but not from fire. In open country they may make Standing crops give cover from view but movement through them can generally be detected.

    (d)   Woods which give cover to men and vehicles from enemy air and ground observation. They give some protection from small arm fire but HE bombs and shells will explode in the branches of trees and will cause heavy casualties unless troops are dug in and have overhead protection.

    (e)   Buildings and walls afford concealment and protection from small arms. Fire and shell splinters. When isolated they make good ranging marks for the enemy.

31.   **Dead Ground**.   Ground which a soldier cannot see from his position is called dead ground. Platoon and section commanders should be able to recognize ground which is likely to be dead to the enemy. Ground can only be described as dead in relation to the position of an observer. Troops under cover or in dead ground are safe from enemy observed fire but not from indirect fire. These areas are always likely to be selected by the enemy as defensive fire tasks for his artillery and mortars. Dead ground is also safe from detection by battle field surveillance radars, by battle field surveillance radars, as these have line of sight limitations.

32.   **Common Mistakes**.   The wrong use of ground may lead to casualties and loss of surprise; some common mistakes are:-

    (a)   Carelessness by troops while making a reconnaissance, such as   unfolding a map in the open or not using a covered approach to an Observation Post.

    (b)   Unnecessary movement in a position overlooked by the enemy.

    (c)   Using conspicuous landmarks such as isolated trees, bushes or cottages.

    (d)   Halting troops near road or track junctions or other mapped features which are always registered as targets by the enemy.
    (e)   Bad track discipline.
    (f)   Failure to guard against enemy air observation.

33.   **Maps and Air Photographs**.   Maps and air photographs should be used together to obtain the best picture of the ground. The two aids are complementary as is shown by listing the advantages and limitation of air photographs :-

     (a)   **Advantage**.
         (i)   Are more up-to-date.
         (ii)   Gives more detail.
         (iii)   Show the size and shape of features accurately.
         (iv)   Allow gradient to be seen in relief with a stereoscope.

     (b)   **Limitations.**

         (i)   Complete geographical cover almost impossible.
         (ii)   Expensive to produce.
         (iii)   Scales vary.
         (iv)   Details of heights not given.

34.   **Selection of Fire Positions and Fire Control**.   The ideal fire position should:-

     (a)   Provide cover from fire.
     (b)   Provide cover from view.
     (c)   Afford a good view of the ground to be watched or target to be engaged.
     (d)   Provide room in which to use the weapon freely.
     (e)   Have a covered approach.
     (f)   Be easy to advance from.

Fire Control

35.   There is a big distinction between fire control in attack and in defence. In **attack** men should be allowed a great deal of latitude in opening fire. Speed and immediate fire effect is what is required. With a well concealed enemy it will often be necessary to "neutralise" an area by fire since few definite targets will be visible. In **defence**, the vital factor in fire control is that early opening of fire may give away positions to the enemy and jeopardize concealment. Normally, a section commander will lay down a line in front of his section post beyond which fire will not be opened without his orders. This is particularly important where a long field of fire is available. In any case fire will normally be opened on the orders of the section commander.

Movement

36.   Movement in the face of the enemy should be covered by fire. This does not mean that it is impossible to move unless a heavy weight of fire is brought down on the enemy. An important part of an attack is the movement towards the objective, supporting fire is one of the aids to that movement. A knowledge of how to move and how to use ground for movement is essential to enable troops to close with the enemy with minimum casualties, undetected in the zone of arc of battle field surveillance radars.

37.   Usually, troops advancing by day in action will move at a brisk walking pace until they make contact; in the final stages of the assault, they will double. They may have to double or crawl at other times; for example if attacking troops move into enemy defensive fire, it is usually best to double forward and through it; to lie down is often dangerous as well as useless. Doubling and crawling are both tiring however, and should only be used in short spells in critical situations particularly for crossing open ground in full view of the enemy. The commander must himself decide on his pace from his personal knowledge of the state of fitness of his men. In general the aim must always be to keep movement determinedly towards the enemy at the best possible speed.

CONCLUSION

38.   Fire & Move is the basic skill of tactics. Its training provided to all the officers and jawans. The basic aim is to enable one detachment of soldiers to move while the enemy is pinned down by the effective fire of the other temporarily static body of soldiers. It is the most effective and safest method to move during operations or when in contact with the enemy.

CHAPTER V : KNOTS, LASHINGS AND STRETCHERS

1.   The ability to join two pieces of natural material together, and so increase their length, gives man the ability to make full use of many natural materials found locally. Knot tying is a useful exercise to obtain better coordination between eyes and fingers.
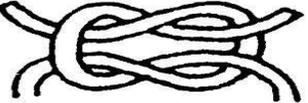
Knots

2.   A brief description of the use to which the knot may be put is given in this lesson. The diagrams will explain how the knot is tied. The letter "F" means the free or untied end of the rope, and the letter "S" means the standing or secured end.

3.   **Knots for Rope ends or for Grips on Thin Rope**.

Ser No	Type of Knot	Sample
(a)	**Thumb Knot.** To make a stop on a rope end, to prevent the end from fraying or to stop the rope slipping through a sheave, etc.	
(b)	**Overhand Knot.** Over hand knot may be put to the same use as the thumb knot. It makes a better grip knot, and is easy to undo.	
(c)	**Figure Eight.** This knot is used as the thumb knot. It is easy to undo, and more ornamental.	

4.   **Knots for Joining Ropes**.

Ser No	Type of Knot	Sample
(a)	**Reef Knot**. To securely join two ropes of equal thickness together. Notice the difference in position of the free and standing ends between this and the thief knot.	
(b)	**Thief Knot** To tie two ropes of equal thickness together so that they will appear to be tied with a reef knot, and will be retied with a true reef knot. This knot was often used by sailors to tie their sea chests, hence the name.	
(c)	**Fisherman's Knot**. For joining two springy materials together; suitable for wire, fishing gut or vines. Two thumb knots (one on each rope)pulled tight. The knots lock together.	

5. **Knots to Make Loops in Rope**.

Ser No	Type of Knot	Sample
(a)	**Bowline**. To form a loop that will not slip on a rope end.	
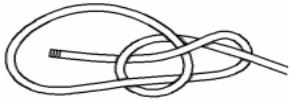
6. **Knots for Fastening Ropes**.

Ser No.	Type of Knot	Sample
(a)	**Clove Hitch**. For securing a rope to as par. This hitch, if pulled taut, will not slip up or down on a smooth surface. A useful start for lashings.	

Lashings

7.   The methods employed to tie with ropes, poles or any rope to a stationary object to securely hold it in place is known as lashing.

(a)   **Square Lashing**. To join poles at right angles.

(b)   **Frapping Turns**. These are turns that go round the lashing and pull it tight.
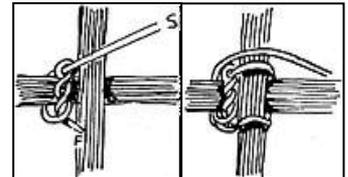
8.   **Stretchers**.   A stretcher, litter, or pram is an apparatus used for moving patients who require medical care. A basic type (cot or litter) must be carried by two or more people. A wheeled stretcher (known as a gurney, trolley, bed or cart) is often equipped with variable height frames, wheels, tracks, or skids.

9.   **Basic stretchers**.

(a)   Simple stretchers are the most rudimentary type. They are lightweight and portable, made of canvas or other synthetic material suspended between two poles or tubular aluminum frame. Many are stored as disaster supplies and are often former military equipment.

(b)   The scoop stretcher is used for lifting patients, for instance from the ground onto an ambulance stretcher or onto a spinal board. The two ends of the stretcher can be detached from each other, splitting the stretcher into two longitudinal halves. To load a patient, one or both ends of the stretcher are detached, the halves placed under the patient from either side and fastened back together.

(c)   The litter, also known as a rescue basket or Stokes basket, is designed to be used where there are obstacles to movement or other hazards: for example, in confined spaces, on slopes, in wooded terrain. Typically, it is shaped to accommodate an adult in a face up position and it is used in search and rescue operations. The person is strapped into the basket, making safe evacuation possible. The litter has raised sides and often includes a removable head/torso cover

for patient protection. After the person is secured in the litter, the litter may be wheeled, carried by hand, mounted on an ATV, towed behind skis, snowmobile, or horse, lifted or lowered on high angle ropes, or hoisted by helicopter.

(d)   A Reeves Sleeve, SKED, or "flexible stretcher" is a flexible stretcher that is often supported longitudinally by wooden or plastic planks. It is a kind of tarpaulin with handles. It is primarily used to move a patient through confined spaces, e.g., a narrow hallway, or to lift obese patients. Reeves stretchers have six handholds, allowing multiple rescuers to assist extrication.

(e)   The WauK board is also designed for use in small spaces. The patient is secured to the board with straps. It has two wheels and a foldable footrest at one end, allowing the patient to be moved by one person, much as with a hand truck for moving cargo. It can also be used at a variety of angles, making it easier to traverse obstacles, such as tight stairwells.

10.   **Wheeled stretchers**.   For ambulances, a collapsible wheeled stretcher, or gurney, is a type of stretcher on a variable-height wheeled frame. Normally, an integral lug on the stretcher locks into a sprung latch within the ambulance in order to prevent movement during transport, often referred to as antlers due to their shape. It is usually covered with a disposable sheet and cleaned after each patient in order to prevent the spread of infection. Its key value is to facilitate moving the patient and sheet onto a fixed bed or table on arrival at the emergency department. Both types may have straps to secure the patient.

11.   **Other types of stretchers**.   The   Nimier   stretcher (*brancard Nimier*) was a type of stretcher used by the French army during World War I. The casualty was placed on their back, but in a "seated position", (that is, the thighs were perpendicular to the abdomen). Thus, the stretcher was shorter and could turn in the trenches. This type of stretcher is rarely seen today.

CONCLUSION

12.   Knots, lashings and stretchers are very useful and become very handy for cadets during camps. They can make use of knots for joining or tying 2 to 3 different ropes together and make use of it during rope climbing, rappelling, slithering and other such adventure activities. Similarly, lashings can be used for joining 2 or 3 things together to make a structure that can useful in camps. For evacuation of any injured or causality stretchers are important to be known and used.

.SUMMARY

1.   Field Craft is an aspect of military training which relates to the conduct of a soldier in face of the enemy. It's an art of using the ground and the weapon available to the best of one's own advantages.

2.   **Methods of Judging Distance**.

    (a)   Unit of Measure.
    (b)   Appearance Method.
    (c)   Section Average.
    (d)   Key Range.
    (e)   Halving.
    (f)   Bracketing.

3.   **Types of Ground**.

    (a)   Broken Ground.
    (b)   Flat and Open Ground.
    (c)   High Ground.
    (d)   Dead Ground.

4.   **Landmarks**.   .An object, which is prominent on the ground and which is used in verbal orders to explain the ground in front.

5.   **Target**. It is an object having a tactical significance which is indicated with a view to bring down fire on it.

6.   **Reference Point**.   .A prominent and unmistakable object, with the help ofwhich you can indicate other land marks or targets. A reference point should be specific. Things are seen due to
    (a)   Shape.
    (b)   Shine.
    (c)   Shadow.
    (d)   Spacing.
    (e)   Smoke.
    (f)   Sound.
    (g)   Movement.

7.   **Camouflage**.   The various measures include.
    (h)   Use of Disruptive Pattern Clothing and Local Vegetation.
    (i)   Camouflage of Face.
    (j)   Camouflage of Equipment.
    (k)   Helmet.
    (l)   Use of Hessian Cloth.
    (m)   Use of Camouflage Net.
    (n)   Camouflage of Packs.
    (o)   Camouflage of LMG.
    (p)   Camouflage of Rifle.

8.   There are two types of cover:-

    (a)   **Cover from Fire**.   This implies that the concealed person is protected both from view and fire of weapon.
    (b)   **Cover from View**.   In this type of cover, a person is concealed only from view or from being seen not from fire.

9.   Field Signals is one of the ways of passing of message with the help of Predetermined codes and signals.

    (a)   Signals with hand.
    (b)   Signals with Weapons.
    (c)   Signals with Whistle.

10.	Field signals are alternate means of giving orders and control troops when voice control is not possible like:-

        (a)	Battle Noises.
        (b)	Need for silence.
        (c)	Intervening distances are too large.

11.	The Field signals used during day are different form ones used at Night. These could be:-

        (a)	Other Methods of Communication.
        (b)	Radio.
        (c)	Dispatch Rider.
        (d)	Runners.

12.	**Basic Considerations for Fire and Movement**.
        (a)	No movement on exposed ground without covering fire.
        (b)	Control by the commander.
        (c)	The angle of covering fire from direct firing weapons should be as wide as possible w/o loss of control or time.
        (d)	Full use of available cover.
        (e)	Optimum use of all available weapons.

13.	The ideal fire position should: -
        (a)	Provide cover from fire.
        (b)	Provide cover from view.
        (c)	Afford a good view of the ground to be watched or target to be engaged.
        (d)	Provide room in which to use the weapon freely.
        (e)	Have a covered approach.
        (f)	Be easy to advance from.

14.	The various section formations are :-
        (a)	Single file.
        (b)	File.
        (c)	Arrow Head.
        (d)	Diamond.
        (e)	Spear Head.
        (f)	Extended Line

15.	Knots are ability to join two pieces of material/rope together. Important types of knots are:-
        (a)	Thumb Knot.
        (b)	Overhand Knot.
        (c)	Figure Eight Knot.
        (d)	Thief Knot.

16.	**Lashing**.	The method employed to tie with ropes, poles, or any rope to a stationary object to securely hold it in place is known as Square Lashing and Frapping Turns.

17.	**Stretchers**.	For evacuation of any injured or causality stretchers are important to be known and used.

ORGANISATION OF AN INFANTRY BATTALION AND ITS WEAPONS

1.   **Introduction**.   The infantry battalion is the most important organisation of the army.   It is trained and equipped to face any adverse situation. It can fight an enemy independently or as part of a larger force. It has the sustenance power and motivation to fight till the end. The Infantry Battalion is a balanced force which can withstand any difficult situation both in offensive, defensive, as well as in special operations against the enemy. The support weapons available with the Battalion can contain the plan of the enemy by causing maximum damage both in fortified fire positions and Armoured protected tanks/personal carriers.. Infantry battalion has inherent fire power capability at long ranges in terms of battalion support weapons. The two important infantry battalion support weapons are 81mm Mortor and Anti Tank guided missile.

ORGANISATIONOF INFANTRY BATTALION

2.   The infantry battalion is the most important organisation of the army. It is trained and equipped to face any adverse situation. It can fight an enemy independently or as part of a larger force. It has the sustenance power and motivation to fight till the end.

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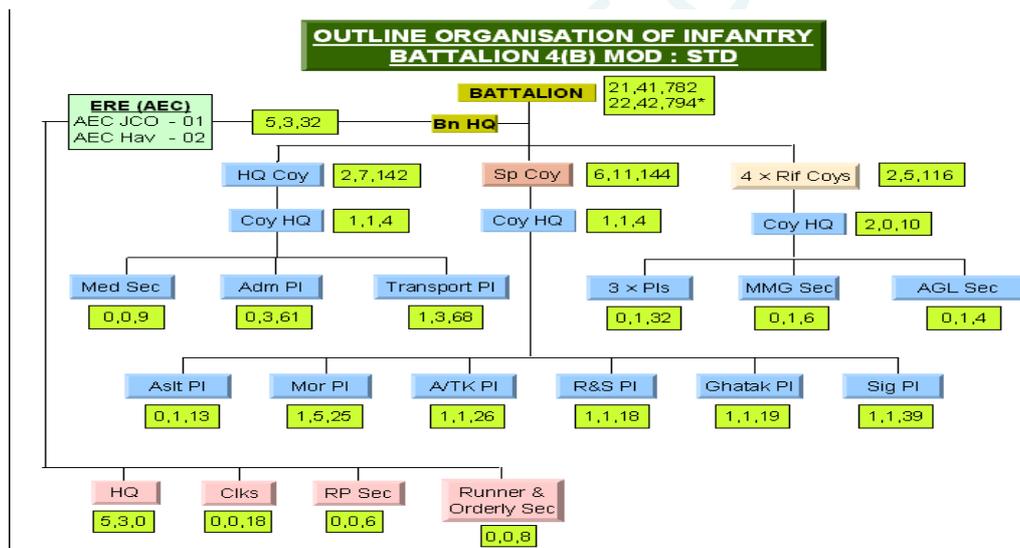
Capabilities

3.   The capabilities of Infantry Battalion are as under:-

    (a)   **Self Reliance**.   The Infantry is equipped, trained and organized to fight with the enemy without any outside support. It can fight itself for a long time.

    (b)   **Ability to Hold Ground**.   The Infantry Battalion can hold ground effectively with or without outside support.

    (c)   **Adaptability**.   An infantry battalion is highly adaptable and can operate over any type of ground, by day or by night and under any difficult climatic conditions. The infantry battalion can be readily shifted by land, sea or air to the battle field.

    (d)   **Mobility**.   Infantry battalion has a high degree of mobility. It can go through almost all kinds of obstacles.

(e) **Vulnerability**. In battle, an infantry battalion becomes vulnerable in front of tanks, artillery, small arms, air attack and anti-personnel mines.

Employability

4. The basic role of infantry battalion is to close in with and destroy or capture the enemy and to hold ground. Fire and movement is the basis of infantry tactics. Infantry battalion from section up wards is based on this principle. Infantry battalion and its sub-units are trained to operate in the face of the enemy opposition without entirely depending on support from other arms, by skillful use of ground, weapons, and above all the infantrymen with their sheer courage, determination and velour.

Company Support Weapons

5. The company support weapons are 7.62mm Dragunov Sniper Rifle, 7.62mm Medium Machine Gun, 30 mm Medium Grenade Launcher, and Anti material Rifles. They are used both in defensive and offensive operations.

6. **7.62 mm Dragunov Sniper Rifle**.

    (a) Caliber - 7.62mm.
    (b) Range - 800 Mtr.
    (c) Range with telescope sight - 1300 Mtr.
    (d) Weight - 4.3 Kg.
    (e) Magazine capacity - 10 Rounds.
    (f) **Ammunition fired**.
        (i) Armor Piercing.
        (ii) Sniper Balls.
        (iii) Steel Core.
        (iv) Tracer.
        (v) Incendiary.

7. **7.62 mm Medium Machine Gun**.

    (a) **Weight**.

        (i) Gun - 14.2 Kg.
        (ii) Tripod - 10.2Kg.

    (b) Effective Battle Range - 1800m.
    (c) Traverse - 360 degree.
    (d) No. of rounds in belt -235 Rounds.

    (e) **Rate of Fire**.

        (i) Normal - 100 rounds per min.
        (ii) Rapid - 200 rounds per min.
        (iii) Cyclic - 500-1000 rounds per min. (Adjustable by setting of gas regulator).

    (f) Length of Service Burst - 20 rounds.
    (g) Sustained Fire - Being air-cooled can maintain normal rate of fire indefinitely However barrel should be changed after firing four belts.

    (h) **Beaten Zone**.

Range	Beaten Zone
(i) 560m	110m x 1m.
(ii) 600m	100m x 1m.

	(iii)	1200m	65m x 3m.
	(iv)	1800m	50m x 4m.
(i)	Trajectory		-When the sight is fixed up to 600m bullets do not rise above 1.2m (4 ft).
(j)	Night Firing		-It is possible to fire the gun at night using passive night sight.

8. **30mm Automatic Grenade Launcher**.

   (a) **Weight**

	(i)	Launcher	-	18 kg.
	(ii)	Mount	-	12 kg.
	(iii)	Sight	-	1 kg (without case); 3.5 kg (with case).
	(iv)	Gun Box	-	14.5 kg (with 29 grenades in one belt).
	(v)	Sight with case	-	3.5 kg.

   (b) **Range** -800 to1700 m (With and without sight).

   (c) **Rate of Fire**

	(i)	Normal -	50grenades/Min.
	(ii)	Rapid	100grenades/Min.
	(iii)	Cyclic	350 to 400grenades/Min.

   (d) **Flexibility**.   It can be mounted on a vehicle or helicopter. It can fire in low angle as well as in high angle. It has crest clearance capability. Flexibility is mainly due to:-

	(i)	Controlled Elevation	-	67 degrees.
	(ii)	Controlled Depression	-	14 degrees.
	(iii)	Free Traverse	-	260 degrees.

   (e) **Effect of Fire**.   It fires a fragmentation type of grenade which can be fired in a single shot or burst mode. The killing area of a grenade is 7 m all around from the point of burst.

   (f) **Limitations**.   It has the following limitations:-

	(i)	Due to sustained fire small parts get damaged.
	(ii)	Barrel needs to be cooled after firing 80 to 90 grenades.
	(iii)	It gives out flash and blast on firing.

9. **84 mm Rocket Launcher**.

   (a) Caliber– 84 mm.
   (b) Weight– 16 kg with mount and telescopic sight.
   (c) Length – 1065 mm.
   (d) Traverse– No traverse of its own.
   (e) **Range**.

	(i)	HEAT	-	400m (moving targets) and 500 m (stationery targets).
	(ii)	HE	-	1000m (killing area 10 m).
	(iii)	Smoke	-	1300 m (width 15 m).
	(iv)	Illumination –		2100 m (area of 400- 500 m diameter for 30 seconds).

(f)	Rate of fire	Maximum sustained 06 rounds per minute.
(g)	Types of ammunition	Heat, HE, Smoke, Illumination.
(h)	Armor Penetration	400 mm (Heat).
(i)	Back Blast Area	15 m.

BATTALION SUPPORT WEAPONS

81MM Mortars

10. **Characteristics of 81mm Mortars**.

    (a) Caliber   -   81 mm.
    (b) Weight   -   40.6 kg (without sight).
                             4.7 kg (sight without case).
    (c) Range

        (i)   Minimum – 68mts (from safety point of view 90 m).
        (ii)   Maximum – 5200 m.

    (d) Rate of Fire (per minute).

        (i)   Slow –   6-8 rounds.
        (ii)   Normal –   9-11 rounds.
        (iii) Rapid – 12- 20 rounds.

    (e) Muzzle Velocity – 305 m/sec (maximum).
    (f) Elevation Limit –45 degrees to 85 degrees (g).
    (g) Safety Distance – Flanking 200 m, Overhead 250 m.

11. **Anti Tank Guided Missile (ATGM)**

    (a) Minimum Range   -   75m.
    (b) Maximum Range   -   2500m.
    (c) Rate of Fire   -   03 missiles per minute.
    (d) Hit Probability   -   90% to 96%.
    (e) Accuracy   -   60 cm around point of   aim, at maximum range.
    (f) Generation   -   Second.
    (g) Launcher Mount

        (i)   Traverse   -   360 degrees.
        (ii)   Elevation   -   8degrees + 20 degrees.
        (iii) Magnification -   10 times.
    (h) Guidance   -   Semi automatic optically tracked Wire guided.
    (i) Penetration   -   At 90 degrees angle of.
    (j) Impact 460mm   -   At 60 degrees angle of impact 230mm.

12. **Visit To Nearby Infantry / Fighting Arms Unit**.   Cadets will be taken on a visit to any nearest Infantry Battalion to show the support weapons on ground where ever possible. In the absence of Infantry Battalion a short video can be screened showing the Infantry Battalion and company support weapons for better understanding of the cadets.

CHARACTERISTICS OF 5.56 MM INSAS RIFLE, AMMUNITION, FIRE POWER, STRIPPING,ASSEMBLING & CLEANING

13.   The 5.56mmINSAS Rifle is produced by the Indian Ordinance Factory Board and is being used by the Indian army. It is the personal service weapon of a soldier. It is lighter than the AK47 and easy to handle.

14. **Characteristics, Ammunition and Fire Power.**

    (a) Calibre   -   5.56 mm.
    (b) Length of Rifle without bayonet   -   960 mm.
    (c) Length of Rifle with bayonet   -   1110 mm.
    (d) Length of barrel   -   464 mm.
    (e) Weight

(i)	Fixed butt with empty magazine	-	3.6 kg.
(ii)	Fixed butt with loaded magazine	-	3.69 kg.
(iii)	Full magazine	-	90 gm.
(iv)	Bayonet	-	305 gm.

(f)	Effective range	-	400 m.
(g)	Sight Radius	-	470 mm.
(h)	Principle of Operation	-	Gas Operated.
(i)	Penetration	-	3 mm at 700m.
(j)	Mode of fire	-	Single Shot and Three Round Burst.
(k)	Rate of Fire		

(a)	Normal	-	60 rounds.
(b)	TRB (Three Round Burst)	-	90 rounds/min.
(c)	Intense	-	150 rounds/min.
(d)	Cyclic	-	600 to 650 rounds/min.

15. **Type of Ammunition**.

    (a)   Ball Round.
    (b)   Tracer Round.
    (c)   Blank Round.
    (d)   High Density (HD) Cartridge.

16. **Stripping**. 5.56mm INSAS rifle is the personnel weapon of a soldier. It is responsibility of the soldier to take care of his weapon. Stripping, assembling and cleaning of this weapon is very easy. If a soldier maintains the weapon properly, it will produce good result.

17. **Removing Magazine**. Hold the magazine with left hand and press them magazine catch to the front with thumb and then remove them again.

18. **Stripping Assembly Cover**. Cock the rifle and keep the change lever on 'S'. Press lever locking retainer with left hand and press the retainer to the front with right hand thumb. When retainer moves to the front, it is free from locking retainer. Now lift the assembly opening cover and move to the front.

19. **Stripping of Piston Extension Assembly**. While pressing retainer make the recoil spring assembly free from the guide and move it out.

20. **Stripping of Piston Extension Assembly**. Hold rear portion of piston extension and while pressing it down ward, remove it from the rifle.

21. **Stripping of Breech Block**. .Hold piston extension switch left hand, turning it upside down and with the right hand slide out the breech block from the recess.

22. **Stripping of Firing Pin**. Remove locking pin with the help of drift. Firing pin will come out.

23. **Stripping of Extractor**. Drift tool is used for stripping of the extractor. Press the extract or with the left hand thumb. Then press access pin with pointed portion of the drift. Access pin will come out. Now remove the extractor and spring from its recess.

24. **Stripping of Gas Plug and Projector Sight**. With the help of drift, remove the pin fixing gas plug and while pressing gas plug remove the gas block. Now the projector sight will also get removed.

25. **Stripping of Hand Guard**.The front edge of hand guard is in the cup near the gas block. Straighten the pin locking and remove it with the help of drift. Shifting the cup towards gas block, remove the hand guard.

26. **Stripping of Magazine**. While pressing retainer dimple remove bottom plate. Remove retainer spring and the platform.

27. **Assembling**. Assembling of the rifle is carried out in reverse sequence of stripping as under:-

    (a)   Assembling of magazine.

(b) Assembling of extractor and firing pin.
(c) Assembling of hand guard.
(d) Assembling of piston extension and breech block.
(e) To insert piston extension assembly in gas cylinder and bracket.
(f) To insert recoil spring assembly in piston extension.
(g) To insert piston extension assembly and recoil spring in body housing.
(h) To close cover assembly and loading of retainer.
(i) Fix magazine.

28. **Cleaning**. Items required for cleaning are as under :-
   (a) Oil bottle with oil.
   (b) Brush cleaning bore.
   (c) Pull through.
   (d) Road cleaning barrel.
   (e) Tool adjusting sight/rear sight.
   (f) Tool removing repair case.
   (g) Chindi.
   (h) Drift.

29. Rifle parts to be oiled are as under:-

   (a) Complete breach box less its face.
   (b) Magazine Catch.
   (c) Trigger mechanism.
   (d) Rifle spring Assembly.

30. Rifle parts not to be oiled are as under:-
   (a) Barrel.
   (b) Cylinder.
   (c) Gas plug.
   (d) Piston extension assembly.
   (e) Magazine platform site.

31. Strip the rifle and clean its parts. Clean bore with pull through and chindi. Oil the bore and clean the cylinder gas. Clean cylinder with pull through and chindi. Gas affected parts like breech block, piston, extension and firing pin to be cleaned carefully so that gas fouling is completely removed. After cleaning, the parts should be oiled with a piece of cloth. Do not rub hard outer surface of the rifle with soaked oil.

CONCLUSION

32. The rifleman of an infantry is capable of closing with the enemy and neutralise him with his personnel weapon. However with the presence of company support weapons his punch increases. The company support weapons give additional effective strength to the Infantry Rifle Company both in defensive well as offensive operations The fire power with the Infantry Battalion as its support weapons in the form of 81 mm mortar and anti tank missile makes its formidable force to deal with enemy. It provides the fire support as well as metal support to the troops fighting on ground.

SUMMARY

1.   5.56 INSAS Rifle is the personal weapon of Indian Army. INSAS Rifle is 25% lighter and has 70% less recoil as compared to 7.62mm SLR. INSAS Rifle is lighter, compact and easy to fire. (INSAS-Indian Small Arms System).

      (a)   Types of ammunition used:-
      (b)   Ball round.
      (c)   Tracer round.
      (d)   Blank round.
      (e)   High Density cartridge.

2.   Infantry Battalion is basic fighting unit of Indian Army. It can fight   an opponent   independently or as part of a larger force. The strength of an Infantry Battalion is 20 officers, 42 JCOs, 794 other ranks.

      (a)   Section is the smallest fighting unit of a Battalion.
      (b)   Capabilities are:-
            (i)   Self-reliance.
            (ii)   Ability to hold ground.
            (iii)   Adaptability.
            (iv)   Mobility.

3.   Characteristics of company support weapons:-
      (a)   7.62 mm Dragunov Sniper Rifle.
      (b)   7.62 mm Medium Machine Gun.
      (c)   30 mm Medium Grenade Launcher.
      (d)   84 mm Rocket Launcher.

4.   Characteristics of infantry battalion support weapons should be known by the cadets.

5.   The infantry battalion support weapons causes' maximum casualty to the enemy.

6.   Used both in offensive, defensive and special operations against the enemy.

7.   Types of infantry battalion support weapons – 81 mm mortar and Anti-tank guided missile.

8.   Characteristics of 81 mm mortar and anti-tank guided missiles – weight, range, rate of fire, muzzle velocity, elevation etc.

<u>**CHAPTER I : BIOGRAPHIES OF RENOWNED GENERALS**</u>

<u>**Introduction**</u>

1.   Military History is a humanities discipline, within the scope of general historical recording of armed conflicts in the history of humanity, and its impact on the societies, their cultures, economies and changing national and international relationships.   The essential subjects of military history study are the causes of war, the social and cultural foundations, military doctrine on each side, the logistics, leadership, technology, strategy, and tactics used, and how these changed over time. Thus it is a dynamic discipline.

<u>**Importance / Necessity of Studying Military History**</u>

2.   **History of the World is Largely a History of Warfare**. Military history is a valuable field of study to both professional soldiers and civilians.   As historian John Keegan said, "The written history of the world is largely a history of warfare."   Yet one may argue if someone is not preparing for war, what is the point of studying the military past?   War is such a dominant feature of human history that most modern nation-states and the nation-state system itself came into existence either through or because of war.

3.   **All Civilisations have Wars in their Culture**.   All civilizations have war in their cultures and "the states within which we live today came into existence largely through conquest, civil strife or struggles for independence.   Consider the United States, a nation forged by the Revolutionary War, re-forged by the Civil War, and expanded through wars with Native Americans, Mexico and Spain.   The study of history, politics and culture over the last millennia of human history would be impossible without a study of military history. Without military history, placing these massive changes in their proper context would be impossible.

4.   **From War Arise Greatest Leaders in History**. Maximum leaders in history have arisen from this conflict / strive.   To name a few – Abraham Lincoln of USA, Winston Churchill of Great Britain and Mrs. Indira Gandhi of India, are best remembered for their contribution in wars.   These figures in history "understood the use of violence and did not hesitate to use it for their ends."

5.   **Study of Military History Affects the Future of Civilisations**. More importantly, most voters lack any military experience, yet elect leaders-with predominantly the same lack of experience to control the most powerful armies in the world.   These leaders will determine if and how their countries will wage wars.   These decisions will affect the future of civilizations.   Military history fills in the gap where personal experience is sorely lacking.   As warfare continues to influence our world today, we who study military history must continue to learn, and to teach, the lessons demonstrated in history.

6.   **Study of Military History Develops Leadership Qualities**.   With study of Military History we come across many leaders with various leadership qualities. Study of military history helps us to know and develop the leadership qualities and learn about leadership traits. These include Alertness, Courage, Dependability, Endurance, Initiative, Integrity, Judgement, Justice, Knowledge, Loyalty, Sense of Humour, Truthfulness, Espirit-de-Corps, Maturity, Humility and Patience

7.   **Study of Military History is a Must for Political and Military Commanders**.   Applying   Past Lessons help us to plan for the future. History can also show how certain plans/moves led to victory or defeat. Military and Civil leaders can strategize based on the history to develop more concrete techniques to win the battles in future. In addition, history has also taught us that it is important to have the support of our home front prior to sending our soldiers to war, especially for extended periods.   We must also understand the ideology of our enemy. Taking the time to learn the mind set and thought process of an enemy does provide us with the adequate tools to properly prepare ourselves for current and future wars. Soldiers can learn strategy, operational art, tactics, techniques, battle procedures/drills, logistic and management aspects, leadership qualities and styles from military history.

BIOGRAPHY OF FIELD MARSHAL KODANDERA MADAPPA CARIAPPA, OBE

8.   Field Marshal Kodandera "Kipper" Madappa Cariappa, OBE (28 January 1899 – 15th May 1993) was the first Indian Chief of Army Staff of the Indian Army and led the Indian forces on the Western Front during the Indo-Pakistan War of 1947-48.   He is among only two Indian Army officers to hold the highest rank of Field Marshal (the other being Field Marshal Sam Bahadur Manekshaw).   His distinguished military career spanned almost three decades, at the highest point of which, he was appointed as the Commander-in-Chief of the Indian Military in 1949.

9.   **Early Life and Military Career**.   Cariappa was born at Shanivarsante in Kodagu (Coorg) which is currently in Karnataka. In 1919, he joined the first batch of KCIOs (King's Commissioned Indian Officers) at The Daly College at Indore and was commissioned into the Carnatic Infantry at Bombay as a

Temporary Second Lieutenant. In 1927, Cariappa was promoted to Captain. He saw active service with the 37 (Prince of Wales) Dogra in Mesopotamia (present-day Iraq) and was later posted to the 2nd Queen Victoria's Own Rajput Light Infantry, which became his permanent regimental home. He was the first Indian officer to undergo the course at Staff College, Quetta in 1933. He was promoted to the rank of Major in 1938.

10. Cariappa served in Iraq, Syria and Iran from 1941–1942 and then in Burma in 1943-1944. He spent many of his soldiering years in Waziristan. He earned his 'Mentioned in Despatches' as DAA and QMG of General (later Field Marshal) Slim's 10th Division. He was the first Indian Officer to be given command of a unit in 1942. By 1944, Cariappa was a Temporary Lieutenant-Colonel. After command, he volunteered to serve in 26 Division engaged in clearing the Japanese from Burma, where he was decorated with an "Officer of the Order of the British Empire." In 1946, he was promoted as the Brigadier of the Frontier Brigade Group. Post-Independence, Cariappa was appointed as the Deputy Chief of the General Staff with the rank of Major General. On promotion as Lieutenant General, he became the Eastern Army Commander.

11. On outbreak of war with Pakistan in 1947, he was moved as General Officer Commanding-in-Chief, Western Command and directed operations for the recapture of Zojila, Drass and Kargil and re-established a linkup with Leh. In all this, he showed tremendous energy in moving troops, against considerable odds and finally ensuring success. On 15 January 1949 Cariappa was appointed as the first Indian Commander-in-Chief of the Indian Army. Cariappa was then instrumental in turning an Imperial Army into a National Army.

Higher Commands and Offices

12. After his retirement from Indian Army in 1953, he served as the high commissioner to Australia and New Zealand till 1956. He was conferred with 'Order of the Chief Commander of the Legion Of Merit' by USA, Harry S. Truman. As a token of gratitude of the nation for the exemplary service rendered by him, the Government of India conferred Cariappa with the rank of Field Marshal on 14th January 1986 at the age of 87.

BIOGRAPHY OF FIELD MARSHAL SAM MANEKSHAW, MC

13. Field Marshal Sam Hormusji Framji Jamshedji Manekshaw, MC (3 April 1914 – 27 June 2008), popularly known as Sam Bahadur ("Sam the Brave"), was an Indian military leader. He was the first Indian Army officer to be promoted to the five-star rank of Field Marshal.

14. Though Manekshaw initially thought of pursuing his career as a doctor, he later joined the first batch of the Indian Military Academy (IMA) when it was established in 1932. Right from his days at IMA, he proved to be witty and humorous in nature. He was first attached to the 2nd Battalion of Royal Scots, and then later posted to the 4th Battalion of 12th Frontier Force Regiment, commonly known as the 54th Sikhs. Following partition, he later reassigned to the 16th Punjab Regiment, before being posted to the 3rd Battalion, 5th Gorkha Rifles, for a brief period later he adopted 8th Gorkha Rifles. His distinguished military career spanned four decades and five wars, beginning with service in the British Indian Army in World War II. During action in World War II, he was awarded the Military Cross for gallantry.

15. Manekshaw rose to become the 8th Chief of Army Staff of the Indian Army in 1969 and under his command, Indian forces conducted victorious campaign against Pakistan in the Indo-Pakistani War of 1971 that led to the liberation of Bangladesh in December 1971. Later, he was awarded the Padma Bhushan and the Padma Vibhushan for his services to the Indian nation.

16. **Early Life and Education**. Manekshaw was born on 3 April 1914 in Amritsar, Punjab to Parsi parents, Hormusji Manekshaw, a doctor, and his wife Hilla, who moved to Punjab from the city of Valsad on the coastal Gujarat. Sam's father served in the British Indian Army as a Captain in the medical services and also participated in World War I. .Hormusji and Hilla had six children of which Sam was the fifth one. Fali, Cilla, Jan and Sehroo preceded Sam and Sam was followed Jemi, who later joined the air force as a doctor and was the first Indian to be awarded the air surgeon's wings from Pensacola, United States. After completing his schooling in Punjab and Sherwood College, Nainital, and achieving a distinction in the School Certificate of the Cambridge Board at the age of 15, he asked his father to send him to London to become a gynaecologist. But his father refused to send him to London stating that he was not old enough.

17. In an act of rebellion against his father's refusal, Manekshaw took the entrance examination for enrollment into the Indian Military Academy and was one of the fifteen cadets to be selected through open competition. He stood sixth in the order of merit. Just before taking over as the Chief of the Army Staff, at a function on 5 June 1969 to mark the centenary of Sherwood College, Manekshaw recalled that his years at the college had prepared him for war as they had taught him to live alone and independently, to fight without relent, tolerate hunger for long periods and to hate his enemy.

18.   **Military Career**.   Manekshaw's military career spanned four decades, from the British era and World War II, to the three wars against Pakistan and China after India's independence in 1947. He held several regimental, staff and command assignments. Manekshaw went on to become the 8th chief of the army staff, led the Indian Army successfully in a war with Pakistan and became India's first field marshal after independence. On commissioning, as per the practices of that time, Manekshaw was first attached to the 2nd Battalion, The Royal Scots, a British battalion, and was later posted to the 4th Battalion, 12th Frontier Force Regiment, commonly known as the 54th Sikhs. Manekshaw was later reassigned to the 16th Punjab Regiment, before being posted to the 3rd Battalion, 5th Gorkha Rifles, and then adopted 8th Gorkha Rifle after partition and went on to become the Colonel of the Regiment of 8th Gorkha Rifle.

19.   **World War II**.   During World War II, the then-Captain Manekshaw saw action in Burma in the 1942 campaign on the Sittang River with the 4th Battalion, 12 Frontier Force Regiment,and had the rare distinction of being honoured for his bravery on the battlefield. During the fighting around Pagoda Hill, a key position on the left of the Sittang bridgehead, he led his company in a counter-attack against the invading Japanese Army and despite suffering 50% casualties the company managed to achieve its objective. After capturing the hill, Manekshaw was hit by a burst of Light Machine Gun fire and was severely wounded in the stomach. Observing the battle, Major General David Cowan, the then commander of the 17th Infantry Division, spotted Manekshaw holding on to life and, having witnessed his valour in the face of stiff resistance, rushed over to him.   Fearing that Manekshaw would die, the general pinned his own Military Cross ribbon to Manekshaw saying, "A dead person cannot be awarded a Military Cross.   The official recommendation for the MC states that the success of the attack was largely due to the excellent leadership and bearing of Captain Manekshaw. This award was made official with the publication of the notification in a supplement to the London Gazette on 21 April 1942 (dated 23 April 1942).

20.   **Chief of the Army Staff**.   Then Chief of the Army Staff (COAS) General P P Kumar Mangalam was due to retire in June 1969. Though Manekshaw was the senior-most commander in army, then Defence Minister Sardar Swaran Singh was in favour of Lt Gen Harbaksh Singh, who had played a key role as the GOC-in-C of Western Command during the1965 Indo-Pak war. Putting the rumours of Harbaksh Singh taking charge as the COAS to an end, Manekshaw was appointed as the 8th Chief of the Army Staff on 8 June 1969. As the Chief of the Army Staff, he developed the Indian Army into an efficient instrument of war. During his tenure as COAS, he was instrumental in stopping the implementation of reservations for scheduled castes and scheduled tribes in the army.

21.   **Indo-Pakistan War of 1971**.   Towards the end of April 1971, Indira Gandhi, the Prime Minister of India, during a cabinet meeting, asked Manekshaw if he was prepared to go to war with Pakistan. In response, Manekshaw told her that his single armoured division and two infantry divisions were deployed elsewhere, that only 13 of his 189 tanks were fit to fight, and that they would be competing for rail carriage with the grain harvest at that point of time. He also pointed out that the Himalayan passes would soon open up, with the forthcoming monsoon in East Pakistan, which would result in heavy flooding. When Indira Gandhi asked the cabinet to leave the room and the chief to stay, he offered to resign. She declined to accept it, but sought his advice. He then said he could guarantee victory if she would allow him to prepare for the conflict on his terms, and set a date for it. These were acceded to by the Prime Minister.

22.   Under Manekshaw's direction, the army launched several preparatory operations in East Pakistan including training and equipping the Mukti Bahini (a local group of freedom fighters), and about three brigades from the regular Bangladesh troops were trained.   As an additional measure, 75,000 guerrillas were trained and equipped with arms and ammunition.   These forces were used to harass the Pakistani army stationed in East Pakistan sporadically in the lead up to the war.

23.   The war started on 3 December 1971, when Pakistani aircraft bombed Indian Air Force bases in the western sector. Manekshaw instructed Lt Gen J F R Jacob, Chief of Staff Eastern Command, to inform the Indian prime minister that orders were being issued for the movement of troops from Eastern Command. The following day, the navy and the air force also initiated full-scale operations on both eastern and western fronts. The veto used by the Russians against the United States' proposal to implement a cease-fire in the United Nations proved decisive in securing India's victory. Manekshaw addressed the Pakistani troops three times via radio messages on the subject of surrender, assuring them that they would receive honourable treatment from the Indian troops. The messages were broadcast on the 9th, 11th and 15 December. The last two messages were delivered as replies to the messages from Maj Gen Rao Farman Ali and Lt Gen Amir Abdullah Khan Niazi.   These messages from the Pakistani commanders to their troops were to have a devastating effect on their side, subsequently leading to their defeat.

24.   Though on 11 December, Ali messaged the United Nations requesting for a cease-fire, it was not authorized by the President Yahya Khan and the fighting continued. Following several discussions and

consultations, and subsequent attacks by the Indian forces, Yahya decided to stop the war in order to save the lives of the Pakistani soldiers. The actual decision to surrender was taken by Niazi on 15 December and was conveyed to Manekshaw through the United States Consul General in Dhaka (then Dacca) via Washington. But Manekshaw replied that he would stop the war only if the Pakistani troops surrendered to their Indian counterparts by 9:00 a.m. on 16 December. Later the deadline was extended to 3:00 p.m. of the same day on Niazi's request. The Instrument of Surrender was formally signed on 16 December 1971.

25.   **Promotion to Field Marshal**.   After the end of the war, Indira Gandhi decided to promote Manekshaw to the rank of Field Marshal and subsequently appoint him as the Chief of the Defence Staff (CDS). However, after several objections from the bureaucracy and the commanders of the navy and the air force, the latter was dropped. Though Manekshaw was to retire in June 1972, his term was extended by a period of six months. On 3 December 1973, Manekshaw was conferred with the rank of Field Marshal at a ceremony held at Rashtrapati Bhavan.

MARSHAL OF THE AIR FORCE : ARJAN SINGH

26.   Marshal of the Indian Air Force Arjan Singh, DFC was born on 15 April 1919. He is the only officer of the Indian Air Force to be promoted to five-star rank, equal to a Field Marshal, to which he was promoted in 2002. He was born in the Punjab town of Lyallpur, British India, into Aulakh family.

27.   **Early Life and Career**.   Arjan Singh was born on 15 April 1919 in Lyallpur in the Punjab in what was then British India.   He was educated at Montgomery, India (now in Pakistan). He entered the RAF College Cranwell in 1938 and was commissioned as a Pilot Officer in December 1939.   As a distinguished graduate of the RAF College, Singh's portrait is found on the walls of the College's west staircase. Air Marshal Arjan Singh led No.1 Squadron, Indian Air Force into command during the Arakan Campaign in 1944.   He was awarded the Distinguished Flying Cross (DFC) in 1944, and commanded the Indian Air Force Exhibition Flight in 1945.

28.   **Career and Commands Held**.   He was Chief of the Air Staff (CAS), from 1 August 1964 to 15 July 1969, and was awarded the Padma Vibhushan in 1965.   He also became the first Air Chief Marshal of the Indian Air Force when, in recognition of the Air Force contribution in the 1965 war, the rank of the Chief of Air Staff was upgraded to that of Air Chief Marshal. After he retired in 1969 at the age of 50, he was appointed the Indian Ambassador to Switzerland in 1971.   He concurrently served as the Ambassador to the Vatican. He was appointed High Commissioner to Kenya in 1974.   He was member of the Minorities Commission, Government of India from 1975-1981.   He was Lt. Governor of Delhi from Dec 1989 - Dec 1990 and was made Marshal of the Air Force in January, 2002. He expired on 16th Sep 2017.

29.   **Career Highlights**.

        (a)   1938-Entered RAF College Cranwell as a Flight Cadet.
        (b)   1939-Commissioned in Royal Air Force as a Pilot Officer.
        (c)   1945-Awarded Distinguished Flying Cross.
        (d)   1964-Chief of Air Staff (Air Marshal).
        (e)   1965-Chief of Air Staff rank upgraded to Air Chief Marshal.
        (f)   1965-Awarded Padma Vibhushan.
        (g)   1969-Retired from Indian Air Force.
        (h)   1971-Ambassador to Switzerland.
        (i)   1974-High Commissioner to Kenya.
        (j)   2002-Marshal of the Air Force.

CONCLUSION

30.   Today the Indian Military is the third largest in the world.   As India is planning to emerge as a regional super power, it is mandatory for its civilian and military leaders to learn from military history to be ready to meet future challenges.   We can learn a lot from the biographies of Field Marshal Cariappa, Field Marshal Sam Manekshaw and Marshal of the Air Force Arjan Singh.   Therefore, it is important for all cadets to study the biographies of Field Marshal Cariappa and Field Marshal Sam Manekshaw.   The Leadership qualities displayed by them worth emulating in every walks of life.

CHAPTER II : INDIAN ARMY WAR HEROES PVC

Introduction

1.   Our Army has been involved in five major wars with our neighbouring countries. We have fought four wars with Pakistan and one with China. Other major operations undertaken by the army include Operation Meghdoot and Operation Cactus, Operation Pawan and Operation Rakshak. Apart from above mentioned operations, the army has also been an active participant in United Nations peacekeeping missions. The Indian Army has shown thorough professionalism, dedication and devotion while participating in all these wars and operations. And for the same many gallantry awards have been awarded to Indian Army for displaying courage, bravery and selfless dedication beyond the call of duty.

2.   **Param Vir Chakra and War Heroes Decorated with PVCs**.   The **Param Veer Chakra (PVC)** is India's highest Military decoration awarded for highest degree of valour or self-sacrifice in the face of enemy. The medal has been awarded 21 times 14 of which were posthumous awards. Literally meaning "Wheels (or cross) of the ultimate brave" it is similar to Medal of Honour in the United States and the Victoria Cross in the United Kingdom. The PVC was established on 26 January 1950 by the President of India, with effect from 15 August 1947. It can be awarded to Officers or enlisted personnel from all branches of the Indian military. It is the highest gallantry award of the Government of India.

3.   **The Design**.   The medal was designed by Savitri Khanolkar who was married to an Indian Army Officer, Vikram Khanolkar of the Sikh Regiment. This was done following a request from the first Adjutant General, Major General HiraLal who in turn had been entrusted with the responsibility of coming up with an Indian equivalent of the Victoria Cross by Pandit Jawaharlal Nehru.The medal is a circular bronze disc 1.375 inches (3.49cms) in diameter. The state emblem appears in the Centre, on a raised circle surrounding this, four replicas of Vajra, the all-powerful mythic weapon of Indra the ancient Vedic king of Gods. The motif symbolizes the sacrifice of Rishi Dadhichi, who had donated his bones to Gods for making Vajra

RECIPIENTS OF THE PARAMVIR CHAKRAS.

4.   The country has awarded 21 Param Veer Chakras for exemplary courage and bravery to the following brave soldiers :-

(a)   Maj Somnath Sharma, 4 KUMAON Badgam, Kashmir November 3, 1947.

(b)   Naik Jadunath Singh Rajput Taindhara, Naushera, Kashmir February 6, 1948.

(c)   2nd Lt Rama Raghoba Rane Bombay Engineers Naushera Rajouri Road April 8-11, 1948.

(d)   Company Haviladar Major Piru Singh 6 Rajputana Rifles Tithwal sector, J&K July 18, 1948.

(e)   Lance Naik Karam Singh 1 Sikh Tithwal sector, J&K October 13, 1948.

(f)   Captain Gurbachan Singh Salaria 3/1 Gorkha Rifles Elizabethville, Katanga, Congo December 5, 1961.

(g)   Major Dhan Singh Thapa 1/8 Gorkha Rifles Ladakh October 21, 1962.

(h)   Subedar Joginder Singh 1 Sikh Tawang, Arunachal October 20-23, 1962.

(i)   Major Shaitan Singh 13 Kumaon Regiment Rezang La, Chusul sector, Ladakh November 18, 1962.

(j)   Lt Col A B Tarapore 17 Poona Horse Phillora, Sialkot, Pakistan September 11-16, 1965.

(k)   Company Quartermaster Havildar Abdul Hamid 4 Grenadiers Cheema, Khem Karan September 10, 1965.

(l)   Lance Naik Albert Ekka 14 Guards, Gangasagar, 6 1/2km west of Agartala December 4, 1971.

(m)   Flying Officer Nirmaljit Singh Sekhon No.18 "Flying Bullets" Squadron Srinagar December 14, 1971.

(n)   Second Lt Arun Khetarpal 17 Poona Horse, 47 Infantry Brigade Shakargarh sector December 16, 1971.

(o)   Major Hoshiar Singh Grenadiers Regiment Shakargarh sector December 17, 1971.

(p)   Naib Subedar Bana Singh J&K Light Infantry Siachen 1987.

(q)   Major Ramaswamy Parameswaram Mahar Regiment Sri Lanka (Operation Pawan) November 25, 1987.

(r)   Captain Vikram Batra13 J&K Rifles July 7, 1999.

(s)   Lt Manoj Kumar Pandey 1/11 Gorkha Rifles July 2-3, 1999.

(t)   Grenadier Yogendra Singh Yadav 18 Grenadiers July 3-4, 1999.

(u)   Rifleman Sanjay Kumar13 J&k Rifles July 4, 1999.

5.   **CHM PIRU SINGH, PVC**.

Born	20 May 1918, Beri, Rajasthan.
Died	18 July 1948 (aged 30) Martyred in action at Tithwal, Kashmir
Years of service	1936–1948
Rank	Company Havildar Major
Unit	6th Battalion, Rajputna Rifles
Battles/wars	Indo-Pakistani War of 1947
Awards	Param Vir Chakra

6.   **Introduction**   Company Havildar Major Piru Singh Shekhawat (20 May 1918 – 18 July 1948) was an Indian Army soldier, awarded the Param Vir Chakra (PVC), India's highest military decoration.
Singh enrolled in the British Indian Army on 20 May 1936, and was assigned to the 1st Punjab Regiment. Between 1940 and 1945, he served on the North-West Frontier and as an instructor, before deploying to Japan as part of the British Commonwealth Occupation Force. After independence, he took part in the Indo-Pakistani War of 1947, serving with the Indian Army's 6th Rajputana Rifles. During the battle, Singh was part of the leading section of a company that was assigned to capture a Pakistani post at Tithwal, in Jammu and Kashmir. Soon after their attack was launched, the company suffered heavy casualties. In time, Singh successfully occupied a Pakistani medium machine-gun post. But, by that time, the entire company lay dead or wounded. Singh was left alone to achieve the objective. He moved out and lobbed grenades at the next enemy post. Before moving to another trench, he received a mortal bullet wound to the head.

7.   **Early Life**.   Piru Singh was born on 20 May 1918, in village <u>Beri</u>, <u>Jhunjhunu</u>, <u>Rajasthan</u>. He was the son of Lal Singh. His family consisted of seven children three brothers and four sisters with Singh being the youngest son.   As a young boy, Singh always hated school, as he was unable to cope with the restricted environment.   One day, after being scolded by his class teacher for quarreling with one of his classmates, Singh ran away, and never returned to school.   After that, Singh continued to help his parents in their farm, and grew up to be well-built and handsome youth. <u>Shikar</u>, a local Indian sport, was his favourite game. Though Singh wanted to join the army from his childhood, he was rejected twice, as he was too young, before he was accepted at the age of eighteen.

8.   **War 1947**.   Following tensions between the newly independent nations of India and Pakistan, war broke out over control of the princely state of Jammu and Kashmir in October 1947, shortly after Singh returned from Japan. In July 1948, Pakistan launched offensive strikes in the Tithwal sector of Jammu and Kashmir, and captured a ring contour on 8 July. This forced the Indian troops stationed in the forward positions across river Kishanganga to retreat. In an attempt to reverse the situation, Singh's unit, the 6th Battalion of the Rajputana Rifles, was moved from Uri to Tithwal, and was assigned to the 163rd Brigade. The troops took position on the Tithwalbridge.

9.   On 11 July, the Indian troops commenced their attack.   These strikes continued for another four days. But reports regarding the situation suggested that the Pakistanis were still in command of a strategically important position and the Indian commanders decided that these had to be captured before the advance could continue.   Apart from this position, another position was also to be captured by the Indians.   The task of capturing these two positions was assigned to the 6th Rajputana Rifles. Two companies were assigned to the operation, with the battalion's 'C' Company securing the second position after the first was captured by 'D' Company.

10.   On 18 July, the 'D' Company launched it first attack at 01:30.   The path to the position held by the Pakistani troops was just 1 metre (3 ft 3 in) wide, and deep ravines lay on either side.   This narrow path was overlooked by hidden Pakistani bunkers that allowed both observation and clear fields of fire for the defending troops.   As they advanced, the Indian company was subjected to heavy shelling from the Pakistanis, and within half an hour the company had recorded fifty-one casualties.

11.   During the battle, Singh's section, leading the company, was sheared down to half strength due to heavy casualties. Singh rushed towards a Pakistani medium machine gun post, which was causing most of the casualties, during which he suffered multiple shrapnel wounds across his body as the Pakistani defenders began rolling grenades down from the heights.   Undeterred, Singh continued to advance adopting the battle cry, "Raja Ramchandra Ki Jai" (English: Hail Lord Rama). Soon he occupied the post killing the men on guard with his bayonet and Sten gun.

12.   But by the time he captured the position, the rest of his company lay dead or wounded. Singh was left alone to achieve the objective assigned.   He advanced towards the second Pakistani medium machine gun post. At this juncture, he was almost blinded by a grenade that blast at his face.   His Sten gun ammunition had run out. Singh moved out of the trench and lobbed grenades at the next Pakistani post.   Meanwhile, he jumped into another trench, and killed two Pakistani soldiers with his bayonet. Before he was able to move out of the trench, he was hit by a bullet in his head.   As he succumbed to his wounds, Singh hurled a grenade into a nearby Pakistani trench.

13.   **Citation**.   On 17 July 1948, Company Havildar Major Singh was posthumously was awarded the India's highest military decoration, the Param Vir Chakra.   The citation reads of follows:
"South of Tithwal, 'D' Company, of which No 2831592 Piru Singh, was Havildar Major was detailed to attack and capture an enemy occupied hill feature.   The enemy had well dug in positions and had sited his MMGs so as to cover all possible approaches.   As the attack advanced, it was met with heavy MMG fire from both flanks.   Volleys of grenades were hurled down from enemy bunkers.   Company Havildar Major Piru Singh was then with the forward most Section of the company.   Seeing more than half of the Section killed or wounded, he did not lose courage.   With battle cries he encouraged the remaining men and rushed forward with great determination onto the nearest enemy MMG position.   Grenade splinters ripping his clothes and wounding him at several places, he continued to advance without the least regard for his safety.   He was on top of the MMG position wounding the gun crew with Sten gun fire. With complete disregard to his bleeding wounds he made a mad jump on the MMG crew bayoneting them to death, thus silencing the gun. By then he suddenly realized that he was the sole survivor of the section, the rest of them either dead or wounded. Another grenade thrown at him wounded him in the face. With blood dripping from his face wounds in his eyes, he crawled out of the trench, hurling grenades at the next enemy position".

14.   **MAJ SHAITAN SINGH,PVC**.

Born	December 1, 1924, Jodhpur, Rajasthan.
Died	November 18, 1962 (aged 37) Rezang La,Jammu and Kashmir, India.
Years of service	1949–1962.
Rank	Major.
Unit	13 KUMAON.
Battles / War	Sino-Indian War.

15.   **Introduction**   Major Shaitan Singh was born on December 1, 1924 at Jodhpur in Rajasthan. His father was Lt Col Hem Singh Bhati.

16.   **Military Action**.   The 'C' Company of the battalion, led by Singh, held this crucial position at Rezang La, at a height of 5000 metres.   The company area was defended by three platoon positions and the surrounding terrain isolated it from the rest of the battalion.   The expected Chinese attack on Rezang La came on November 18 in the morning.   It was the end of a very cold winter night, with light snow falling.   The icy winds howling through Rezang La were biting and benumbing.   More than the thin air and cold, the location of Rezang La had a more serious drawback.   It was crested to Indian artillery because of an intervening feature, which meant that they had to make without the protective comfort of the big guns.   In the dim light of the morning, the Chinese were seen advancing through nullahs to attack No.7 and No.8 Shaitan Singh 2 platoon positions.   The Indian Army troops fell on their prepared positions to face the Chinese offensive.

17.   At 0500 hours when the visibility improved, both platoons opened up on the advancing Chinese with rifles, light machine guns, grenades and mortars. Indian artillery could, however, not be used.   The nullahs were littered with dead bodies.   The survivors took position behind boulders and the dead bodies.   The Chinese, though they failed the first frontal attack, were not discouraged.   They subjected the Indian positions to intense artillery and mortar fire at about 0540 hours. Soon about 350 Chinese troops commenced advance through the nullahs. This time, No.9 Platoon, which held fire till the enemy was within 90 metres opened up with all weapons in their possession.   Within minutes, the nullahs were again full of dead bodies, mainly of the Chinese.   I in frontal attack, the enemy, approximately 400 strong, then attacked from the rear of the company position. They simultaneously opened intense medium machine gun fire on No.8 Platoon.   This attack was contained at the barbed wire fencing of the post.   The Chinese then resorted to heavy artillery and mortar shelling. An assault group of 120 Chinese also charged No.7 Platoon position from the rear.   However, Indian Army 3-inch mortar killed many of them. When 20 survivors charged the post, about a dozen Kumaonis rushed out of their trenches to engage them in a hand-to-hand combat.

18.   Meanwhile, the Chinese brought up fresh reinforcements.   The encirclement of No.7 Platoon was now complete.   The platoon, however, fought valiantly till there was no survivor. No.8 Platoon also fought bravely to the last round.   Singh displayed exemplary leadership and courage in the battle of Rezang La. By all accounts, he led his troops most admirably.   Unmindful of his personal safety he moved from one platoon post to another and encouraged his men to fight.   While moving among the posts he was seriously wounded, by a sniping Chinese MMG. But he continued to fight along with his men. While he was being evacuated by two of his comrades, the Chinese brought heavy machine gun fire on them.   Singh sensed danger to their lives and ordered them to leave him.   They placed him behind a boulder on the slopes of a hill, where he died. The Chinese announced a unilateral ceasefire on November 21, 1962. In this action, 109 Kumaonis out of a total of 123 were killed.   Of the 14 survivors, 9 were severely injured.

19. The Chinese suffered more than a thousand casualties. After the war was over, the body of Singh was found at the same place, dead from the bullet wound and the freezing cold. It was flown to Jodhpur and cremated with full military honours. Singh was awarded ParamVir Chakra, the highest wartime gallantry medal, posthumously, for his leadership and devotion to duty.

20. **Citation**. The citation for the ParamVir Chakra awarded to him reads: Major Shaitan Singh was commanding a company of an infantry battalion deployed at Rezang La in the Chushul sector at a height of about 17,000 feet. The locality was isolated from the main defended sector and consisted of five platoon-defended positions. On 18 November 1962, the Chinese forces subjected the company position to heavy artillery, mortar and small arms fire and attacked it in overwhelming strength in several successive waves. Against heavy odds, our troops beat back successive waves of enemy attack.

21. During the action, Major Shaitan Singh dominated the scene of operations and moved at great personal risk from one platoon post to another, sustaining the morale of his hard-pressed platoon posts. While doing so he was seriously wounded but continued to encourage and lead his men who, following his brave example, fought gallantly and inflicted heavy casualties on the enemy. For every man lost to us, the enemy lost four or five. When Major Shaitan Singh fell disabled by wounds in his arms and abdomen, his men tried to evacuate him but they came under heavy machine-gun fire. Major Shaitan Singh then ordered his men to leave him to his fate in order to save their lives.

22. **CAPTAIN VIKRAM BATRA, PVC**.

Captain Vikram Batra	
Param Vir Chakra	
Nickname(s)	Sher Shah
Born	9 September 1974 Palampur, Himachal Pradesh, India
Died	7 July 1999 (aged 24) Pt. 4875, Kargil, Jammu & Kashmir, India
Allegiance	Republic of India
Service/branch	Indian Army
Years of service	1996–1999
Rank	Captain
Service number	IC 57556
Unit	13 JAK RIF
Battles/wars	Kargil War Operation Vijay Battle of Tiger Hill
Awards	Param Vir Chakra

23. Captain Vikram Batra, PVC (9 September 1974 – 7 July 1999) was an officer of the Indian Army, posthumously awarded with the Param Veer Chakra, India's highest and prestigious award for valour, for his actions during the 1999 Kargil War in Kashmir between India and Pakistan. He led one of the toughest operations in mountain warfare in Indian history. He was often called as ''Sher Shah'' in the intercepted messages of the Pakistan army.

24. **Early Life and Career**. Vikram Batra was born on 9 September 1974 in Ghuggar village near Palampur, Himachal Pradesh, to GL Batra and Jai Kamal Batra. He got his primary education from his mother, who herself was a teacher. He received his education up to Middle Standard at the D.A.V. Public School in Palampur and up to senior secondary stage in Central School, Palampur. After passing his 10+2 in 1992 from Central School Palampur, he got admitted in D.A.V. College, Chandigarh in B.Sc where he was adjudged the best N.C.C. Cadet (Air Wing) in two zones. Later, he was selected to join the Indian Military Academy in Dehradun in 1996 in Jessore company of Manekshaw Battalion, and was commissioned in the

Indian Army as a Lieutenant of the 13 Jammu & Kashmir Rifles at Sopore, in Jammu and Kashmir. He rose to the rank of Captain.

Heroic Act of Capt Bikram Batra, PVC in Kargil War

25. During the Kargil invasion of 1999 by Pakistan, Lt Batra (at time), 13 JAK Rifles, and his Delta Company were ordered to recapture peak 5140 on June 19, 1999 five weeks after the war began. Nicknamed *SherShah* ('Lion King') in Urdu for his courage which also doubled as his call sign, he decided to approach the hill from the rear, aiming to surprise the Pakistani defenders. He and his men ascended the sheer rock-cliff, but as the group neared the top, the enemy pinned them on the face of the bare cliff with machine gun fire. Captain Batra, along with five of his men, climbed up regardless and after reaching the top, hurled two grenades at the machine gun post. He single-handedly killed three enemy soldiers in close combat. He was seriously injured in the process, but insisted on regrouping his men to continue with the mission. Inspired by the courage displayed by Captain Batra, the soldiers of 13 JAK Rifles charged the enemy position and captured Point 5140 at 3:30 a.m. on 20 June 1999. His company is credited with killing at least eight Pakistani intruders and recovering a heavy machine gun.

20. The capture of Point 5140 set in motion a string of successes, such as Point 5100, Point 4700, Junction Peak and Three Pimples. Along with fellow Captain Anuj Nayyar, Batra led his men to victory with the recapture of Point 4750 and Point 4875. This led to the fall of Tiger Hill and India's eventual hold on the valley was strengthened.

21. Nine days later, Vikram Batra was assigned to an urgent mission to recapture peak 4875. This was one of the most difficult peaks to capture as the Pakistani troops sat above the peak at 16,000 feet and the climb gradient was 80 degrees. The fog made matters worse for Batra and his team. In the early morning hours of 7 July 1999, he commanded a mission to rescue an injured officer during a Pakistani counterattack against Point 4875. During the rescue attempt, he pushed aside his Subedar, saying **"Tu baal-bacche dar hai, hat ja peeche***."(You have children, step aside)* and was killed in action while clearing enemy positions. His last words were, "*Jai Mata Di.*", which is a Punjabi creed referring to Durgadevi, the Hindu Goddess of Victory.

CONCLUSION

22. Soldiers face the dangers and vagaries of war and sacrifice their lives for their motherland. The Indian Nation also honours its bravest of the brave soldiers by conferring on them the highest gallantry award "Param Vir Chakra" as recognition of their bravery and sacrifice.

CHAPTER III : STUDY OF BATTLES OF INDO-PAK WAR 1965, 1971, OPREATION MEGHDOOT AND KARGIL

Introduction

1.   The partition of the subcontinent came into effect on15 August 1947, when India gained independence.   Pakistan declared independence a day earlier. At the time of independence the old Indian Army stood divided between Pakistan and India.   Instead of large scale celebrations, riots and mass killing between Hindus and Muslims in Punjab and Bengal intensified.   It also led to acute suffering and misery of the displaced people, a part from colossal loss of precious human lives and destruction of property due to communal riots and retribution.

2.   Taking advantage of communal strife, in Oct 1947 Pakistani troops soon crossed over into Kashmir to participate into an undeclared war with India.   The tribal' volunteers' along with Pakistani regulars had by then overrun large tracts of Jammu province and the Valley, which shared a porous border with Pakistan.   It was when they had reached Badgaon, on the suburbs of Srinagar that the Maharaja of J&K signed the Instrument of Accession and put in a bid for India's military assistance.   Indian Army then swung into action to save J&K.

3.   Despite the accession of the state, a part of Kashmir, known as Pakistan Occupied Kashmir, remains under the illegal occupation of Pakistan, and this has remained a contentious issue between both nations.   Since 1947-1948 war, India and Pakistan have fought the following wars: -
   (a)   1965War.
   (b)   1971 War.
   (c)   1999 Kargil War.
   (d)   Proxy war since1988 till date.

INDO-PAKISTANI WAR 1965

4.   The Indo-Pakistan war of 1965 was a culmination of skirmishes that took place between April 1965 and September 1965 between Pakistan and India.   The conflict began following Pakistan's Operation Gibraltar, which was designed to infiltrate forces into Jammu and Kashmir to participate in insurgency against Indian rule.   In retaliation, India reacted swiftly and launched a counter attack and a second confrontation with Pakistan took place in 1965, largely over Kashmir.   Pakistani President Ayub Khan launched Operation Gibraltar in August1965, during which several Pakistani paramilitary troops infiltrated into Indian-administered Kashmir and attempted to ignite an anti-India agitation in Jammu and Kashmir. Pakistani leaders believed that India, which was still recovering from the disastrous Sino-Indian War, would be unable to deal with a military thrust and a Kashmiri rebellion.   Pakistan launched Operation Grand Slam on 1 September, invading India's Chamb- Jaurian sector.

5.   **Offensive on Pakistan**.   Initially, the Indian Army met with considerable resistance in the northern sector. After launching prolonged artillery barrages against Pakistan, India was able to capture three important mountain positions in Kashmir.   By 9 September, the Indian Army had made considerable in-roads into Pakistan.   India had its largest haul of Pakistani tanks when the offensive of Pakistan's 1st Armoured Division was blunted at the Battle of Asal Uttar, which took place on 10 September near Khemkaran in Punjab. Another tank battle of the war came in the form of the Battle of Chawinda, the largest tank battle in history after World War II.   Pakistan's defeat at the Battle of Asal Uttar and Dograi hastened the end of the conflict.

6.   **Battle of Dograi**.   To relieve pressure at Chamb–Jaurian Sector in J&K, 15 Infantry Division launched offensive in Lahore sector.   3 JAT of 54 Infantry Brigade crossed Ichogil canal and captured the town ship of Dograi and was just 13 miles from Lahore on 23 September 1965. On23 September 1965 cease fire was announced.   A decision to return back to pre-war positions was taken following the Tashkent Declaration.

INDO-PAKISTAN WAR 1971

7.   An independence movement broke out in East Pakistan which was brutally crushed by Pakistani forces.   Due to large-scale atrocities against them, thousands of Bengalis took refuge in neighbouring India

causing major refugee crisis. In early 1971, India declared its full-support for the Bengali rebels, known as Mukti Bahini, and Indian agents were extensively involved in covert operations to aid them. Wary of India's growing involvement in the Bengali rebellion, the Pakistan Air Force (PAF) launched a preemptive strike on 10 Indian air bases at Srinagar, Jammu, Pathankot, Amritsar, Agra, Adampur, Jodhpur, Jaisalmer, Uttarlai and Sirsa at 1745 hours on 3 December. This aerial offensive, however, failed to accomplish its stated objectives and gave India its excuse to declare a full-scale war against Pakistan the same day. By midnight, the Indian Army, accompanied by Indian Air Force, launched a major three-pronged assault into East Pakistan. The Indian Army won several battles on the eastern front including the decisive of Battle of Hilli, which was the only front where the Pakistani Army was able to build up considerable resistance. India's massive early gains was largely attributed to the speed and flexibility with which Indian armoured divisions moved across East Pakistan.

8. **Battle of Longewala**. Pakistan launched a counter-attack against India on the western front. On 4 December 1971, 'A' company of the 23rd Battalion of India's Punjab Regiment detected and intercepted the movement of the 51st Infantry Brigade of the Pakistani Army near Ramgarh, Rajasthan. The battle of Longewala ensured during which the A company, though being out numbered, thwarted the Pakistani advance until the Indian Air Force directed its fighters to engage the Pakistani tanks. By the time the battle had ended, 38 Pakistani tanks and 100 armoured vehicles were either destroyed or abandoned. About 200 Pakistani troops were killed in action during the battle while only 2 Indian soldiers lost their lives. Pakistan suffered another major defeat on the western front during the Battle of Basantar which was fought from 4 December to 16 December. By the end of the battle, about 66 Pakistani tanks were destroyed and 40 more were captured. In return, Pakistani forces were able to destroy only 11 Indian tanks. By 16 December, Pakistan had lost size able territory on both eastern and western fronts.

9. **Surrender of Pakistan Army in Dhaka**. Under the command of Lt General J S Arora, the '3 Corps' of the Indian Army, which had invaded East Pakistan, entered Dhaka and forced Pakistani forces to surrender on 16 Dec 1971, one day after the Battle of Basantar. After Pakistan's Lt General AAK. Niazi signed the Instrument of Surrender, India took more than 90,000 Pakistani prisoners of war.

OPREATION MEGHDOOT : SIACHEN GLACIER

Introduction

10. The Siachen Glacier became a bone of contention following a vague demarcation of territories in the Karachi Agreement of July 1949 which did not exactly specify who had authority over the Siachen Glacier area. Indian interpretation was that Pakistan territory extended only Saltoro Ridge based on the Simla agreement where the territorial line's route after the last demarcated Point NJ9842 was "thence North to the glaciers." Pakistan interpretation was that their territory continued northeast from Point NJ9842 to the Karakoram Pass. As a result, both nations claimed the barren heights and the Siachen Glacier. In the 1970s and early 1980s, Pakistan permitted expeditions to climb the peaks in the Siachen region from the Pakistani side, perhaps in an attempt to reinforce their claim on the area as these expeditions received permits obtained from the Government of Pakistan and in many cases a liaison officer from the Pakistan army accompanied the teams.

11. In 1978, the Indian Army also allowed mountaineering expeditions to the glacier, approaching from its side. The most notable one was the one launched by Colonel Narinder "Bull" Kumar of the Indian Army, who led an expedition to Teram Kangri, along with medical officer Captain AVS Gupta. The first air landing on the glacier was carried out on 6 October 1978 when two casualties were evacuated from the Advance Base Camp in a Chetak helicopter. Contention over the glacier was aggravated by these expeditions, through both sides asserting their claims.

12.   Notably, when Pakistan gave permission to a Japanese expedition to scale an important peak (Rimo I) in 1984, it further fueled the suspicion of the Indian Government of Pakistani attempts to legitimize their claim.   The peak, located east of the Siachen Glacier, also overlooks the north western areas of the Aksai Chin area which is occupied by China but claimed by India.   The Indian military believed that such an expedition could further a link for a trade route from the north eastern (Chinese) to the southwestern (Pakistani) side of the Karakoram Range and eventually provide a strategic, advantage to the Pakistani Armed Forces.

13.   **Back Ground.** The Indian military decided to deploy troops from Northern Ladakh region as well as some paramilitary forces to the glacier area. Most of the troops had been acclimatized to the extremities of the glacier through a training expedition to Antarctica in 1982 before eventually launching the operation to occupy complete glacier.   In 1983, Pakistani generals decided to stake their claim through troop deployments to the Siachen glacier.   After analysing the Indian Army's mountaineering expeditions, they

feared that India might capture key ridges and passes near the glacier, and decided to send their own troops first. Islamabad ordered Arctic-weather gear from a London supplier, unaware that the same supplier provided outfits to the Indians.   The Indians were informed about this development and initiated their own plan, providing them with a head start.
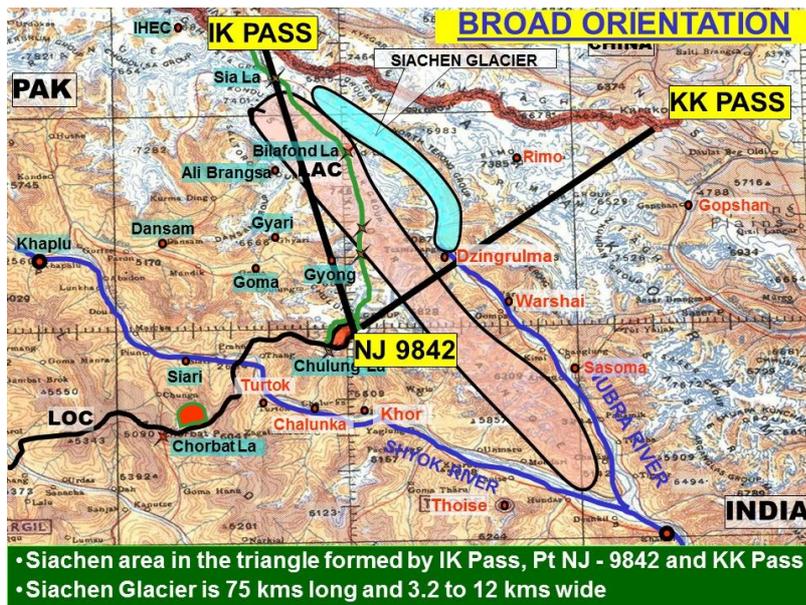
14.   **Operation Meghdoot**.   The Indian Army planned an operation to control the glacier by 13 April 1984, to pre empt the Pakistani Army by about 4 days, as intelligence had reported that the Pakistani operation planned to occupy the glacier by 17 April.   Named for the divine cloud messenger, Meghaduta, from the 4th century AD Sanskrit play by Kalidasa, Operation Meghdoot was led by Lieutenant General Prem Nath Hoon. The task of occupying the Saltoro ridge was given to 26 Sector, commanded by Brigadier Vijay Channa, who was tasked with launching the operation between April 10 and 30.   He chose April 13, supposedly an unlucky date, because it was the Vaisakhi day, when the Pakistanis would be least expecting the Indians to launch an operation.

15.   Preparations for Operation Meghdoot started with the airlift of Indian Army soldiers by the Indian Air Force. The Air Force used Il-76, An-12 and An-32 to transport stores and troops as well to airdrop supplies to high altitude airfields.   From there Mi-17, Mi-8 and own helicopters carried provisions and personnel to the east of the hitherto unscaled peaks.

The first phase of the operation began in March 1984 with the march on foot to the eastern base of the glacier. A full battalion of the Kumaon Regiment and units from the Ladakh Scouts, marched with full battle packs through an ice-bound Zoji La pass for days. The units under the command of Lieutenant-Colonel (later Brigadier) D. K. Khanna were moved on foot to avoid detection of large troop movements by Pakistani radars.

16. The first unit to establish position on the heights of the glacier was led by Major (later Lieutenant-Colonel) R. S. Sandhu. The next unit led by Captain Sanjay Kulkarni secured Bilafond La. The remaining forward deployment units then marched and climbed for four days

- Siachen area in the triangle formed by IK Pass, Pt NJ - 9842 and KK Pass
- Siachen Glacier is 75 kms long and 3.2 to 12 kms wide

under the command of Captain PV Yadav to secure the remaining heights of the Saltoro Ridge. By April 13, approximately 300 Indian troops were dug into the critical peaks and passes of the glacier. By the time Pakistan troops managed to get into the immediate area, they found that the Indian troops had controlled all three major mountain passes of Sia La, Bilafond La, and by 1987 Gyong La and all the commanding heights of the Saltoro Ridge west of the Siachen Glacier. Handicapped by the altitude and the limited time, Pakistan could only manage to control the Saltoro Ridge's western slopes and foothills despite the fact that Pakistan possessed more ground accessible routes to the area, unlike Indian access which was largely reliant on air drops for supplies due to the steeper eastern side of the glacier. In his memoirs, former Pakistani president, General Pervez Musharraf states that Pakistan lost 985.71 sq mi (2,553.0 km^2) of territory. Time magazine also states that the Indian advance captured 985.71 sq mi (2,553.0 km^2) of territory claimed by Pakistan. Camps were soon converted to permanent posts by both countries. The number of casualties on both sides during this particular operation has been large.

17. **Aftermath and Current Situation**. There are divergent views on the strategic value of the operation. Some view it as a futile capture of non-strategic land which antagonized relations between India and Pakistan. Others consider the operation to be a "daring" success by the Indian Military and ensured that the Indian military held tactical high ground on the strategic Saltoro Ridge just west of the glacier, albeit at a high cost. The Indian Army currently controls all of the 70 kilo metres (43 mi) long Siachen Glacier and all of its tributary glaciers, as well as the three main passes of the Saltoro Ridge immediately west of the glacier, Sia La, Bilafond La, and Gyong La, thus holding onto the tactical advantage of high ground. The operation and the continued cost of maintaining logistics to the area is a major drain on both militaries. Pakistan launched an all out assault in 1987 and again in 1989 to capture the ridge and passes held by India. The first assault was headed by then-Brigadier-General Pervez Musharraf (later President of Pakistan) and initially managed to capture a few high points before being pushed back. Later the same year, Pakistan lost at least one major Pakistani post, the "Quaid", which came under Indian control as Bana Post, in recognition of Bana Singh who launched a daring daylight attack, codenamed Operation Rajiv, after climbing 1,500 ft (460 m) of ice cliff. Bana Singh was awarded the Param Vir Chakra (PVC), the highest gallantry award of India for the assault that captured the post. Bana Post is the highest battlefield post in the world today at a height of 22,143 feet (6,749 m) above sea level. The second assault in 1989 was also unsuccessful as the ground positions did not change. The loss of most of the Siachen area and the subsequent unsuccessful military forays prompted Benazir Bhutto to taunt Zia ul Haq that he should wear a burqa as he had lost his manliness.

KARGIL CONFLICT - 1999

18. In 1998, India carried out nuclear tests and a few days later, Pakistan responded by more nuclear tests giving both countries nuclear deterrence capability, although India had exploded three hydrogen bombs which Pakistan lacks. Diplomatic tension ceased after the Lahore Summit was held in 1999.The sense of optimism was short-lived, however, since mid-1999 Pakistani paramilitary forces and Kashmiri insurgents captured deserted, but strategic, Himalayan heights in the Kargil district of India. These had been vacated by the Indian army during the onset of the inhospitable winter and were supposed to reoccupy in spring. Once the scale of the Pakistani incursion was realised, the Indian Army quickly mobilized about 200,000 troops and Operation Vijay was launched.

19.   However, since the heights were under Pakistani control, India was in a clear strategic disadvantage.   From their observation posts, the Pakistani forces had a clear line-of-sight to bring down indirect artillery fire on NH 1A, inflicting heavy casualties on the Indians.   Thus, the Indian Army's first priority was to recapture peaks that were in the immediate vicinity of NH1A.   This resulted in Indian troops first targeting theTiger Hill and Tololing complex in Dras.

20.   **Battle of Tololing**.   The Battle of Tololing, was one of the pivotal battles in the kargil war between Indian Armed forces and troops from Northern Light Infantry who were aided by other Pakistan irregulars in 1999.   Tololing is a dominating feature overlooking Srinagar-Leh (NH1D) and was vital link.   The terrain was such that frontal attacks had to be launched which resulted in heavy causalities.   The three week assault finally culminated with India taking control of the peak and changing the course of the war.   23 Indian soldiers were killed in the final assault, resulting in one of the costliest battle of the entire war.   Other assaults, slowly tilted the combat in India's favour. Never the less, some of the posts put up stiff resistance, including Tiger Hill (Point5140) that fell only later in the war.

21.   The Indian Army mounted some direct frontal ground assaults which were slow and took a heavy toll given the steep ascent that had to be made on peaks as high as 18,000 feet (5,500m).   Two months into the conflict, Indian troops had slowly retaken most of the ridges they had lost; according to official count, an estimated 75%–80% of the intruded area and nearly all high ground was back under Indian control.   On 4 July 1999, Pakistan's Prime Minister Sharif agreed to withdraw Pakistani troops under US pressure and the fighting came to a gradual halt, but some Pakistani forces remained in positions on the Indian side of the LOC.

22.   The Indian Army launched its final attacks in the last week of July; as soon as the Drass sub sector had been cleared of Pakistani forces, the fighting ceased on 26 July. 26 July has since been marked as 'Kargil Vijay Diwas' (Kargil Victory Day) in India. By the end of the war,India had resumed control of all territory south and east of the Line of Control, as was established in July 1972 as per the Shimla Accord.

CONCLUSION

23.   Wars with Pakistan has been a regular affair in the long history of both countries along with conflicts with china. This is a compulsive and existential necessity for the Pakistani State controlled by their military. The sacrifices made by the Indian Army to safeguard the sovereignty and integrity of the nation are great, for which the whole nation is proud of its achievements.

CHAPTER IV : WAR MOVIES

1.   **Introduction**.   Battles are fought in the wilderness and away from limelight, however ferocious and destructive they may be. Historians have always tried to piece together those little but significant actions by individuals and groups bringing out their valour and courage for the consumption of future generations. Here we will see three visual documentaries on Indo – Pak wars of 1965, 1971 and 1999 to gain further insight on the subject.

Documentary on Indo – Pak War 1965

2.   Screening of documentary on Indo – Pak war 1965.

Documentary on Indo – Pak War 1971

3.   Screening of documentary on Indo – Pak war 1971.

Documentary on Kargil Conflict 1999

4.   Screening of documentary on Indo – Pak Kargil Conflict, 1999.

CONCLUSION

5.   The study of the Indo-Pak War brings out the sacrifices made by the Armed Forces of India. It is heartening to see the role of Armed Forces in maintaining the sovereignty and integrity of our nation. One must salute the war heroes and all those who have laid down their lives for the motherland.

SUMMARY

1.   Field Marshal KM Cariappa, OBE was the first native Indian Chief of Army Staff of the Indian Army. He is only among three Indian Army officers to hold the highest rank of Field Marshal. He was appointed as the Commander-in-Chief of the Indian Military in 1949, received the rank of Field Marshal On 14th January 1986 at the age of 87.

2.   The Param Vir Chakra (PVC) is India's highest military decoration award for highest degree of valour or self-sacrifice in the presence of enemy. The PVC was established on 26 January 1950 by the President of India. The medal was designed by Mrs Savitri Khanolkar.

3.   CHM Piru Singh Shekhawat, PVC on 17 July 1948, Company Havildar Major Singh was posthumously was awarded the India's highest military decoration, the Param Vir Chakra..

4.   Maj Shaitan Singh, PVC was awarded ParamVir Chakra, the highest wartime gallantry medal, posthumously, for his outstanding leadership during 'Battle of Rejang La'.

5.   Captain Vikram Batra, PVC was posthumously awarded with the ParamVir Chakra for his actions during the 1999 Kargil Conflict. He led one of the toughest operations in mountain warfare in Indian history.

6.   India has fought four wars with Pakistan so far, 1947-48 War,1965 War,1971 War and Kargil Conflict

7.   **War of 1965.**

   (a)   Pakistan launched Operation Gibraltar to support insurgency in J&K against Indian rule.
   (b)   In retaliation India launched Operation Grand Slam in western sector against Pakistan.
   (c)   The famous battles of 1965 war include Battle of Asal-Uttar, Battle of Dograi etc.
   (d)   Battle of Chawinda was the largest tank battle in the history after World War II.

8.   **War of 1971.**

   (a)   In early1971,India declared its full-support for the Bengali rebels ,Known as Mukti Bahini.
   (b)   Battle of Longewala was fought on 4 December 1971.
   (c)   On16 December 1971, more than 90000 Pakistani soldiers surrendered at Dhaka.

9.   **Operation Meghdoot, Siachen Glacier**   The Siachen Glacier became a bone of contention following a vague demarcation of territories in the Karachi Agreement of 1949, the boundary demarcated as Actual Ground Position Line beyond point NJ 9842 and both India and Pakistan occupying positions on both sides.

10.   Kargil Conflict 1999 was fought on the heights of Kargil and Drass in 1999. In mid-1999 Pakistani paramilitary forces and Kashmiri insurgents captured deserted, but strategic, Himalayan heights in the Kargil district of India. Indian forces painstakingly recaptured all posts one after another in a bloody conflict. Operation Vijay was declared success on 26 July1999.

CHAPTER I : INTRODUCTION TO COMMUNICATION AND LATEST TRENDS

1.   Communication is the easy transmission of thoughts and ideas from one individual to another and vice-a-versa and reception and understanding of others ideas in the original form. Various forms of communications are sign language, voice, written script, line transmission, radio wave, space wave and highly complex digital communication. In modern battlefield, activities of the army have become very complex and require frequent communication between commanders and troops to achieve the desired results. Importance of communications is becoming a major ingredient of modern warfare.

2.   **Line Communication** The invention of telephone by Graham Bell revolutionized the world of communications as individuals were able to speak directly to each other. This is the basic means of signal communications for a force which is static. A telephone is by far the best means of signal communication between individuals   following are advantages and disadvantages given below: -

    (a)   **Advantages**.

        (i)   Reliable and practically free from electrical interference.
        (ii)   Relatively secure.
        (iii)   Number of circuits and message carrying capacity is more but limited only by availability of material and manpower.

    (b)   **Disadvantages**.

        (iv)   Vulnerable to physical interference and enemy interception along the entire length of the route.
        (v)   Takes time to construct.
        (vi)   Inflexible once it is laid.
        (vii)   Expensive in men and material

RADIO COMMUNICATION

3.   **Radio Communication**.   Radio is the technology of using radio waves to carry information such as sound, by systematically modulating properties of electromagnetic energy waves. The information in the waves can be extracted when radio waves strike an electrical conductor and transformed back into its original form. Radio communication requires the use of both transmitting and receiving equipment. The transmitting equipment, which includes a radio transmitter and transmitting antenna, is installed at the point from which messages are transmitted. The receiving equipment, which includes a radio receiver and receiving antenna, is installed at the point at which messages are received

4.   **Wave**. A wave can be described as a disturbance that travels through a medium from one location to another location. Types of waves can broadly be divided in two parts :-

    (b)   **Mechanical Waves**.   A mechanical wave is a wave that is an oscillation of matter, and therefore transfers energy through a medium.

    (c)   **Electromagnetic Waves**.   Electromagnetic waves are waves which can travel through the vacuum of outer space.

    (d)   **Propagation of Wave**. The mode of propagation of electromagnetic waves (EMW) from transmitter to receiver depends upon the frequency employed. These can be of following types :-

        (i)   Sky Wave Propagation.
        (ii)   Space Wave Propagation
        (iii)   Ground Wave Propagation.
        (iv)   Tropospheric Scatter.

5.   Radio Communication involves Net Radio and Radio Relay.

Net Radio

6.   Net radio is the basic means of signal communication for any mobile force. Efficiency of net radio communication is appreciably affected by factors such as weather, terrain, power output of the set, state of training of operators and equipment maintenance. It provides facilities for the following :-

(a)   **Radio Telephony** – Simple one way voice communication, depending on the type of equipment available.

(b)   **Radio telegraphy** for transmission of message and key conversations.

(c)   **Tele printers** over radio transmission.

7.   **Advantages**.

(a)   Vulnerable only at terminal and is therefore reasonably protected from enemy action except by a direct hit.

(b)   Flexible hence can be rapidly re-arranged in the event of regrouping.

(c)   Rapid in establishing communication.

(d)   Works on the move although range obtained will be much less than when stationary.

(e)   Economical in personnel and equipment.

8.   **Disadvantages**.

(a)   Inherently insecure and susceptible to enemy interception which necessitates the use of codes and ciphers with a consequent delay in clearing traffic and overall increase in operating personnel.

(b)   Net radio being inherently insecure demands a considerable degree of security consciousness on the part of the users. This means adherence to standard procedure and security codes.

Radio Relay

9.   Radio relay implies that a series of radio transmitters and receivers normally spaced between 20-35 Kms apart and are used to provide point signal communication.

10.   **Advantages**.

(a)   Replace line with considerable economy of manpower and stores.

(b)   It can be operated over area where for reasons of ground or enemy activity use of line may not be possible.

(c)   Provides greater flexibility than line.

(d)   Quick to set up and move except in mountainous country.

(e)   By its ability to employ multichannel equipment radio relay provides more tele-printer circuits over one link than can normally be provided over the average field cable. Thus it has much greater traffic handling capacity.

11.   **Disadvantages**.

(a)   Liable to interception and hence insecure. Has relatively greater security than net radio, depending upon the sitting and direction of the beams.

(b)   Liable to interference from enemy jamming although not as much as in the case of net radio.

(c)   Terrain between stations must be reasonably suitable to get a 'quasi optical path', this presents difficulty in sitting.

(d)   Location of terminal and intermediate stations may not suit tactical layout and may, therefore, create additional protection requirements.

(e)   It cannot work on the move.

(f)   Slightly more expensive in men and material than in the case of net radio.

(g)   Needs critical sitting.

CHARACTERISTICS OF WIRELESS TECHNOLOGY (MOBILE, WI-FI ETC.)

12.   **Features of Wi-Fi Technology**. Wireless operations permit services, such as a long-range communications, which are impossible or impractical to implement with the use of wires. Information is transferred in this manner over both short and long distances.

13.   The following list summarizes some of the benefits of a Wi-Fi network

Figure: Wireless Local Area Network Connected to the Internet

(a)   **Unmatched mobility and elasticity.**
Wi-Fi, is allowing the new intensity of connectivity without giving up functions. Wi-Fi introduced various types of utilities such music
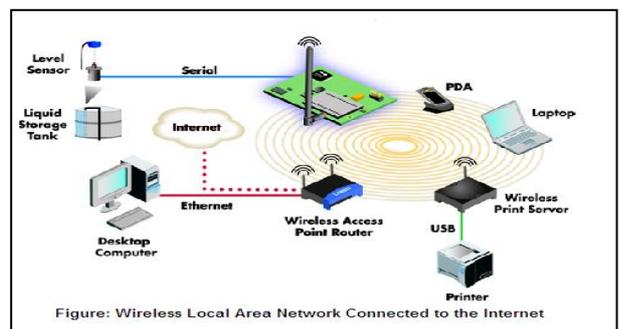
streamers that transmit your music to speakers without any wire you can also play music from the remote computer or any other attached to the network. The most important now you can play online radio. Wifi technology system is rather remarkable, you can download songs, send an email and transfer files expediently at sky-scraping speed and you can move your computer easily because your WiFi network has no cable to disrupt your work so we can say that it is quite easy, helpful and most of all expedient.

(b)   **Fortress Technology** Wi-Fi providing secure wireless solutions support the growth and release of a prototype mobile ad hoc wireless network for use in the wireless strategic skirmish.

(c)   **Support an Entire Age Bracket.**   Wi-Fi technology has several advantages, it supports an entire age bracket and create as connection between components on the same network and have the ability to transfer data between the devices and enable different kinds of devices such as game, MP3 player, PDA's and much more!

(d)   **Convenient and Available Everywhere.**   Wi-Fi is a convenient technology and where the network range station exists you are online during travel; you can equip with a Wi-Fi network and get connected. You will automatically connect to the internet if you are near a hotspot. These days WiFi exist everywhere with all its wonders.

(e)   **Faster and Secure**   With Wi-Fi, you can get a high speed of internet because it is very fast than DSL and Cable connection you can establish a Wi-Fi network in small space now you don't need any professional installation just connect to a power outlet with an Ethernet cord, and start browsing. Wi-Fi security system for Threats makes it more renewable and its tool protect your VPN and secure web page. You can easily configure the device to take better performance. The standard devices, embedded systems, and network security make it more powerful.

(f)   **Wi-Fi with no limitation**   You can use a "Wi-Fi" network with no limitation because it can connect you worldwide. You can easily cater to your requirements with Wi-Fi networking applications because the power consumption is not very high as compared to another bandwidth networks. The future of wireless internet network communications is bright.

(g)   **Extension of Wi-Fi Technology**   It is because of this wireless technology that so many other advancements could take place. Have you even thought of your TV to be supported by WI-FI? Well if you didn't, start thinking now. There are smart TV's in a market that connects to the internet. Having the internet on TV makes it possible to watch you tube videos, Net Flix and so much more. Read more about Wi-Fi TV technology on World Wide Web for more information

(h)   **Cost Reduction**.   As mentioned above, the absence of wires and cables brings down cost.

(i)   **Flexibility**.   Extended access, cost reductions, and mobility create opportunities for new applications as well as the possibility of creative new solutions for legacy applications.

TERMINAL EQUIPMENT AND LIMITATIONS OF WI-FI

14.   **Mobile Telephones**.   One of the best-known examples of wireless technology is the mobile phone, also known as a cellular phone, with more than 4.6 billion mobile cellular subscriptions worldwide as of the end of 2010.These wireless phones use radio waves from signal-transmission towers to enable their users to make phone calls from many locations worldwide.

15.   **Wireless Data Communications**.   Wireless data communications are an essential component of mobile computing. The various available technologies differ in local availability, coverage range and performance, and in some circumstances, users must be able to employ multiple connection types and switch between them.

16.   Wi-Fi technology is not perfect and has many flaws that limit its use as follows:

(a)   **Security**.   Because wireless transmissions can pass through walls, security is an issue.

(b)   **Wireless Reception**.   Varies from area to area, even within your own apartment. It's not

always guaranteed that you'll have a connection to the Internet.

(c)   **Interference**. Call quality is greatly influenced by the environment, is particularly sensitive to electromagnetic radiation generated by other household appliances.

(d)   **Compatibility Issue**. Despite the global standardization, many devices from different manufacturers are not fully compatible, which in turn affects the speed of communication

CHARACTERISTICS OF WALKIE / TALKIE

17.   A Walkie/Talkie (formally known as a hand held transceiver) are a hand-held, portable, two-way radio transceiver. Its development during the Second World War is credited to Donald L. Hings, radio engineer Alfred J.Gross, and engineering teams at Motorola. Where a phone's ear piece is only loud enough to be heard by the user, a walkie-talkie's built-in speaker can be heard by the user and those in the user's immediate vicinity. Hand-held transceivers may be used to communicate between each other, or to vehicle-mounted or base station.

18.   **Radio set GP338 Motorola.**   Defence organizations use hand held radios for a variety of purposes. Radio Set Gp338 Motorola can communicate on a variety of bands and modulation schemes.

19.   **Facilities / Features**

(a)   **FACILITIES**.
         (i)   It is portable and light in weight.
         (ii)   Can be operated easily.
         (iii)   It can be operated in VHF/UHF and 2 way simplex mode.
         (iv)   128 channel of this radio set can be preset into 8 zone.
         (v)   Option of selective call facilities available.
         (vi)   Call alert can be given to receiver station.
         (vii)   Can select required zone.
         (viii)   Start/stop facilities of scan operation available.
         (ix)   Add/Delete from scan list facilities available.

(b)   **Weight and Measure**. Weight and measure of this radio set is as follows:
         (i)   Dimension with Nickel Metal-Hydride high capacity battery-137x57.5x37.5mm.
         (ii)   Weight with Nickel Metal-Hydride high capacity battery-420gm.

(c)   **Frequency Range**.   Frequency of this radio set is as under:-
         (i)   136 MHz to 174 MHz on VHF mode.
         (ii)   403 MHz to 470 MHz on UHF mode.

(d)   **Communication Range**.   Communication range of this radio set is 4 to 5 Km and 20 to 40 Km with repeater.

(e)   **Power Supply**.   Power supply can be provided to this radio set by the high capacity 7.2 volt batteries.

(f)   **Battery Charging Time**.   1 hour for high capacity 7.2 volt batteries.
         (i)   Power output (HF) 1 to 5W att.
   (ii)   Power output (UHF) 1 to 4 Watt.

20.   **WALKIE/TALKIE**.   This radio set has been divided into four portions.

(a)   **Top Panel**.   Contains   On/Off Volume Knob, Channel Selector Knob, Top Button and Antenna

(b)   **Side Button**.   Name and functions of the large control on side panel is Press to Talk Switch and Right Side Accessory Mount.

(c)   **Front Panel**.   There are a total of six buttons i.e. Exit Key, Up Key, and Menu Select Key. Front Panel Key Pad. This is an alphanumeric keypad. There are 10 keys on this pad from 0 to 9. One key star and one extract key. LCD Display. This is a 14-character LCD display window and 14 types of indicators are displayed.
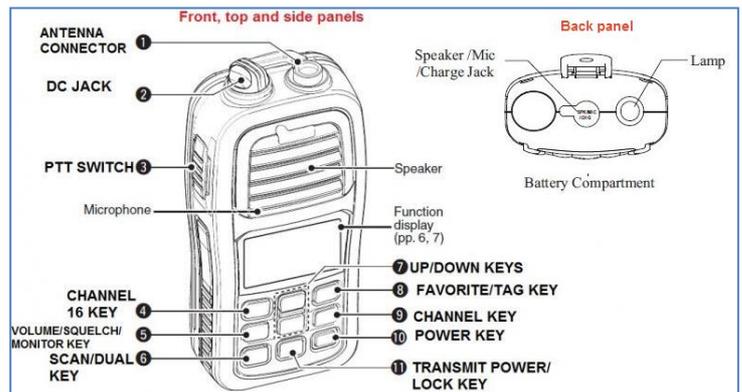
(d)   **Back Panel**.   The battery is fixed on this back panel of radio.

LATEST TRENDS AND DEVELOPMENT IN COMMUNICATION

Tropo Scatter, Modem, Fax, and Telex

21.   **Tropo scatter**. The lower layer of the atmosphere below 15 Km height is called tropospheric region. Communication carried out in this layer use the principle of tropo scatter. In this system micro waves are transmitted in the Ultra High Frequency (UHF) and Super High Frequency (SHF) band to achieve Radio Communication over the horizon covering a range between 70 Km to 1000 Km.

22.   **MODEM (Modular-Demodulator)**.   This device is used to convert computer generated output (Digital signals) that can be transmitted on a telephone line. Modems are required at both the sending and receiving computers.

23.   **Fax**.   This is common short form of FACSIMILE which is one of the memory type electronic mail and message systems with the following advantages:-

(a)   Can transmit graphics as well as Alpha numeric information (letters and numbers).

(b)   Reduce time and eliminates transmission error.

(c)   Use any transmission medium eg. Telephone, line, micro radio wave.

24. **Telex**. This is the abbreviated form of TELE PRINTER EXCHANGE. As cable is used in this type of communication devices to connect two such instruments it restricts its range of operation.

   (a) **Advantage**.
      (i)   Re-generative repeaters in a network can increase range; however voice signal cannot be re-generated.
      (ii)   Can be used over a telephone network.
      (iii)   Can receive messages when unattended.
      (iv)   Message is recorded in a printer form.

   (b) **Disadvantages**.
      (i)   The Equipment is costlier than a telephone set.
      (ii)   Key in error due to the need for a human operator to send-receive message.
      (iii)   Lack of privacy since any one can read the printed output.

25. **Satellite**.   Satellites are used for many purposes. Common types include military and civilian Earth observation satellites, communications satellites, navigation satellites, weather satellites, and space telescopes. Space stations and human spacecraft in orbit are also satellites.   Satellite orbits vary greatly, depending on the purpose of the satellite, and are classified in a number of ways. Well-known (overlapping) classes include low Earth orbit, polar orbit, and geostationary orbit.

26. **Optical Fibre Communication Computer System**.   Hollow tubes made of corning glass with an outer protective coating of rubber/plastic etc. are what constitute optical fibers. These fibers are very delicate and small in diameter.

   (a) **Advantages**.

      (i)   It has wide band width carrying different types of information from low speed voice signal to high speed computer data.
      (ii)   Less   power requirement.
      (iii)   Small cable size.
      (iv)   No electromagnetic interference.
   (b) **Disadvantages**.

      (i)   Expensive in terms of equipment and manufacturing.
      (ii)   Requirement of experts to run the system

27. **Computer System**.   Strictly speaking a computer is any calculating device. The name is derived from a Latin word "Computer" meaning to reckon or compute. However, the term computer has come to mean a special type of calculating machine having certain characteristics.

28. **Internet**.   It provides an instant, trouble free and cheap means of communications. Internet is therefore a collection of individual data networks connected together in such a way that data can be exchanged back and forth between networks widely separated.. Electronic Mail, Web- Browsing and Voice Mail are the main facilities of internet.

29. **Cell Phone**.   Cellular radio network was first introduced in 1980. It provides a mobile subscriber access to the global telephone network. It is a rapidly expanding technology with high rates of obsolescence.

30. **Multimedia**.   It is a computer technology that displays information using a combination of full motion video animation, sound graphics and text with high degree of user interaction.

31. **Video-Conferencing Systems**.   These provide the full benefits of face to face communication with sound, graphics and simultaneous transmission of data. The system enables people widely separated geographically to inter- act without having to meet at one place.

Videophone.   It is a system that enables us to transmit an image via digital tele network, making visual contact has been made possible over great distances, apart from transferring speech. Facilities provided by videophone are:
   (a)   Can transmit speech as well as colour video.
   (b)   Conduct of video conferences.

(c)   Called subscriber is seen on the monitor.
(d)   High quality of voice.
(e)   Speed of sending/ receiving can be adjusted by the user.
(f)   Map over-lays can be transmitted.

Information Technology

32.   Information Technology or IT for short, refers to the creation, gathering, processing, storage, presentation and dissemination of information, and also the processes and devices that enable all this to be done. IT stands firmly on the hardware and software of a computer and the telecommunications infrastructure. What has made the big difference in recent years is not the fact that individual computers have dramatically improved in their capabilities, but that all those information islands are being connected by digital highways made possible through the use of the telecommunications infrastructure by the computers, which, largely explains why the internet and the WWW have begun to play such a significant role in our use of computers.

CONCLUSION

33.   Today the technology has advanced in all spheres of life. Even the defence forces are well poised to exploit the state-of-art modern communication techniques for meeting the requirements of the Indian Army in the 21st century. Some of the areas where the army is already in the process of exploiting are the Cellular Radio (both GSM & CDMA), WLL, mobile trunked radio, mobile satellite systems, OFC and so on. Therefore, it is very important to be well versed with the latest trends in information technology to gain maximum advantage from the same

Indian Navy Summit conducted by Video Conferencing system

CHAPTER II : BASIC RADIO TELEPHONY (RT) PROCEDURE

Introduction

1.   The procedure is laid out to communicate on the Radio so as to make the conversation secure and successful, which is referred to as "Radio Telephony". This procedure is very important to avoid utter confusion over radio and is generally used by defence forces, air traffic controllers, maritime operators and amateur radio operators. Various advantages/disadvantages of RT procedure and radio communications are as under:-

      (a)   **Advantages**.
          (i)   Easy to establish.
          (ii)   Flexible.
          (iii)   Transmissions to more than one station.
      (b)   **Disadvantages**.
          (i)   Easier to intercept.
          (ii)   Liable to atmospheric interference and interference from other stations.
          (iii)   Liable to be jammed.
          (iv)   Skilled operators required.

2.   **Need for Standard Procedure**.   Standard procedure in RT needed to attain speed, uniformity, security and prevents misunderstanding & confusion by use of code signs, link signs etc. which hides identity of an operator and that of a unit.

3.   **Principles of Radio Telephony Procedure**.   BASS defines the Principles of RT procedure.

      (a)   B – Brevity.
      (b)   A – Accuracy.
      (c)   S – Security.
      (d)   S – Speed.

4.   **Types of Radio Telephony Communication**.

      (c)   **RT Conversation**.   .This is normal conversation between radio operators, which is not registered.

      (d)   **Unregistered (UR) Message**.   The only record taken will be in radio operator's logs of the sender and receiver.

      (e)   **Formal Message**.   It is written down and signed by the originator will be written on a message form (IAFU-4009).

5.   **Definitions**

      (a)   **Radio Net**.   Stations working on same frequency in order to communicate with each other comprise a Radio Net.

      (b)   **Control Station**.   Station serving as the senior HQ in the Radio Net. It is responsible for establishment of communications and maintains radio discipline on the net.

      (c)   **Link Sign**.   It is secret group of letters or combination of letters and figures, allotted to a station on radio net, for concealing the identity of the communicating station. Link signs are changed daily or even earlier if required.

      (d)   **Code Sign**.   It is three-letter group allotted to HQ/formation or unit to conceal their identity. These are changed daily.

      (e)   **Long Message**.   Message that lasts for more than half a minute generally consists of more than thirty groups.

      (f)   **Short Message**.   A short message lasts for half a minute or less.

      (g)   **Phonetic Alphabet**.   Alpha, Bravo, Charlie.

(h)   **Standard Phrases**.   Use of standard procedure ensures that exact meaning of a sender is conveyed to the receiver in minimum time.

(i)   **Code Word**.   A code word is a single word used to provide security cover for reference to a classified matter.

(j)   **Nicknames**.   A nick name consists of two separate words that do not bear any relationship to each other i.e. PAHAD BANDAR. Nick names have very little security value and are used for convenience.

6.   **Radio Telephony Procedure**.   Standard phrases used in RT procedure are as under:-

(a)   **Over**. My transmission has ended and I expect to hear a further transmission from you on this subject. Other stations will not transmit.

(b)   **Out**.   My transmission has ended and I do not expect you to make a further transmission on the subject. Other stations may transmit.

(c)   **Wait Out**.   You have finished for the time being and will call you later. Other stations may transmit.

(d)   **Wait**.   Pause for a few seconds follows. Other stations will not transmit.

(e)   **Out to You**.   I have finished with you and am about to call another station.   No reply is expected from you. Other stations will not transmit.

(f)   **Roger**.   Message received and understood.

(g)   **Wilco**.   Message received, understood and will be complied with.

7.   **Types of Calls** Calls can be categorised as under:-

(a)   **Single Call**.   A call when only one station on a net is addressed by anyone station of the net.

(b)   **Multiple Calls**.   A call when two or more but not all stations on the net are addressed. The pro word "and" will be inserted between the last two call signs e.g. `A1 for A2 and A3'.

(c)   **Net Call**.   A call used to address all stations on a net e.g. "All stations Alpha".

(d)   **Net Call with Exceptions**.   A call used to address all stations on the net except a few. Here a net call is made and stations not called are specified e.g. "all stations Alpha except ABC 3".

8.   **Establishment of Communication**.   Preliminary instructions are issued by Control. They are not sent by radio unless in dire emergency. On establishment of communications, signal strength will always be checked and confirmed. Link signs will not be abbreviated in bad weather conditions. If a station has not come up during establishment of communication but comes up little later, communication will be again established. Signal communication will always be established in the following situations: -

(a)   After change of frequency.
(b)   Bad weather.
(c)   After move.
(d)   After lifting of radio silence.
(e)   After change of link sign.

9.   **Documentation**.   Documentation forms a very important aspect of RT procedure. All events need to be documented for future reference in case of a query.

10.   **Rules on Security**.   Security over radio is an important issue in defence forces hence there is a need to adopt these procedures and follow certain golden rules.

      (a)   Think before you speak.
      (b)   Use correct procedure.
      (c)   Avoid use of jargon.
      (d)   Use official codes only.
      (e)   Substitute clear names by code signs.
      (f)   Be brief.

PRACTICE

11.   The cadets will be given adequate practice on RT procedure.

CONCLUSION

12.   Proper Radio Telephony procedure is essential to establish communication both during war and peace time. There are certain advantages and disadvantages of RT procedure. The messages can be intercepted by enemy and the complete information can be retrieved especially during field conditions. Considering the same one must follow all the rules of security while communicating.

SUMMARY

1.   **Line.**   This is the basic means of signal communications for a force which is static.

2.   **Radio Communication.** Radio communication involves Net Radio and Radio Relay. Net radio is the basic means of signal communication for any mobile force.

3.   **Radio Relay.**   Radio relay implies that a series of radio transmitters and receivers normally spaced between 20-35 Km apart and are used to provide point signal.

4.   **Wireless.**   Wireless operations permit services, such as a long-range communications, that are impossible or impractical to implement with the use of wires.

5.   **Mobile Telephones.**   These wireless phones use radio waves from signal-transmission towers to enable their users to make phone calls from many locations worldwide.

6.   **Wireless Data Communications.**   Wireless data communications are an essential component of mobile computing. The various available technologies differ in local availability, coverage range and performance.

7.   **Wi-Fi.**   Wi-Fi is a wireless local area network that enables portable computing devices to connect easily to the Internet. Wi-Fi has become the de facto standard for access in private homes, within offices, and at public hotspots. Cellular data service offers coverage within a range of 10-15 miles from the nearest cell site.

8.   A walkie-talkie is a hand-held, portable, two-way radio transceiver.

9.   **Radio Telephony.**   The procedure laid out to communicate on the Radio so as to make the conversation secure and successful, which is referred to as "Radio Telephony".

10.   **Principles of Radio Telephony Procedure**.
    (a)   B – Bravity.
    (b)   A – Accuracy.
    (c)   S – Security.
    (d)   S – Speed.

11.   **Types of Radio Telephony communication**.
    (a)   RT conversation.
    (b)   Unregistered (UR) Message.
    (c)   Formal Message.

12.   **Types of Calls**.
    (a)   Single Call.
    (b)   Multiple Call.
    (c)   Net Call.
    (d)   Net Call with Exceptions.

13.   Troposcatter is a system in which micro waves are transmitted in the UHF and SHF band to achieve radio communication over the horizon covering a range between 70 Km to 1000 Km.

14.   Modem (modulator-demodulator) is a network hardware device that modulates one or more carrier wave signals to encode digital information for transmission and demodulates signals to decode the transmitted information.

15.   A satellite is an artificial object which has been intentionally placed into orbit. Such object is sometimes called artificial satellite to distinguish them from natural satellites such as Earth's Moon.

16.   Satellites are used for a large number of purposes. Common types include military and civilian earth observation satellites, communications satellites, navigation satellites, weather satellites, and research satellites.

17.   Multimedia is content that uses a combination of different content forms such as text, audio, images, animation, video and interactive content. Multimedia contrasts with media that use only rudimentary computer displays such as text-only or traditional forms of printed or hand-produced material.