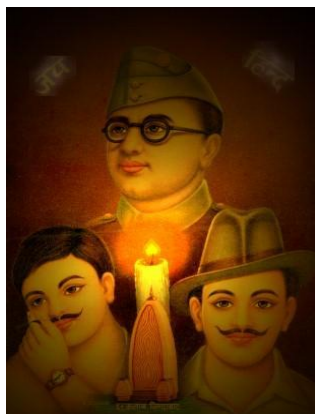


NATIONAL CADET CORPS



CADET HAND BOOK ABRIDGED VERSION-2007

(QUESTION ANSWER FORMAT)



Only for free issue to cadets of “National Cadet Corps” in digital form.

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NCC

Section -1

Ques 1- What is NCC Motto?

Ans - **Unity & Discipline.**

Ques 2 – What are the aims of NCC?

Ans - (a) To develop character, comradeship, discipline, leadership, secular outlook, spirit of adventure, sportsmanship and ideals of selfless service among the youth of the country.

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

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

Section – 2

Ques 1 – What is the rank of DG NCC?

Ans – Lt General.

Ques 2 – What is the rank of Dy Director General of NCC Directorate?

Ans - Brigadier/ Air Commodore/ Commodore (IN)

Ques 3 – How many Directorates are there in NCC?

Ans - 17.

Ques – 4 - What are the ranks of SD/SW ANOs?

Ans – Lt, Capt & Maj.

Ques – 5 - What are the ranks of JD/JW ANOs?

Ans - 3rd Officer, 2nd Officer, First Officer and Chief Officer.

Section – 3

Ques 1. Name various camps conducted in NCC?

Ans - Basically there are two types of camps as under : -

- (a) Annual Training camps
- (b) Centrally organised camps, which are a under: -
 - (i) Leadership camps – Advance & Basic leadership camps
 - (ii) Thal Sainik camps
 - (iii) Vayu Sainik Camps.
 - (iv) Rock climbing camps.
 - (v) National integration camps.
 - (vi) Republic day camp and Prime Minister's rally.

Ques 2 - Name the social service and community development activities?

Ans – These are as under: -

- (a) Tree Plantation.
- (b) Blood Donation.
- (c) Old Age Homes.
- (d) Adult Education.
- (e) Community work.
- (f) Disaster relief.
- (g) AIDs and Cancer awareness programmes.

Ques 3. What are the various eligibility conditions for certificate examination?

Ans – These are as under: -

- (a) **'A' Certificate**
 - (i) The candidate must have attended a minimum of 75% of total training periods laid down in the syllabus for the first and second years of Junior Division/ Wing NCC (All Wings).
 - (ii) Must have attended one Annual Training Camp.
- (b) **'B' Certificate**
 - (i) The cadet must have attended a minimum of 75% of total training period laid down in the syllabus for the first and second years for Senior Division Wing NCC (All Wings).
 - (ii) Must have attended one Annual Training Camp/NIC.
 - (iii) Cadets possessing 'A' certificate will be awarded 10 bonus marks.
 - (iv) An Air Wing Cadet must do a minimum of 10 Glide Launches.

(c) **'C' Certificate**

- (i) The candidate must be in possession of Certificate 'B'.
- (ii) The cadet must be in third year of SD/SW NCC Training.
- (iii) The cadet must have attended a minimum of 75% of the periods of 3rd year syllabus during the academic session.
- (iv) Must have attended Two ATCs or one ATC and in addition one of the following:-
 - (aa) RD Camp at Delhi (RDC).
 - (ab) Centrally Organised Camp (COC).
 - (ac) Para Training Camp (PTC).
 - (ad) National Integration Camp (NIC) (when applicable for SD/SW Cadets).
 - (ae) All India Trekking Expedition (DG NCC organised).
 - (af) All India Mountaineering Expedition (DG NCC organised).
 - (ag) Attachment Training with Service units.
 - (ah) Any one of the Adventure Courses approved by DG NCC.
 - (aj) Sailing Expedition , with actual sailing exceeding 10 days, duly approved by DG NCC.
 - (ak) Any cadet participating in National Rifle Association of India (NRAI) matches as part of DG NCC team.
 - (al) Special Services Camps (essentially with 50% Service training).
 - (am) Successfully done Scuba Diving Course.
 - (an) Youth Exchange Programme.
 - (ao) Foreign cruise (Navy).

Ques 4. – How is the grading awarded in NCC?

Ans - A cadet has to obtain 45% marks in each paper and 50% marks in the aggregate to pass the examinations. Grading based on total marks obtained will be awarded as follows:-

- (a) Grading 'A' - Cadets obtaining 80% marks or above.
- (b) Grading 'B' - Cadets obtaining 65% marks and above but below 80%.
- (c) Grading 'C' - Cadets obtaining 50% marks and above but below 65%.
- (d) Fail - Cadets obtaining less than 45% in any paper or less than 50% of the aggregate.

Ques 5. Name the retention clothing items and scales of authorisation?

Ans - Authorisation of retention clothing for army boys/Girls is tabulated as under: -

Ser No	Item	Life in Months	Qty Auth per Cdt	Qty to be retained		Remarks
				JD/ JW	SD/ SW	
1.	Shirt PWPC Khaki Boys/Girls)	72	02 Prs	02 Prs	02 Prs	All wings
2.	Trouser PWPC Khaki (Boys/Girls)	72	02 Prs	02 Prs JW	02 Prs	All wings (less JD boys)
3.	Short PWPC Khaki	72	02 per JD & one per SD	02 per JD Army	01 Pr SD Army	-
4.	Salwar/ Kamiz white	48	02 per JW/SW	02 Pr JW	02 Pr SW	Army Girls Wing only
5.	Beret/ Pagree DG	72/24	01 per Cdt	01 per Cdt	01 per Cdt	All wings
7.	Socks Nylon NTP Black	15	02 per Cdts	02 Prs	02 Prs	
8.	Shoe Black leather Derby DMS	30	1 Pr per Army JD & Girls JW	01 pr per, Army JD & Girls JW	-	Army JD/JW
9.	Shoe Ankle Leather DVS	54	01 pr per Army SD/SW Cdts	-	1 pr per Army SD/SW Cdts	-
10.	Shoe canvas white/Brown	12	01 pr per Girl /Army Cdt	01 Pr 01 pr per JD/JW Cdt	01 Pr per SD/ SW	One pr for Army, Girls for entire pd of 2/3 yrs.

Note-It must be amended by various Dtes as applicable considering the geographical jurisdiction.

Ques 6. Write the full version of NCC song?

Ans -

NCC Song

*Hum Sab Bhartiya Hain, Hum Sab Bhartiya Hain.
Apni Manzil Ek Hai, Ha, Ha, Ha, Ek Hai, Ho, Ho, Ho, Ek Hai
Hum Sab Bhartiya Hain*

*Kashmir Ki Dharti Rani Hai,
Sartaj Himalaya Hai,*

*Sadiyon Se Hamne Isko Apne Khoon Se Pala Hai
Desh Ki Raksha Ki Khatir, Hum Shamshir Utha Lenge,*

*Hum Shamshir Utha Lenga.
Bikhere-Bikhere Tarey Hain Hum Lekin Jhilmil Ek Hai
Ha, Ha, Ha, Ek Hain
Hum Sab Bhartiya Hain,*

*Mandir Gurdware Bhi Hain Yahan
Aur Masjid Bhi Hai Yahan,
Girja Ka Hai Ghadiyal Kahin
Mullah Ki Kahin Hai Ajaan.*

*Ek Hi Apna Ram Hai, Ek Hi Allah Taala Hai,
Ek Hi Allah Taala Hai, Rang Birange Deepak Hai Hum,
Lekin Jagmag Ek Hai Ha, Ha, Ek Hai, Ho Ho, Ho, Ek Hai.
Hum Sab Bhartiya Hain, Hum Sab Bhartiya Hain.*

Section – 5

Ques 1 – List out various incentives for NCC cadets by centre and state Govts?

Ans – These are as under: -

A. Concession in employment: -

(a) Vacancies reserved for commission in Defence Forces for NCC 'C' Certificate

Army 64 per year- Indian Military Academy (IMA), Dehradun through UPSC and Service Selection Board (SSB) Interview.

100 per year - in Officers Training Academy (OTA), Chennai for Short Service Commission Non Technical No UPSC Exam, only SSB.

Navy -6 per Course. No UPSC Exam, Only Naval SSB.

IAF – 10 % in all courses including Flying Training courses. No UPSC Exam only Air Force SSB.

- | | |
|-------------------------------------|---|
| (b) For ORs, Sailors, Airmen | 5 to 10% bonus marks awarded for recruitment. |
| (c) Para Military Forces | 2 to 10 bonus marks awarded for recruitment. |
| (d) Department of Telecommunication | Bonus marks awarded for recruitment. |
| (e) CRPF | NCC Cadets holding third division degree eligible for recruitment to gazetted post. |
| (f) National Cadet Corps | Civilian Gliding Instructors/Girl Cadet Instructors and NCC WTLOs. |
| (g) State Governments | Preference in State Services in certain States. |
| (h) Industry | Some Industries give preference to NCC 'C' Certificate holders for various jobs. |

Ques 2. What are the aims and financial assistance provided by cadet welfare society?

Ans - A. **Aims of the Society**. The present aims of Cadets Welfare Society are:-

- (a) To give financial assistance to cadets NOK/nominee in case of a demise during NCC activity.
- (b) To give financial relief to cadets on sustaining injury / disability during NCC activity.
- (c) To grant scholarships to academically brilliant students.
- (d) To grant Best and 2nd Best Cadet awards at Group level.
- (e) To conduct sports and adventure activities which cannot be funded by Public Funds.

B. **Financial Assistance/Relief**. The Society is granting financial assistance and relief, as under, to cadets who sustain injury or death during NCC related activity as well as for sports and adventure activities.

NCC Related Activities	Death Cases	Permanent Disability	Temporary Disability
High Risk	Rs.2,00,000/-	Upto Rs. 2,00,000/	Upto Rs.1,00,000/
Other Activities	Rs.1,50,000/-	Upto Rs. 1,50,000/	Upto Rs.1,00,000/

Ques 3. List out various scholarship schemes available for NCC cadets?

Ans - A. **Scholarships.** A scholarship scheme was introduced in 1991 where 250 scholarships of Rs.2,000/- each were awarded to academically brilliant NCC cadets. The scheme in its present form awards Rs.5,000/- each which are distributed amongst the 17 Dtes based on their enrolled strength of cadets.

B. **Best Cadet Awards.** Best Cadet Cash Awards are given to two cadets from each category i.e. JD, JW, SD, SW in every Group HQ with Rs 3,000/- to each Best Cadet and Rs. 2,000/- to each 2nd Best Cadet. A total of 760 cash awards are given every year.

C. Sahara Scholarships.

(a) In 2002 the Sahara Group introduced an Annual Sahara Scholarship Scheme with a corpus fund of Rs 3 Crores. Rs 1 Crores is to be given annually as scholarships to academically brilliant cadets.

(b) A total of 1016 scholarships with the following breakdown are given as follows:-

Category	No. of vacancies per Group HQ	Total	Amount per Scholarship
JD	3	285	Rs 6,000/-
JW	3	285	Rs 6,000/-
SD	2	190	Rs 12,000/-
SW	2	190	Rs 12,000/-
Professional	Total 66 Scholarships.	66	Rs 30,000/-
	Total	1016	

CHAPTER II

NATIONAL INTEGRATION

SECTION 1- INDIAN HISTORY AND CULTURE

Ques 1. – List out the important periods of Indian History?

Ans - Relevant details are as under: -

- (a) **Harappan Culture** – First urban culture to flourish in India.
- (b) **Vedic age** – It was the result of the inter- mixing of the Indo - Aryans with the pre-existing inhabitants of India.
- (c) **Jainism & Buddhism** - 6th century BC to 200 BC. Both religions had lasting impact on life and culture of India.
- (d) **Period from 200 BC to 300 AD** – This phase is extremely important since the changes that took place in economic and political life, and significant developments in various aspects of culture including religion, art and science and technology.
- (e) **4th AD to 8th century - Classical age of Indian civilization** - The Guptas built a large kingdom during this period which remained powerful for about a century. In the Deccan and the South, there were two major Kingdoms during this period of the Pallavas and of the Chalukyas. Some of the finest achievements in various fields of culture-art, architecture, literature, philosophy, science, technology can, however, be dated to this period.
- (f) In spite of the dominant position of Sanskrit in most part of the country. This period marks the beginning of many modern Indian languages as well as distinct scripts in different parts of the country. The period is also important for some of the most significant advances in science and technology. Most of the major works in astronomy, mathematics and medicine belong to this period.
- (g) **The medieval period** – 8th to 17th century – Creation of large number of states, Induction of Islam, emergence of Brahmini & Vijaynagram kingdoms in south, Establishment of Sultanate of Delhi, unification of North and South under Mughals like Ashoka earlier, Akbar, the greatest of the Mughal emperors, followed a policy of 'sulk- kul' (peace with all).
- (h) **The modern period** - 18th century saw decline of Mughals and colonisation by British began. Freedom struggle, partition and independence of India are important events of this period.

Ques 2 Why 4th to 8th century called classical age of Indian civilisation?

Ans - It is due to the following : -

- (a) Guptas remained powerful for almost for one century.
- (b) Pallavas and chaulukyas were major kingdoms of Deccan and south.
- (c) Some of the finest achievements in various fields of culture-art, architecture, literature, philosophy, science, technology are dated to this period.
- (d) Decline of Buddhism and rise of Brahminical religion.
- (e) Sanskrit was language of court in major parts of the country and beginning of many modern Indian languages.
- (f) The period is also important for some of the most significant advances in science and technology. Most of the major works in astronomy, mathematics and medicine belong to this period.

Ques 3. What are various dimensions of Indian culture?

Ans - Various different races have been coming to India and on entering India; they had conflicts with the local inhabitants. These conflicts affected their respective cultures and through the process of assimilation and synthesis, Indian culture grew all the richer. Various races which came to India are as under ; -

- (a) Negrito Race.
- (b) Dravidians.
- (c) Aryans.
- (d) Muslims.
- (e) British.
- (f) The present form of administration in India is the outcome of the great influence of the British ideology. The present economic organization, joint stock companies, managing agencies, big factories, production through machines, railways, telegraphs, telephone, aeroplanes and other means of conveyance and communication were brought to India from the west.

SECTION 2- RELIGIONS AND CUSTOMS OF INDIA

Ques 1 – What are the major Indian religions and percentage of population?

Ans - (a)	Hindus	-	83.5 %
(b)	Muslims	-	10.7 %
(c)	Christians	-	2.44 %
(d)	Sikhs	-	1.79 %
(e)	Buddhists	-	0.74 %
(f)	Jains	-	0.46 %
(g)	Others	-	0.37 %

Ques 2. The customs of India depict very colourful panorama. What are your comments?

Ans – It is due to the following: -

- (a) India is a multiracial, multilingual civilization with rich cultural heritage and has provided peaceful atmosphere for the development of many religions. Indian culture and customs are influenced by these religions.
- (b) Indian festivals are famous the world over. Most of the festivals are related to the change of weather and crop harvesting since India is an agro based economy. The most famous Indian festivals are Diwali, Holi, Dussehra and Basant Panchami. There are certain festivals which are prevalent in particular regions only like Bihu in Assam, Baishakhi in Punjab etc.
- (c) There are different customs of Hindu marriage as compared to a Muslim marriage or a Sikh marriage. Similarly there are different customs of celebrations. There are certain religious customs which pertain to particular religion only like Mundan ceremony in Hindus and Naming ceremony in Sikhs.
- (d) There are certain customs regarding dresses and ornaments of women. These are associated with particular regions which give a very colourful dimension to Indian customs and traditions, similarly all regions have their distinctive ornaments.
- (e) The customs and traditions of India though varied are binding which ultimately serves as a unifying factor of Secular India.

SECTION 3- UNITY IN DIVERSITY

Ques 1 –What is the importance of national unity?

Ans - National unity is also essential for social wellbeing, peace and harmony. People can enjoy peace and security, if there is a mutual trust and goodwill among all sections of society. No progress can be made in the field of art & literature, science & cultural advancement and economic well-being, if the disruptive tendencies and divisive forces are present in the country. Nation can play an effective role in the international field if our own house is in order.

Ques 2 - What are the fundamentals of national unity?

Ans - These are as under : -

- (a) Language.
- (b) Casteism.
- (c) Education.
- (d) Communalism.
- (e) Regionalism.

Ques 2 - What is the relevance of NCC in unifying India and what are the important ingredients of national unity?

Ans - NCC creates awareness amongst youth about the diverse heritage of our country and fosters national integration despite linguistic, cultural, religious and geographical barriers. It helps cadets to gain experience to live together, co-operate with each other and work in harmony amongst cadets of various states, thus strengthening unity. Important ingredients of national unity are as under: -

- (a) Ethics and social values.
- (b) Cultural and traditional values.
- (c) Discipline and patriotism.

SECTION 4- NATIONAL INTEGRATION AND ITS IMPORTANCE

Ques 1. Define national integration.

Ans - National integration is a positive concept to inculcate feeling of togetherness amongst diverse sections of society. It is not the uniformity of all religions, dress and food habits etc. It means both preservation of diverse cultures and at the same time living, respecting and working in harmony with each other for the overall prosperity of the nation.

Ques 2 – Why national integration important for progress of any nation?

Ans – It is important for the following: -

- (a) Maintenance of sovereignty and territorial integrity of the nation.
- (b) Maintenance of peace and harmony.
- (c) Growth and development of the nation.
- (d) Eradication of poverty and illiteracy.
- (e) Internal security and law and order.
- (f) Culture and religious development.
- (g) Economic and industrial growth.
- (h) Attract foreign investment and increase import and export.
- (j) Exchange of technological know-how and culture .
- (k) Dignity and self respect as a nation.
- (l) Welfare and well-being of the people.
- (m) Foreign relations and better standing among the nations of the world.

SECTION 5- FAMOUS LEADERS OF INDIA **(Only for JD/JW Cadets)**

Ques 1 – Mahatma Gandhi, Bhagat Singh, Lal Bahadur Shastri, Chander Shekhar Azad, Subash Chandra Bose, Swami Vivekanand , Jawaharlal Nehru , Maulana Abul Kalam Azad and Sardar Vallabh Bhai Patel.

Ans – Study the Precis for complete details

SECTION 6- INDIA'S NEIGHBOURS
(Only for JD/JW Cadets)

Ques 1 – What are the favourable points in the developing Indo-China relations?

Ans - These are as under : -

- (a) Neighbours and huge human infrastructure.
- (b) Age old religious & cultural ties with regular exchange of delegations.
- (c) Agriculture with strong industrial base.
- (d) Fastest growing economies.
- (e) Opening of trade routes.
- (f) Nuclear power and emerging space technology.
- (g) Growing relations in the fields of culture, education, economy, science and Technology.
- (h) Perpetual friendship treaty of Panchsheel based on five principles of peace.

Ques No 2 – What are the hurdles in the Indo-china relations?

Ans - These are as under : -

- (a) Difference of ideology i.e. Democracy vs Communism.
- (b) Persisting border dispute.
- (c) Chinese war of 1962.
- (d) Suppression of Tibetan freedom.
- (e) Increasing nuclear capability and weapons of mass destruction by China.
- (f) Helping Pakistan militarily.

Ques 3 – What are the favourable points in the Indo-Nepal relations?

Ans – These are as under: -

- (a) Historical cultural and religious ties.
- (b) Increasing co-operation in the fields of Agriculture, Agro-based industries, tourism, processing of cash crops, science and technology.
- (c) Establishment of industrial units with the help of India.
- (d) Construction of Devighat Hydro-electric Project in Nepal during 1985.

Ques 4 – What are the favourable points in the Indo-Bhutan relations?

Ans – These are as under: -

- (a) Ties of religion, culture and friendship between people of both countries.
- (b) India is responsible for security and communication in Bhutan.
- (c) Development of education, technical skills and economy of Bhutan.
- (d) Continuous economic, industrial and military aid to Bhutan.

Ques 5 – What are the favourable points in the Indo-Myanmar relations?

Ans – These are as under: -

- (a) Strong cultural and ties since time immemorial.
- (b) Common border and perpetual security problems.
- (c) Both countries agreed to check drug trafficking and unlawful activities on the borders.
- (d) Regular exchange between the dignitaries of both nations to resolve problems of mutual interest.

Ques 6 – What are the hurdles in the Indo-Myanmar relations?

Ans – These are as under: -

- (a) Military rule and constant suppression of democracy in Myanmar.
- (b) Dismal poverty & stoppage of international aid.
- (c) Many NE insurgent groups operate from Myanmar.
- (d) Porous border is conduit for supply of drugs to India.

Ques 7 – What are the favourable points in the Indo-Bangladesh relations?

Ans – These are as under: -

- (a) India helped Bangladesh to achieve independence.
- (b) Financial and technical assistance for development programmes in Bangladesh.
- (c) Indian Army helped people of Bangladesh in their genuine struggle against oppression and domination by West Pakistan.

Ques 8 – What are the hurdles in the Indo-Bangladesh relations?

Ans – These are as under: -

- (a) Influx of immigration of Bangladeshis into India.
- (b) Shelter to NE insurgent groups in Bangladesh.
- (c) Poor, over-populated and ill-governed nation.
- (d) Increasing influence of fundamentalists in society.
- (e) Increase in Al-Qaeda and ISI backed groups.

Ques 9 – What are the favourable points in the Indo-Sri Lankan relations?

Ans – These are as under: -

- (a) Age old cultural and religious ties.
- (b) Constant co-operation in the spheres of economic, peace and friendship.
- (c) Being close maritime neighbour it is in India's interest that political and social stability returns to Sri Lanka.

Ques 10 – What are the hurdles in the Indo-Pakistan relations?

Ans – These are as under: -

- (a) Constant tension & strained relations after partition leading to four wars of 1949, 1965, 1971 and kargil war of 1999.
- (b) Raising Kashmir bogey in international fora repeatedly.
- (c) Fomenting trouble in India in various forms.
- (d) Supporting militant groups from its soil against India.
- (e) Suppression of democracy and military rule in Pakistan.

Ques 11 – What are the favourable points in the Indo-Pakistan relations?

Ans – These are as under: -

- (a) Same heritage, culture and ancestry.
- (b) Common food habits, strengths and concerns of populace.
- (c) Shared water resources.
- (d) Increasing people to people contacts.
- (e) Increasing confidence building measures.
- (f) Disenchantment of common people with the military and fundamentalists groups.

SECTION 7- CONTRIBUTION OF YOUTH FOR NATION BUILDING

Ques 1 – Define role of youth in nation building?

Ans - Youth is the backbone, hope of the future, potent tools of national integration and reckonable force to shape the destiny of the nation. The youth can play a leading role in bringing together the people of different states and religions with a view to integrating them emotionally, culturally and geographically.

Ques 2 – How can youth contribute individually for nation building?

- Ans -
- (a) Be good human being by imbibing Oriental value system.
 - (b) Help the friends & colleagues from unprivileged section of society.
 - (c) Improve personal talent, innovate and enhance your usefulness for society and Nation.
 - (d) Discourage corruption in every form and manifestation in society.
 - (e) Participate in sports, yoga and improve personal health.
 - (f) Use national/natural resources like, energy in all forms, communication spectrum, water resources etc with due austerity and discourage its misuse by others.
 - (g) Develop secular outlook and tolerance for all sections of society.
 - (h) Extend willing help to civil administration during natural and man made disasters.
 - (i) Learn healthy politics during college days.

Ques 3. Youth can contribute for nation building at personal level by saying 'no' to what all social evils?

- Ans -
- (a) Drugs
 - (b) Dowry
 - (c) Illicit sexual relations
 - (d) Antisocial activities in thought and action.
 - (e) Exploitation of underprivileged in society.
 - (f) Use of child labour
 - (g) Unfair means during exams.
 - (h) Accepting and offering bribe in all forms.

Ques 4 - Youth can contribute for nation building at personal level by saying 'yes' to which all good personal habits?

- Ans -
- (a) Avoid rash driving.
 - (b) Carry driving license and helmet always.
 - (c) Follow road etiquettes and road safety norms explicitly.
 - (d) Don't use mob while driving and no over speeding.
 - (e) Extend willing help during natural and man made disasters.
 - (f) Organise traffic control during accidents.
 - (g) Plant trees on special occasions like birth of daughter, birthday of other Nears and Dears, anniversaries etc and prevent extravaganza by all means.
 - (j) Help and look after aging parents
 - (k) Groom & nurture your children so that they become responsible citizens of the nation.
 - (l) As responsible citizens, employees, entrepreneurs & Govt servants, ensure punctuality, excellence, simple living and high thinking.
 - (m) Help your colleagues from under privileged section of society.

SECTION 8- NATION STATE, NATIONAL INTEREST AND OBJECTIVE **(Only for SD/SW Cadets)**

Ques 1 - Define nation state.

Ans - **Nation State** can be defined as a country which has 'essential elements' of population, territory, sovereignty and Government.

Ques 2. What are the national interests of a Nation?

Ans - National interests are as under:-

- (a) **Sovereignty**. Foremost interest of the nation is to be autonomous and remain independent.
- (b) **Integrity**. The nation should be full, indivisible and have a well-defined territory.
- (c) **Unity**. The nation should be a secular union of states with political power belonging to a central confederate authority, with united and undivided

goals without factional , sectarian or fanatical prejudices. It should be tolerant towards caste, colour, creed, religion and language of each other.

(d) **Security**. The nation must ensure safety, territorial integrity and protection of the state against external threat or subversion.

Ques 3. What are the important Directive principles of state Policy?

Ans (a) To ensure and protect a social order which stands for the welfare of the people.

(b) Separation of judiciary from the executive.

(c) Protection of national monuments.

(e) Protection and improvement in environment, forests and wild life.

(f) Organise agriculture and animal husbandry on modern and scientific lines.

(g) Improvement of public health.

(h) Prohibition of intoxicating drinks and drugs.

(j) Promotion of educational and economic interests of weaker sections of the people.

(k) To have uniform code of law irrespective of caste, creed, colour or religion.

(l) Participation of workers and labourers in labour law.

(m) Promotion of cottage industries.

(n) Provision of maternity relief.

(o) Education to all.

(p) Equal justice to all.

(q) Equal pay for equal work for both men and women.

(r) Adequate means of livelihood to all citizens.

Ques 4. What are the current objectives of India?

Ans - (a) Self sufficiency in nuclear- power.

(b) Availability of reliable power supply for farming and industries.

(c) Production of goods for world markets.

(d) Balancing growth in both public and private sector.

(e) Modernization of villages, linking with roads and provision of electricity to all villages.

CHAPTER-III

DRILL

Ques 1 – What is the aim of Drill?

- Ans - (a) To inculcate a sense of discipline,
(b) Improve bearing, smartness in appearance and turn out,
(c) Create self confidence and
(d) To develop the quality of immediate and implicit obedience to orders.

Ques 2 – Word of command ke kitne bhag hote hain?

- Ans - (a) Cautionary.
(b) Executive.

Ques 3 - What are the points to be checked in Savdhan?

- Ans (a) Heels together and in line, feet turned out equally forming an angle of 30 degrees, knees straight without stiffness, hips level and drawn back slightly, body erect and resting equally on hips, chest lifted and arched shoulders square, falling equally and neck filling the collar.
- (b) Arms hanging straight down without stiffness so that the thumbs are immediately behind the seams of the trouser, back of the hand outwards, hands closed (not clenched) and thumbs straight to the front.
- (c) Head erect and square to the front, chin vertical and eyes straight to the front.
- (d) Weight of the body resting equally on the heels and the toe of the feet.
- (e) Bring heels together with extreme sharpness by lifting the left foot six inches from the ground and placing it flat and very firm besides the right, avoid stamping of foot.

Ques 4 – Dehne Mur kitne degree ka hota hai aur ki paon par word of command idya jaata hai?

Ans – 90° degree aur bayen paon par.

Ques 5 – Peechhe Mur kitne degree ka hota hai aur ki paon par word of command idya jaata hai?

Ans – 180° degree aur bayen paon par.

Ques 6 – Bayen Mur kitne degree ka hota hai aur ki paon par word of command idya jaata hai?

Ans – 90° degree aur dehne paon par.

Ques 7 – Squad ko kadd war karne ke liye karwai likho?

- Ans – (a) Squad ek line mein.
(b) Squad ek do ki ginti karo.
(c) Ek number ek kadam aage aur do number ek kadam peechhe chal.
(d) Ek number dehne aur do number bayen mur.
(e) Dehna cadet khara rahey baaki teen line banaao, tez chal.

Ques 8 – Khuli line chal mein word of command kiya hoga?

Ans – Khuli line chal.

Ques 9 – Dressing ka word of command likho?

Ans – Sajj dehne sajj.

Ques 10 – Salute kitne parkar ke hain?

Ans – Teen parkar ke:

- (a) Saamne ka
- (b) Dehne ka
- (c) Bayen ka

Ques 11 – Saamne ka salute kis paon par diya jaata hai?

Ans – Bayen par.

Ques 12 – Dehne ka salute kis paon par diya jaata hai?

Ans – Bayen par.

Ques 13 – Saamne ka salute kis paon par diya jaata hai?

Ans – Bayen par.

Ques 14 – Word of command “Parade par” milte hee squad kitne kadam ke baad thamm karta hai?

Ans – 15 Kadam par.

Ques 15 – Visarjan mein first turn kis taraf karte hain?

Ans – Dehne taraf.

Ques 16 – Normal march karte waqt ek minute mein kitne kadam hote hai?

Ans – 120 Kadam.

Ques 17 – Slow march karte waqt ek minute mein kitne kadam hote hai?

Ans – 70 Kadam.

Ques 18 – Word of command “Tez Chal” mein pehla kadam kitne inch ka hota hai?

Ans – 30 inch ka.

Ques 19 – Squad ko dehne ya bayen baaju karne ke liye word of command kiya hoga?

- Ans – (a) Squad dehne baaju chal
(b) Squad bayen baaju chal.
(c) Squad aage chal.
(d) Squad peechhe chal

Ques 20 – Dehne, bayen, asage aut peechhe chal mein jiyada se jiyada kitne kadam hote hai?

Ans – Teen.

Ques 21 – Squad dehne ya bayen baaju chal mein side step kitne inch ka hoga?

Ans – 12 inch ka.

Ques 22 – Kadam taal kis liye karvaya jaata hai?

- Ans – (a) Warm up karne ke liye
(b) Kadam milane ke liye.

Ques 23 – Tej chaal mein kadam taal kis paon par bolte hain?

Ans – Baeyen paon par.

Ques 24 – Kaun kaun salute adhikari hote hain?

Ans – Nb Subedar aur uske upar sabhi adhikari.

CHAPTER-III (A)

DRILL WITH ARMS & CEREMONIAL DRILL **(Only for SD/SW Cadets)**

Ques 1 – Savdhan position mein rifle kis hath mein hoti hai?

Ans - Dehna Hath.

Ques 2 - Aaram se position mein rifle kahan hoti hai?

Ans – Rifle ka butt dehne paon ke sath aur rifle aage ki taraf jhuki hui.

Ques 3 – Rifle ko tol sashar mein kab kiya jaata hai?

Ans - Sameekhsha karam mein chalte waqt.

Ques 4 – Bhumi sashtra mein rifle ka barrel kis disha mein hota hai?

Ans - Aage ki taraf.

Ques 5 - Bhumi sashtra mein rifle ka magazine kis disha mein hota hai?

Ans - Dehne taraf.

Ques 6 - Bagal sashtra ke hukam par kia karwai hoti?

Ans - Dehne haath se rifle ko upar uchhalo, baen haath se fore hand guard, Dehne haath se piston grip pakro. Rifle 90⁰ angle par body ke saath lagaen, dehne haath se mazboot pakro, baen haath ko savdhan position mein lao.

Ques 7 - Baazu sashtra mein rifle kahan hoti hai?

Ans - Rifle neeche, butt dehen toe ke sath aur 90⁰ par hoti hai.

Ques 8 - salami sashtra kin kin ranks ko laagu hota hai?

Ans - Major aur upar ke ranks ko.

Ques 9 - National salute kis ko laagu hota hai?

Ans - President and Governors of states.

Ques 10 – General salute kis ko laagu hai?

Ans - Major General and above.

Ques 11- Guard of honour kis kis ko laagu hota hai?

Ans - Senior Division Units may provide guards of honour to the following:-

- (a) The president, Vice President and the Prime Minister.
- (b) The Governors of states and Lt Governor/Chief commissioners of Union Territories.
- (c) The Defence Minister / Minister in the Ministry of Defence / Deputy Defence Minister.
- (d) The Chief Minister of State.
- (e) The Chief of Army /Naval /Air Staff.
- (f) The Defence Secretary.
- (g) The General Officer commanding-in-Chief of the command in which the Unit is located (Army Wing Units only).
- (h) The Flag officer Commanding-in-chief within their Commands (Naval wing units only).
- (j) The Air Officer Commanding-in-Chief, within their commands (Air Wing Units only).
- (k) The Vice chief of Army/Naval/Air Staff.
- (l) The Dignitaries addressing the convocation of a University.
- (m) Chancellor of a University (where Governor of the State is not the Chancellor).
- (n) Pro-Chancellor/Vice Chancellor of a University when attending important university functions as Chief guest in their University.
- (o) Director General NCC.

Ques 12 - Gaud of honour ki nafri likho?

Ans - The strength of the Guard of Honour will be as follow:-

- (a) 150 rank and file for the President (will be formed up in 3 equal division).
- (b) 100 rank and file for the Vice President and Prime Minister (will be formed up in two equal division).

CHAPTER-IV

WEAPON TRAINING

SECTION-1

CHARACTERISTICS OF .22 RIFLE , STRIPPING, ASSEMBLING, CARE AND CLEANING AND SIGHT SETTING

Ques 1 – What are the major characteristics of Rif .22 No MK-II, MK IV and Deluxe BA?

Ans - The major characteristics of Rifle .22 No MK-II, MK IV and Deluxe BA are :-

<u>Ser No</u>	<u>Details</u>	<u>Rifle .22 No II MK IV BA</u>	<u>Rifle .22 Deluxe BA</u>
(a)	Length	45"	43"
(b)	Weight	8 Lbs 10 ½ OZ	6 Lbs 2 OZ
(c)	Magzine Capacity	10 Rounds	05 Rounds
(d)	Muzzle Velocity	2700 per sce	2700 per sec
(e)	Grooves in the barrel	06	06
(f)	Effective Range	25 yds	25 yds
(g)	Max Range	1700 yds at 33 angle	1700 yds at 33 angle
(h)	Calibre	.22	.22
(j)	Ammunition	.22	.22
(k)	Rate of fire :- (i) Normal (ii) Rapid	 05 Rds pm 10-15 Rds pm	 05 Rds pm 10-15 Rds pm

Ques 2 - What points must be kept in mind while assembling Rif .22?

Ans - (a) Bolt head to be fully tight.

(b) Bolt head and guide rib as well as cocking piece and steel lug to be in a line.

(c) Number of the bolt should tally with that of the rifle.

(d) Safety catch should be applied.

SECTION-2

LOADING, COCKING AND UNLOADING

Ques 1 – What is the drill for loading and unloading in the lying position for Rif .22?

Ans - (a) To lie down, take a long pace forward with the left foot and at the same time pass the rifle into left hand, grasping it at the point of balance. Place the right hand on to the ground in line with the left foot. During this movement push the rifle forward and lower to the ground. The left arm will now be extended to the front. The legs will be well apart. Now load the rifle as taught.

(b) Unload the rifle without further orders. Place the right hand on the ground below the right shoulder. Draw up the left hand. Stand up as quickly as possible.

SECTION-3

LYING POSITION AND HOLD

Ques 1 – What are the three basic essentials of good shooting?

Ans - (a) Position must be comfortable and hold so firm that the rifles gains a rock like steadiness.

(b) The firer must aim correctly.

(c) The trigger be pressed in such a way that aim is not disturbed.

Ques 2 – What are the characteristics of good lying position?

Ans (a) Legs opened wide apart and body slanting to the left from the line of the target.

(b) Formation of the two triangles:-

(i) Horizontal triangle formed by the three points where the chest leaves the ground, the left elbow and the right elbow. (Fig 1)

(ii) Vertical triangle as viewed from the front of firer the two of its sides are formed by the forearms, the base being the ground between elbows. In addition as a quick check, the shoulders should be level (Fig-2)

SECTION 4

AIMING I - RANGE AND TARGETS **(Only for JD/JW Cadets)**

Ques 1 – Define laws of aiming?

- Ans - (a) Focus the target so that a clear picture is formed on the retina of the eye and get the true centre of the target. Then with the eye focus to the foresight.
(b) Hold the rifle properly as has already been taught and keep it upright.
(c) Close the left eye and focus the foresight.
(d) See the foresight through the black sight 'U'. The foresight should be seen right in the centre of the U. The tip of the foresight must be aligned in the centre and in level with the shoulder of the U.

Ques 2 – What are the targets used for firing with Rif .22?

- Ans (a) For application firing 1' x 1' target is used. The aim is to be taken at the bull which is the black, centre most circle.

(b) For grouping, 1' x 1' target with a white patch in the centre of the bull is used.

(c) For rapid firing, 6 inches figure target is used. The aim is taken at the centre of the figure.

SECTION-5

TRIGGER CONTROL AND FIRING A SHOT

Ques 1 – What are essentials of good shooting?

- Ans -(a) **Determination.** Accurate shooting is never achieved without concentration, each time a shot is fired the firer must be fully determined that it is going to be perfect one.

(b) **Turning the Shot.** From the time correct holding is achieved, more than five seconds should not be taken to fire a shot. Dwelling on the aim cause the eye and muscles to tire and results in bad shooting.

(c) **Action on Range Being Ordered.** When the 'range' is given the firer should adjust his sights and await for indication of the target.

Ques 2 – What is the sequence of action while firing a shot?

- Ans - (a) **Aiming Position.** On taking the aim, the firer must take the first pressure.

(b) **Breathing.** Just before taking an aim, breathing must be gently restrained. It is important to coordinate so that when the foresight comes to the point of aim, the breath is partially exhaled.

(c) **Firing.** Immediately on 'correct aim' the second pressure will be taken and shot fired. For a second or two after firing, there should be no relaxation of the hold or movement of trigger finger or head.

(d) **Follow Through.** The hold and aim must be maintained until the bullet has left the barrel. Better still fire should allow through until the bullet has reached the target.

SECTION-6

RANGE PROCEDURE AND SAFETY PRECAUTIONS

Ques 1 – What is the normal procedure on the firing points?

Ans - It is as under :-

- (a) The party to fire is brought within about 100 yds of the firing point.
- (b) The practices to be fired are explained.
- (c) Firers are detailed to targets.
- (d) The coaches, ammunition party and look out men take up their positions.
- (e) The first two details only form up behind their targets.
- (f) On the order of '**Age Barh**' (Detail Advance) the first detail will take position on the firing point.
- (g) On the lowering of the red flag at the butt, the officer supervising the firing point may order his red flag to be taken down and give the order of '**Detail Advance**'. The coaches check up their positions and correct them if needed, and give the word of command '**Limber Up**'. On this, the firers must align rifles as they have been taught. The officer will then give the order to load and carry on.
- (h) The firing will start only after getting orders from officer-in-charge firing.
- (j) On completion of fire, the firers must raise their right hand up, keeping the elbow on the ground.
- (k) Officer-in-charge will give the word of command '**Khali Kar**' (before this he must ensure that all have finished). On this the firers will take their rifles onto their shoulders and move the bolt twice, press the trigger and stand up.

(l) The officer-in-charge will give the command '**Detail Report**' on this the firers would report '**Number ek rifle theek, do theek, teen theek and number char rifle theek**'. The report will be form left to right. (Normally four targets are used on miniature range).

(m) The first and last firer will say 'Number **ek rifle theek**' and the rest will say '**Do theek, teen theek**' and so on.

(n) The details are changed by word of command and the new detail which has been waiting comes up while another detail forms up behind.

(o) Before the firers leave the range they will have a further weapon inspection. Each firer will be asked whether she has any live ammunition. It will be ensured that they have no live ammunition.

SECTION -7

AIMING II - ALTERATION OF SIGHT **(Only for SD/SW cadets)**

Ques 1 – What is Mean Point of Impact (MPI)?

Ans - The central point of area covered by the group of rounds fired with consistent aim and held at the same aiming mark is called MPI.

Ques 2 – What is the elevation at different ranges?

Ans - (a) The amount of alteration necessary may be found from the following table which shows the change of MPI when the sight is changed by 100 yards.

<u>Range Target</u>	<u>Rise or drop of MPI on Target</u>
200 Yards	6 inches
300 Yards	12 inches
400 Yards	18 inches
500 Yards	24 inches

(b) An alteration of 50 yards in the sight will bring half the effect shown above. 200 yards will double it on the target.

SECTION-8

THEORY OF GROUP AND SNAP SHOOTING **(Only for SD/SW cadets)**

Ques 1 – What is grouping capacity?

Ans - The diameter of a circle containing all five shots, fired by a man to the best of his ability, is known as his grouping capacity.

Ques 2 – What are the main points to be observed during snap shooting?

Ans - (a) Accuracy is not sacrificed for speed.

(b) There is no verbal declaration of aim, since this would cause distraction.

(c) The butt remains in the shoulder in order to save time in re-aiming.

(d) Perfect bolt manipulation to ensure that no time is wasted in reloading.

(e) Firing will continue until such time as the command 'Stop' is given, or no further fire is required.

SECTION-10

CHARACTERISTICS OF 7.62 MM SLR AND 5.56 MM INSAS **(Only for SD/SW cadets)**

Note – Already covered in Infantry weapons

CHAPTER V

LEADERSHIP

Section 1- Motivation

Ques 1 – Define motivation?

- Ans – (a) Motivation is the process by which one is inspired to act in the desired manner with the help of catalytic persuasion.
(b) It is the application of will power and is expressed commonly as a desire, wish, need, preference, want or striving.
(c) It is an act of inspiring men to do their jobs.

Ques 2 – What are the various means of motivation?

- Ans (a) Integrating as far as possible the personal needs of the men with the needs of the organization.
(b) Providing opportunity where practicable for individuals to participate in establishing goals and standards of performance. Such participation fosters ready acceptance of objective.
(c) The leader himself setting a personal example of optimum performance. “In doing everything, it is better to check up ones conduct and to act on lines laid down by sages. **You, who are a leader of men, must set the example**” - BHAGVAD GITA.

SECTION 2- DISCIPLINE AND DUTIES OF A GOOD CITIZEN

Ques 1 – Define Duty?

Ans – Duty is a moral/legal obligation and a binding force of what is right and behaviour towards superior colleagues & subordinates.

Ques 2. Define Discipline?

Ans - **To obey man’s order as issued by rightful authority is discipline.** Discipline welds together the other qualities of self control, courage, endurance, alertness, comradeship and correct behaviour at all times.

Ques 3. Define Citizen?

Ans - A member of a particular community who owes allegiance to the State and who enjoys protection and the rights granted by the Constitution of the country.

Ques 4. What are the important duties of a good Citizen?

Ans - (a) Primary duty is to be **loyal** and owe **allegiance to the State**.

(b) Patriotism, Preservation of Independence of the Country.

(c) Service before Self.

(d) Sense of Duty.

(e) Care and protection of the government property.

(f) High Character.

(g) A good citizen considers right of other citizens also as important as his own right.

SECTION 3- LEADERSHIP TRAITS

Ques 1 – What are Leadership traits?

Ans - These area as under : -

(a) Alertness

(b) Bearing

(c) Courage

(d) Decisiveness

(e) Dependability

(f) Endurance

(g) Initiative

(h) Integrity

(i) Judgement

(j) Justice

(k) Knowledge

(l) Loyalty

(m) Sense of humour

(n) Tactful

(o) Unselfishness

SECTION 4- PERSONALITY/ CHARACTER DEVELOPMENT

Ques 1 –Write measures for development of Personality?

Ans – These are as under: -

- (a) Judgement
- (b) Mirroring
- (c) Be cheerful and nice
- (d) Be sincere and trustworthy.
- (e) Provide compelling ideas.
- (f) Conviction
- (g) Positive attitude.
- (h) Leadership skills
- (i) Communication skills

Ques 2 –Write measures to improve character?

Ans – These are as under: -

- (a) Courage.
- (b) Decisiveness.
- (c) Initiative.
- (d) Enthusiasm.
- (e) Loyalty.
- (f) Justice.
- (g) Morality.
- (h) Sense of Duty.
- (j) Patriotism.

Ques 3 – List out role of NCC in personality/ character development?

Ans – These are as under: -

- (a) Drill
- (b) Interaction of cadets during camps.
- (c) Competitions
- (d) Sports and adventure activities.

SECTION 5- TYPES OF LEADERSHIP
(Only for SD/SW cadets)

Ques 1 – Write three ideal leadership styles?

- Ans- (a) Autocratic
(b) Democratic
(c) Laissez Faire

SECTION 6- VALUES / CODE OF ETHICS
(Only for SD/SW cadets)

Ques 1 –Define value?

Ans - Value is a standard behaviour of an individual in society.

Ques 2 –Define Ethics?

Ans – Ethics is a set of moral principles that governs a person's behaviour in society.

Ques 3 – List out important values of a good & successful leader?

Ans - These are as under : -

- (a) **Honesty** - not to steal, cheat or lie.
- (b) **Integrity** - uprightness.
- (c) **Purity** - no duplicity, insincerity in thought, word or deed.
- (d) **Discipline** - behaviour according to essential rules and norms which is self-imposed.
- (e) **Selflessness** - unselfishness, rise above selfish or self-centered individualism, self-sacrifice.
- (f) **Loyalty** - true, faithful to duty, love or obligation to person/ institution, faithful in allegiance to the nation or mother country.
- (g) **Fairness** - being impartial, give right decision.
- (h) **Equality** - treat everyone equally.
- (j) **Trust** - firm belief in the reliability, ability, strength of some one or something.
- (k) **Support** - give help, encouragement, or approval.
- (l) **Respect** - a feeling of admiration for someone because of their qualities.

SECTION 7- PERCEPTION
(Only for SD/SW cadets)

Ques 1 –Define Perception?

Ans – Perception is a complicated interaction of selection, organization, and interpretation of stimuli.

Ques 2 – Define two elements of perception?

Ans - (a) Perception is a process of selection or screening which prevents us from processing irrelevant or disruptive information and

(b) There is organisation of stimuli implying that the information that is processed has to be ordered and classified in some logical manner which permits us to assign meaning to the stimuli situations.

Ques 3 – What are the External attention factors of perceptual selection?

Ans – (a) Intensity
(b) Size
(c) Contrast
(d) Repetition
(e) Motion
(f) Novelty and familiarity

SECTION 8- COMMUNICATION INCLUDING INTER-PERSONAL COMMUNICATION
(Only for SD/SW cadets)

Ques 1 –Define communication?

Ans - (a) “Communication is an exchange of facts, ideas, options, emotions by two or more persons”. or

(b) Communication is an intercourse by words, letter, symbols or messages and a way that one member shares meaning and understanding with another”.

Ques 2 – Write down principles of effective communication.

Ans – These are as under : -

- a) Clarity of Objective
- (b) Proper Messenger.
- (c) Knowledge of Communicatee.
- (d) Selection of Media / Method
- (e) Removal of Barriers:
- (f) Feedback.

Ques 3 – What are the advantages & disadvantages of Face-to-Face interpersonal communication?

Ans **Advantages**

- (a) Once contact is made with audience, there is no time lag between the transmission of a message and its reception.
- (b) It gives control to the speaker. In a personal contact one has much more command over the receiver's attention. The listener at least has to pretend to pay attention. In such cases message ought to be clear and interesting enough to capture the attention of the audience.
- (c) It permits instantaneous feedback. Because of the tremendous amount of feedback available in face-to-face communication, it has also been termed the richest kind of communication channel.
- (d) A final advantage of face-to-face interaction is its personal quality. When a personal meeting goes well, the relationship that communication develops can help solve problems that might have been more difficult when handled from a distance. Personal meetings are especially important in some cultures, where failure to visit someone in person is an insult.

Drawbacks

- (a) It is difficult to arrange personal meetings. Even when communicator is in the same building, scheduling a meeting can be difficult and frustrating.
- (b) A personal encounter might also be unproductive if the contact antagonizes one or more of the participants.

Ques 4 – What are the guidelines for effective listening?

Ans – These are as under: -

- (a) A good listener shows deep interest in the speaker by looking at him. He observes the gestures, facial expressions and postures of the speaker.
- (b) While listening exercise mental discipline over yourself. Only if you concentrate properly can you be a good listener.
- (c) Do not allow yourself to be distracted by noise or entering of late comers.
- (d) Do not distract the speaker.
- (e) Be present in time at the venue. It enables to settle yourself physically and mentally before the speech starts.

- (f) Take the efforts to listen not only to the words but also to the feelings being conveyed by the speaker.
- (g) Don't hesitate to ask the questions to clarify meaning of statements made by the speaker.
- (h) Let your listening always be sympathetic, alert and active. Try to understand the speaker's point of view.
- (j) Follow the trend of discussion so as to make the proper response when your turn comes.
- (k) Use the extra time you get as listener to analyse and evaluate the speech.
- (l) Avoid thinking too much about a part that has already been covered by the speaker as this will prevent you from paying attention to the next argument.
- (m) Don't take too many notes because you will get little time to analyse and evaluate the message or speech.
- (n) Avoid emotional barriers which prevent your from listening effectively.

Ques 5 – What are the advantages of good listening?

Ans – These are as under: -

- (a) It improves the quality of communication and makes people respect the view point of others.
- (b) Good listening leads to positive attitudes, cordial relations and better participation.
- (c) It provides valuable information for the purpose of decision making.
- (d) Good listening enables to find the solutions to the complex problems.

SECTION 11-IMPORTANCE OF GROUP/TEAM WORK **(Only for SD/SW cadets)**

Ques 1 –What are the various types of Groups?

Ans - Classification of group according to evolutions of primary goals is an given below:-

- (a) **Friendship Group.** It evolves informally to meet its members' personal security, esteem and belonging needs.
- (b) **Task Group.** It is created by the management to accomplish certain organization goals. Task group can further be classified as under:-

(i) **Formal Groups**. They are established by an organization to facilitate the achievement of the organization goals.

(ii) **Informal Group**. 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) **Effective Group**. 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 and procedures for 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.

Ques 2 – What are the characteristics of a mature Group?

Ans - (a) An increasing ability to be self directed (not dependent on the leader).

(b) An increased tolerance that progress takes time.

(c) An increasing sensitivity to their own feelings and those of others.

(d) Improvement in the ability to withstand tension, frustration and disagreement.

(e) A perception of the common denominators, which bind the group as well as areas of individual difference.

(f) A better ability to anticipate realistic results of behavior to channel emotions into more socially acceptable ways of expressing these emotions.

(g) An increased ability to change plans and methods as new situations develop.

(h) A decrease in time needed to recover from threatening group situations. Peaks and valleys of emotional group crises become less personal.

(j) Increased efficiency in locating problems, engaging in problem solving and providing help to individuals as needed.

(k) A willingness to face one's own responsibilities and to assist others when help is needed.

(l) An acceptance of the right of the other person to be different.

Ques 3 – What are various types of teams?

Ans - (a) Functional Teams

(b) Problem Solving Teams.

(c) Cross - Functional Teams.

(d) Self - Managed Teams.

Ques 4 – What are the characteristics of a Team?

Ans - (a) Illusion of invulnerability.

(b) Collective rationalization.

(c) Unquestioned belief.

(d) Stereotypical views.

(e) Direct pressure.

(f) Self censorship.

(g) Shared illusion of unanimity.

CIVIL AFFAIRS AND DISASTER MANAGEMENT

SECTION -1

Civil Defence organisation and its Duties

Ques 1 -Define civil defence?

Ans - It is a measure adopted by the civilian population, Government, local self bodies and voluntary organisation etc, during the war to minimize the effects of enemy action on men and material. It is the defence of the citizens by the citizens.

Ques – 2. What is the organisation of civil defence at District level?

Ans - District Magistrate is controller along with in charge for various civil defence services like Civil Surgeon, Superintendent of Police, PWD Engineer, Publicity officer etc.

Ques 3 - Write various kinds of civil defence services?

Ans - (a) Headquarters Service

(b) Warden's Service

(c) Fire Fighting Service

(d) Casualty Services

(e) Communication Services

(f) Training Services

(g) Rescue Services

(h) Welfare Services

(j) Depot and Transport Services

(k) Salvage Service.

(l) Corpse Disposal Service

(m) Supply Service

SECTION -2

Types of emergencies and natural disasters

Ques 1 -Define disaster?

Ans - Disaster denotes any odd event natural or man made which brings about immense misery to a region and it becomes difficult to cope up with the situation through local resources. There are two types of disasters i.e. Natural and Man made.

Ques 2 - What are the natural disasters?

Ans

- (a) Wind Related - Storm, Cyclone, Tornado, Storm surge and Tidal waves.
- (b) Water Related - Flood, Cloudburst, Flash flood, Excessive rains and Drought.
- (c) Earth Related - Earthquake, Tsunamis, Avalanches, Landslides and Volcanic eruptions.

Ques 3 – What are the man made disasters?

- Ans
- (a) Accidents. Road, Rail, Air, Sea and Building collapse.
 - (b) Industrial Mishaps. Gas Leak, explosion, sabotage and safety breach.
 - (c) Fire. Building, Coal and Oil.
 - (d) Forest Fire. In tropical countries forest fires are often manmade.
 - (e) Contamination/Poisoning. Food, water, illicit-liquor and epidemics.
 - (f) Terrorists Activities.
 - (g) Ecological. Pollution (air, water, noise), soil degradation, loss of biodiversity, global warming, sea level rise, toxic wastes and nuclear accidents.
 - (h) Warfare. Conventional, chemical and nuclear.

Ques 4 - Describe Earth quack, Tsunami, Draught and Flood.

Ans (a) Earthquake. Layers of rock make up the earth's surface. Rocks do not bend or break easily. Tension caused by movement of Earth's plates, build up over the years until the rocks can take the strain no longer. Suddenly they crack and shift, sending out shock waves, and reducing anything built on the surface to rubble. This is what we call an earthquake. The shock of the initial earthquake may be followed by a series of aftershocks over the next few days. These fade as the rocks settle down into their new positions.

(b) **Tsunamis**. This giant wave is caused by an undersea earthquake. Vibrations rush through the ocean at hundreds of kilometers an hour. When they reach shallow waters they slow down and build up into vast waves, at times 76m (250 ft) tall. The tsunami crashes onto the shore, sweeping away anything in its way.

(c) **Drought**. If, over about two weeks, there is less than 0.2 mm (1/100in) of precipitation, there is said to be a drought. Without reservoirs, there is not enough water for people and crops. Some places have extreme drought which lasts for many years. Droughts have disastrous and long term impact on the economy and can affect a large segment of the society which may last for months and in some cases several years. Generally, drought situation may be defined as a temporary reduction in water or moisture availability significantly below the normal or expected amount for a specific period. Drought is a slow onset phenomenon.

(d) **Flood**. It can arise from abnormally heavy precipitation, dam failures, rapid snow melting, river blockages or even burst water mains. It is usually sudden in onset. Types of floods can further be classified into Inland and Coastal floods. Major floods result in physical damage, deaths and injuries, problems in drinking water supply and food shortages and displacement of population.

SECTION -3

Fire Fighting

Ques 1 -What are the three elements for fire?

Ans - (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).

Ques 2 – What are the modes of spread of fire?

Ans - (a) **Conduction**. Transfer of heat by the intermediary material. Many materials which will not burn easily particularly metals are good conductors for transmitting heat. These materials when heated by the fire may ignite other combustible material with which these may be in contact.

(b) **Convection**. Transfer of heat through gases or smoke, Gases tend to rise until ceiling or roof is reached after which they spread sideways in a mushroom manner and ignite combustible materials located at higher levels than the original fire e.g. fire spreading onto top floor. The best method to check this is to remove or cool the combustible materials.

(c) **Radiation**. Radiation means transfer of heat from the source of fire, without heating the midway media e.g. air. The effect of radiation can be countered by forming a 'water curtain' between the fire and the object to be protected or the object may be removed or cooled.

(d) **Direct Burning**. This phenomenon is self-explanatory. Direct burning is often due to a combination of the above two or three factors viz, conduction, convection and radiation.

Ques 3. – What are the various categories of fire fighting appliances?

- Ans (a) Fire Extinguishers.
- (b) Stirrup Pumps.
- (c) Buckets/Ghee Tin (Water /sand containers)
- (d) Fire Beaters and Hooks.

SECTION -4

Essential services and their Maintenance

Ques 1 -What are the essential services?

- Ans (a) Postal, telegraph or telephone service.
- (b) Railways, road, air and sea transport service for the carriage of passengers or goods.
- (c) Running of ports of (b) above.
- (d) Provision of water, electricity and sanitation.
- (e) Medical services and essential supplies.
- (f) Production and supply of essential commodities.
- (g) Running of mint and security presses.

Ques 2 – What is the role of NCC cadets for maintaining essential services?

- Ans (a) Telephone exchange – as operators.
- (b) Hospitals- as nurses and as links between doctors, nurses, patients and hospital technicians. They could also help in maintaining hospital discipline and security.
- (c) First Aid Centres- establish and run these 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 relief flow 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.

SECTION - 5

Protection **(Only for JD/JW Cadets)**

Ques 1 -What are the protective measure against the air attack?

- Ans (a) **In the Trenches.** The size of these trenches could be 8' to 10' long. 2' to 2 ½' wide and 4' to 6' deep. Eight to ten feet long units are dug in a zig-zag manner with an angle of 80 degrees to 100 degrees between each leg.
- (b) **In the Open.** Lie on the ground with face downward resting on elbows with hands clasped behind the head so that chest is not in contact with the ground. Put a rolled handkerchief in between teeth.
- (c) **In a Vehicle.** Park the vehicle in a side lane leaving the ignition key in its place and take cover in the open.
- (d) **Inside the Building.** Be near the inside wall of the building. Places below staircases, archways, doorways, corners and under the eaves are safer.
- (e) **In a Train.** Turn off the lights and crawl under seats. On no account look outside the windows.
- (f) **In the Cinema.** Remain seated on your seats.

(g) **In a Bullock Cart or Tonga.** Unyoke animals, tie them to the nearest tree or a pole, take shelter as in the open.

(h) **Protection of Doors and Windows.** Doors and windows can be screened by walls and sand bags.

Ques 2 – What the various methods of rescue?

Ans (a) **Methods Suitable for One Rescuer.** Human Crutch, Pick-a-back (reverse), Fireman's lift. Rescue crawl, Removal downstairs, Bowline drag and Toe drag.

(b) **Methods Suitable for More than One Rescuer.** Two handed seat, Three handed seat, Fourhanded seat, Fore and Aft method, Two-man Human Crutch, Clothes lift, Blanket lift.

(c) **Improvised Stretcher.** Blankets, sheets or rugs salvaged from the site can be converted into improvised stretchers by using small poles, broom handles etc.

SECTION - 6

Role of NCC during Natural Hazards **(Only for JD/JW Cadets)**

Ques 1 -What are the role of NCC cadets during natural disasters?

- Ans
- (a) Traffic Management under supervision.
 - (b) Search and Rescue.
 - (c) First Aid and evacuation of rescued people.
 - (d) Helping in setting up and administration of Relief Camps.
 - (e) Collection, loading and dispatch of medical aid, material, food and other articles of relief.
 - (f) Conduct of cultural and recreational activities for victims to boost their morale at later / rehabilitation stages.

Ques 2 - What are the various points for consideration while employing NCC cadets for disaster management?

Ans (a) 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.

- (b) Suitable bonds would be required to be obtained from parents of cadets.
- (c) Cadets are never readily available to be mustered at short notice because they are busy with their studies at schools/colleges. It is only during camps that the cadets are available and can be launched at short notice.
- (d) Cadets are not adequately trained for specialized tasks related to Disaster Management. Suitable training must be given to them during institutional training.
- (e) Adequate allowances would require to be allocated for the cadets taking part in these activities.
- (f) Joint schemes with the State Disaster Relief machinery would be required to be made in which NCC cadets may be incorporated.
- (g) Adequate signal equipment and other disaster relief equipment would be required to be authorised to NCC to carry out necessary training.
- (h) NCC cadets would have to carry out rehearsals along with the Army, Police, Fire Fighting forces and others in the State.

SECTION - 7

Traffic Control in Disasters Management under Police Supervision **(Only for SD/SW cadets)**

Ques 1 - What are the responsibilities of Traffic Police and where all cadets can be employed for disaster management?

Ans - (a) **Immediate Action.** On receipt of the information about any Disaster taking place, 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 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. Cadets can be incorporated with the local police personals.

(c) **Cordoning.** The entire affected area shall be cordoned off and no collection of crowd be allowed there. Cadets can be used to cordon off effected 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. Cadets can accompany the casualty or be employed as points 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 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. Cadets can be employed to check and ensure that only emergency vehicles are permitted to the 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. Cadets can be cooperated 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. Cadets can form part of the reserve forces to aid traffic police.

(j) **Maint of 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. Cadets can be employed to videograph and carryout tasks in maintaining of records of incidents.

SECTION-8

DISASTER MANAGEMENT DURING FLOOD/CYCLONE **(Only for SD/SW cadets)**

Ques -1 - What is the assistance required during flood/cyclone?

- Ans
- (a) Flood/Cyclone Warning.
 - (b) Shelter Management.
 - (c) Evacuation & Rescue.
 - (d) First aid & Medical.
 - (e) Sanitation.
 - (f) Relief.

- (g) Carcass Disposal.
- (h) Patrolling and Liaison

Ques 2 – What is the affective method to contact NCC cadets to be available for any assistance during calamities?

- Ans
- (a) Radio / TV.
 - (b) Contact telephone numbers.
 - (c) Jeep with loudhailer.
 - (d) By word of mouth.

Ques 3 - Describe as to how the assistance will be provided during any flood/cyclone by NCC cadets?

Ans - All NCC cadets, both boys and girls, junior and senior along with motivated and responsible men, women and youth volunteers can implement and supervise the activities of the contingency plan. Each group will have distinct activities to carry out before, during and after the flood/cyclone. NCC cadets of each Gp will be trained in various aspects as under: -

- (a) **Relief Group.** The member of the group collect and distribute relief such as food supply, cloth, kerosene, diesel, utensils etc and coordinate all the relief requirement of the other action groups. Both the boy and girl cadets have to be capable of interacting with the local authorities to ensure adequate supplies reach the affected areas in time.
- (b) **Warning Group.** Members of this group could be cadets from JD. They have to be trained to understand radio warning and act fast to spread the warning throughout the area of responsibility. Some members should have a radio before the flood/cyclone. This group has to monitor weather forecast through wireless radio, TV, transportation and communication aids are needed to pass on warning.
- (c) **Shelter Management Group.** The members of this group can have maximum cadets from JW/SW. They will be at the shelter and safe houses looking after 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 reasonability.

(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 undisputed 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 psychotically and physically able to carry out this task and should have been medically protected. If possible the Civil Defence Volunteers, members from the NSS/boys Scouts can be included in this group.

SECTION-9

DISASTER MANAGEMENT DURING EARTHQUAKE **(Only for SD/SW cadets)**

Ques 1 – What is likely to be the impact of earthquakes?

Ans - (a) Loss of Life.

(b) Injury.

(c) Damage to or destruction of property including crops.

(d) Disruption of production.

(e) Disruption of lifestyle.

(f) Loss of livelihood.

(g) Disruption to essential services.

(h) Damage to national infrastructure and disruption to administrative and organisational systems.

(j) Sociological and psychological after-effects.

Ques 2 – What are the problem areas which need particular attention during relief operations?

Ans – (a) Severe and extensive damage, creating the need for urgent counter measures especially search and rescue and medical assistance.

(b) Difficulty of access and movement.

- (c) Widespread loss of or damage to infrastructure, essential services and life support systems.
- (d) Recovery requirements (restoration and rebuilding) may be life extensive and costly.
- (e) Occurrence of earthquake in areas where such events are rather rare may cause problems due to lack of public awareness.

Ques 3 – What are the important points to be kept in mind by residents of quake prone area?

Ans - (a) Keep in mind that most problems from a severe earthquake result from falling objects and debris (partial building collapse, ceiling plaster, light fixtures etc) and not from ground movement.

(b) Shelves for bookcases etc should be fixed to the walls. Remove heavy objects from shelves above head level. Do not hang plants in heavy pots that could swing free of hooks. Bookcases, cabinets or wall decorations can topple over and fall.

(c) Locate beds away from the windows and heavy objects that could fall. Do not hang mirrors or picture frames over beds.

(d) Secure appliances that could move causing rupture of gas or electrical lines. Know location of master switches and shut-off valves.

(e) Make sure the overhead lighting fixtures are well secured to the ceiling and move heavy unstable objects away from exit routes.

(f) Replace glass bottles with plastic containers or move them to the lowest shelves.

(g) Be aware that with a severe earthquake, all services such as electricity/water will probably be down. Emergency services may be extremely limited for a few days.

(h) Emergency stores like water, long lasting ready to eat food, first aid kit medicines tools, portable radio, flash light, batteries, blankets, warm jackets fire extinguisher and telephone/mobile etc be kept in a secure place at your residence or in your car.

SECTION-10

SETTING UP RELIEF CAMP DURING DISASTER MANAGEMENT (Only for SD/SW cadets)

Ques 1 - What are the basic considerations for setting up of relief camp for disaster management?

Ans – Following points are relevant for proper siting of relief camp: -

- (a) **Social Needs.** In most circumstances the choice will be limited and any land meeting even minimum standards may be scarce. However the site selected must meet the basic needs of the society.
- (b) **Water.** The single most important site selection criteria are the availability of an adequate amount of water on a year-round basis. The watershed of the area may be a consideration.
- (c) **Open Space.** The site must provide a sufficient amount of usable space for the displaced population. Since there is always the possibility that more people may arrive, the site should be large enough to allow for major expansion.
- (d) **Accessibility.** The site must be accessible by vehicles and close to communication links, sources of supplies and services such as food, cooking fuel, shelter material, and national community services.
- (e) **Environment.** The area should be free of major environmental health hazards, potential diseases and harmful insects such as mosquito and tsetse fly.
- (f) **Soil and Ground Cover.** The soil should allow for water absorption and the retention of human waste. Rocky or impermeable sites should be avoided.
- (g) **Land Rights.** The land should be exempt from ownership rights or grazing and other uses by local population.
- (h) **Transit Centre.** There may be a need to set up a reception or transit centre, through which displaced people pass on the way to a long-term settlement site

SECTION-11

ASSISTANCE IN REMOVAL OF DEBRIS **(Only for SD/SW cadets)**

Ques 1 - What should be the ideal priority for removal of debris?

- Ans (a) **Priority I.** To remove debris that may damage entry and exit for emergency services, public health and safety.
- (b) **Priority II.** To remove debris that poses a threat to life and safety, e.g. damage to public structures, bridges and road ways.
- (c) **Priority III.** To remove debris that cause hindrance to the process of rehabilitation of disaster affected area.
- (d) **Priority IV.** To remove debris on private property.

Ques 2 - What is the likely role of NCC cadets for removal of debris?

Ans - NCC Cadets could be employed as under : -

- (a) Spread public awareness about task in hand to enhance participation.
- (b) Remove debris in conjunction with civil services.
- (c) For identification of disposal areas and as guides.
- (d) Reporting/controlling of illegal dumping activity.

SECTION-12

COLLECTION AND DISTRIBUTION OF AID MATERIAL **(Only for SD/SW cadets)**

Ques 1 – What are the various types of Aid materials required during management of disasters?

Ans - Aid material can be divided into following categories: -

- (a) Personal Clothing and bedding Items.
- (b) Medical and Life Saving Equipment
- (c) Housing and Shelters.
- (d) Transportation.
- (e) Debris Clearing Equipment.
- (f) Animals and Live Stock.

- (g) Disposal of the Dead.
- (h) Communication.
- (j) Food, Water and Cooking Facilities.
- (k) Electricity and Lighting Facilities.

Ques 2 – what is the source of supply of aid material?

- Ans - (a) Central Government Organisations including Defence Services.
- (b) State Government Organisations.
 - (c) Non Government Organisations (NGOs).
 - (d) Educational Institutions.
 - (e) Social Welfare Organisations.
 - (f) Resident Welfare Organisations.
 - (g) Red Cross.
 - (h) International Organisations like WHO etc.
 - (j) Individuals.

Ques 3 - What is the role of NCC cadets for collection of aid material?

- Ans – (a) Cadets can help at the time of collection and help in maintaining records.
- (b) Help in the sifting of articles and bulk breaking and packaging.
 - (c) Help in dispatch of items by various means.
 - (d) NCC can establish their own collection and distribution centres as they are closely associated with schools and colleges all over the country and even in the remotest areas of our country. These can be opened at unit/ group level.
 - (e) NCC is working and coordinating with government at the central and also at the state and district level and thus by their disposition they are ideally suited for a parallel net work with other organisations.

Ques 4 - What is the role of NCC cadets for distribution of aid material?

- Ans - (a) Can be co-opted with the PDS system.
- (b) Work along with NGOs or other organisations.
 - (c) Work independently in the chain of NCC collection and distribution system.

- (d) Work along with Defence Forces who are major contributors in crisis management.
- (e) Operate and man various posts established for escorting and guiding delivery agents with adequate signal communications.

SECTION-13

MESSAGE SERVICES **(Only for SD/SW cadets)**

Ques 1 – What are various methods of communications?

Ans - (a) Messengers.

(b) Telephones including Cell phones.

(c) Two-way radio (VHF).

(d) Field Telephone.

(e) Signal transmission through propagation of waves as follows:-

(i) **Ground Wave.** Long and Medium waves range upto 30 Kms.

(ii) **Space Wave.** VHF and UHF waves range upto 50Kms.

(iii) **Sky Wave.** HF waves making use of ionosphere layer existing upto a height of 150-200 Kms from the surface of the earth. Range from 100 Kms to 1000 Kms.

(iv) **Tropospheric Scatter.** For forward propagation height range upto 8-10 Kms from the surface of the earth.

(f) Satellite.

(g) Dial-up modems (Internet including e-mail and Fax).

(h) Local Area Networks (LANs).

(j) Signals.

CHAPTER-VII

SOCIAL SERVICE

SECTION-1

WEAKER SECTIONS OF OUR SOCIETY AND THEIR NEEDS

Ques 1 – What are the various weaker sections of Indian society?

- Ans (a) Scheduled Caste (SC)
- (b) Scheduled Tribes (ST).
- (c) Other Backward Classes (OBC).

Ques 2 - What are various arguments in favour of Reservation Policy?

- Ans - (a) Social diversity is desirable in campuses and work places. It can bring out hidden talent of society.
- (b) One way to do it is to provide relaxed entry criteria for under privileged groups.
- (c) Hardship faced by those in general category is due to shortage of seats in professional colleges and shortage of employment opportunities and not due to reservation.

Ques 3 What are various points against reservation policy?

- Ans - (a) Economic conditions should be the basis for reservation.
- (b) Reservation decisions are taken keeping political interests in mind.
- (c) Allocation of quotas on the basis of caste is a form of racial discrimination and thus contrary to right to equality.
- (d) Merit is severely compromised by reserving seats for certain caste-based communities.
- (e) Caste system is being kept alive by reservation policy.

Ques 4 – Write down contribution of NCC cadets to help the weaker section of our society?

- Ans - (a) Help colleagues from weaker section of society in studies and to acquire vocational skills.

- (b) Do not discriminate on the basis of social status of any one.
- (c) Learn the values of equality and social justice.

SECTION-2

SOCIAL SERVICE AND ITS NEED

Ques 1 – What are the various types of social services?

- Ans - (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, Care & protection.
 - (g) Housing and Rehabilitation.
 - (h) Recreation, Sports and Social activities.

SECTION-3

FAMILY PLANNING

Ques 1 - Define family planning?

Ans - Family planning is defined as the voluntary, responsible decision made by individual and couples as to the desired family size and timing of birth.

Ques 2 – What are the various methods of family planning?

- Ans - (a) Vasectomy.
- (b) Tubectomy.
 - (c) Conventional contraceptives like condoms and diaphragms.
 - (d) Oral pills.

Ques 3 – What are the suggested measures to ensure success of family planning policy of the Govt?

Ans - These are as under : -

- (a) Voluntary encouragement of family planning for healthy children.
- (b) Stringent laws and massive campaign through the electronic and print media to create conducive environment.
- (c) Take steps encouraging a two-child norm.
- (d) Educating women particularly in backward areas.
- (e) Early marriage be strictly checked and efforts be made to raise the living standard and improve literacy rate.
- (f) Couples adopting family planning should be given all possible assistance.
- (g) Provide basic health care facilities in the backward areas.
- (h) Involvement of religious leaders in the programme.
- (j) Development of rural areas.

SECTION-4

HIV/AIDS: CAUSES & PREVENTION **AND** **CONTRIBUTION OF YOUTH TOWARDS PREVENTION OF AIDS**

Ques 1 - Define HIV?

Ans - HIV (Human Immuno-deficiency Virus) is a virus that gradually destroys the body's immune system.

Que 2 - Define AIDS?

Ans - AIDS (Acquired Immuno Deficiency Syndrome) is a condition wherein various diseases affect the body because of the body's weak natural defence mechanism – the immunity.

Note - 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.

Ques 3. – How does HIV/AIDS spreads

- Ans -
- (a) Sexual transmission
 - (b) Blood transfusion.
 - (c) Sharing needles and syringes for intravenous drug use.
 - (d) Mother-to-child transmission during pregnancy, delivery or breastfeeding

Ques 4 - Is there any risk of HIV/AIDS infection due to blood donation?

Ans - Blood donation has no risk of getting HIV infection because the needles and other equipment used for collecting blood are safe.

Ques 5 – What are various methods to prevent HIV/AIDS?

Ans - There are four main methods which are as under : -

- (a) Being in a mutually faithful sexual relationship.
- (b) Checking all the blood and blood products for HIV infection before transfusion.
- (c) Avoiding drug abuse, especially sharing needles and syringes for injecting drugs.
- (d) Reducing the risk of mother-to-child transmission by following recommended guidelines for preventing parent to child transmission of HIV infection.

Ques 6 . What is the role of youth in preventing HIV infection?

Ans - (a) Preventing HIV infection/re-infection at individual/community level.

(b) Spread awareness and educate the under privileged section of society.

(c) Promote responsible behaviours, especially those related to sexual behaviours and drug abuse.

(d) Imbibe values and play active role to address gender imbalance.

(e) Educate general public that the HIV can not be transmitted by the following modes:-

- (a) Shaking Hands.
- (b) Sharing of Clothes.
- (c) Sharing of Food and Utensils.
- (d) Sharing of Toilets.
- (e) Insect Bites.
- (f) Hugging or Kissing.
- (g) Working in the same office or travelling in the same vehicle.
- (h) Playing or swimming with the infected person.
- (j) Coughing, sneezing or in routine patient-care activities (bed-making, feeding etc).

SECTION-5

CANCER, ITS CAUSES AND PREVENTIVE MEASURES

Ques 1 - What are the causes of cancer?

Ans - Main causes of cancer are:-

- (a) Prolonged chewing of tobacco, zarda, pan and pan masala.
- (b) Heavy smoking.
- (c) Excessive drinking.
- (d) Poor oral hygiene and inadequate dental care.
- (e) Air and water pollution.
- (f) Deficiency of balanced diet.

Ques 2 – What are the early signs of cancer amongst Gutka and tobacco users?

Ans - (a) Any sore and ulcer on tongue, cheek or gums that does not heal within a fortnight.

- (a) Red and white patches on the lips or mouth.
- (b) A lump or swelling anywhere in the mouth or neck.
- (c) Difficulty in walking.
- (d) Difficulty in speech.
- (e) Repeated bleeding in the mouth.
- (f) Numbness in the mouth.

Ques 3 – What are the preventive measure against cancer?

Ans -

- (a) Avoiding smoking.
- (b) Avoiding tobacco in any form.
- (c) Good oral hygiene.
- (d) Avoiding diet high in processed and preserved meat, smoked and salted food.
- (e) Avoiding obesity.
- (f) Handling asbestos and certain dyes with precaution.
- (g) Early treatment on detection.

SECTION-6

CONTRIBUTION OF YOUTH TOWARDS SOCIAL WELFARE

Ques 1 – What is the contribution of youth towards social welfare?

Ans - Contribution of youth is as under : -

- (a) Leadership.
- (b) Community Service.
- (c) National and Cultural Integration.
- (d) Education and Literacy. .
- (e) Environment.
- (f) Health Care and Family Welfare.
- (g) Physical Education and Adventure Training.
- (h) Old Age Care.
- (j) Watershed and Waste Land Development.

SECTION-7

NON- GOVERNMENT ORGANISATION AND THEIR CONTRIBUTION TO THE SOCIETY (Only for JD/JW Cadets)

Ques 1 - Define NGO?

Ans - 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. Their goals are primarily non-commercial. They collect funds both from people and the government.

Ques 2 - What are the various types of NGOs?

- Ans -
- (a) **INGO.** International NGOs.
 - (b) **BINGO.** Business oriented International NGO.
 - (c) **RINGO.** Religious International NGOs.
 - (d) **ENGO.** Environment NGO.

Ques 2 - What are the various activities under taken by NGOs?

- Ans -
- (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.
 - (j) Educating people about AIDS.
 - (k) Family Planning Programmes.
 - (l) Community Development Work.
 - (m) Promotion of Social-equality.
 - (n) Wildlife and Animal Care.
 - (o) Human-rights.
 - (p) Awareness Campaign.
 - (q) Child Care.
 - (r) Polio Eradication drive.
 - (s) Providing schooling facilities especially in remote villages and rural areas.
 - (t) Creating and providing health and hygiene infrastructure and facilities.
 - (u) Cottage Industry.
 - (v) Orphanage and Old Age Homes.

SECTION-8

DRUG TRAFFICKING AND CRIME **(Only for SD/SW cadets)**

Ques 1 – Define Drug?

Ans - A `DRUG` is a substance—solid, liquid or gas that brings about physical and / or psychological changes. Drugs affect the central nervous system.

Ques 2 – What are the various types of drugs and name the common drugs in each category?

Ans (a) **Depressants**. Depressants are drugs that slow down the function of the central nervous system. Depressant drugs do not necessarily make a person feel depressed. They include:-

- (i) Alcohol.
- (ii) Cannabis.
- iii) Barbiturates, including Seconal, Tuinal and Amytal.
- (iv) Benzodiazepines (Tranquilisers), Benzos, Tranx, such as Rohypnol, Valium, Serepax, Mogadon, Normison and Eupynos.
- (v) GHB (Gamma- hydroxybutrate), or Fantasy
- (vi) Opiates and Opioids, including Heroin.

(b) **Stimulants**. Stimulants act on the central nervous system to speed up the messages to and from the brain. They make the user feel more awake, alert or confident. Stimulants increase heart rate, body temperature and blood pressure. Other effects include appetite, dilated pupils, talkativeness, agitation and sleep disturbance. Mild stimulants include:-

- (i) Ephedrine used in medicines for bronchitis, high fever and asthma.
- (ii) Caffeine in coffee, tea and cola drinks.
- (iii) Nicotine in tobacco.

(c) **Hallucinogens**. Hallucinogens affect perception, People who have taken them may believe they see, hear and perceive things that are not really there or what they see may be distorted in some way. The effects of hallucinogens vary a great deal, so it is impossible to predict how they will affect a particular person at a particular time. Hallucinogens include:-

- (i) Dhatura
- (ii) Ketamine

Ques 3 – What is the role of “Narcotic Drugs and Psychotropic Substances (NDPS) Act and Rules”?

Ans - (a) Punishment of upto 20 yrs rigorous imprisonment and fine up to Rupees Two Lakhs for indulging in trafficking of narcotic drugs and psychotropic substances.

(b) Death sentence in case of repeat of this offence.

(c) Forfeiture of property of smugglers.

(d) Regulating of legitimate trade and commerce of NDPS for medicinal and scientific purposes. The “Prevention of Illicit Trafficking in Narcotic Drugs and Psychotropic Substances”(PITNDPS) provides for detention of persons indulging in trafficking of narcotic drugs for 1 to 2 years by an executive order

CHAPTER-VIII
HEALTH AND HYGIENE
SECTION-1

STRUCTURE AND FUNCTION OF THE HUMAN BODY

Ques 1 – What are the main parts the Human body?

Ans - These are as under : -

- (a) Skelton
- (b) Muscles.
- (c) Blood Circulatory Organs.
- (d) Respiratory Organs.
- (e) Digestive Organs.
- (f) Excretory Organs.
- (g) Nervous System Organs

SECTION -2

HYGIENE AND SANITATION

Ques 1 – Define Hygiene?

Ans - Hygiene is the science which seeks to preserve and improve the health of the individual and of the community as a whole.

Ques - 2 – How to ensure proper personal hygiene?

Ans - It is as under : -

- (a) 7-8 hours of Sleep
- (b) Regular Bathing
- (c) Eating and Drinking
- (d) Care and Cleanliness of Skin, Hand, Hair and Teeth.
- (e) Healthy food and proper rest.
- (f) Exercise.

Ques 3 - What are the various methods of water purification?

Ans - These are as under : -

- (a) Boiling and distilling.
- (b) Filtration.
- (c) Sterilization.
- (d) Pinking.
- (e) Precipitation.

Ques 4 – Describe a soakage pit?

Ans - Essential for the disposal of liquid refuse like greasy water from kitchen and waste water from bathrooms. Dig a pit 4 feet by 4 feet and 5 feet to 6 feet deep. Fill with small stones and broken bricks. Cover the top with oiled sacking and put earth or sand 6 inches above. In the centre keep a perforated empty tin of kerosene oil. Fill this tin with layers of gravel or sand and gravel. In this, fit in a bucket, filled with straw, grass or some other grease retaining material. Remove the strainer daily and replace with fresh one.

SECTION-3

PREVENTABLE DISEASES

Ques 1 – Describe classification of communicable diseases?

- Ans -
- (a) Excremental Diseases
 - (b) Droplet Infection
 - (c) Contact Diseases
 - (d) Inset Borne Diseases
 - (e) Water borne diseases
 - (f) Animal Borne Diseases

Ques 2 – What are the preventive measures to ward off communicable diseases?

Ans - Preventive measures are as under : -

- (a) Segregate the patient
- (b) Destroy agents (germs) causing infection.
- (c) Dis-infection.
- (d) Control of the food and drink.
- (e) Inoculation and Vaccination

FSECTION-4

FIRST AID IN COMMON MEDICAL EMERGENCIES

Ques 1 - What is the first aid treatment for internal injuries?

Ans -

- (a) Keep the patient warm, lying down with feet raised up and head kept low.
- (b) Apply cold application on the suspected injured region.
- (c) Cheer up the patient.
- (d) Arrange medical attention as soon as possible

Ques 2 - What is the first aid treatment for burns and scalds?

Ans (a) Protect burnt area by applying bandage or cover exposed part with clean towel or cloth.

- (b) Give complete rest and plenty of fluids to the patient.
- (c) Re-assure the patient.
- (d) Give him morphia if available.
- (f) Evacuate patient to the nearest hospital or dispensary.

Ques 3 - What is the first aid treatment for snake bite?

Ans (a) Make the victim lie down comfortably.

- (b) Give convincing reassurance against fear of death.
- (c) Apply a light constricting tourniquet with handkerchief, bandage or shoe lace above the knee for a bite on the leg and above the elbow for a bite on the arm. So that the poison does not flows to all part of the body.
- (d) Wash with soap and water. Use water freely.
- (e) Incise into the skin 2" x ½" across the fang mark with a blade.
- (f) Suck the blood either with mouth or with a suction pump. Be careful that there is no cut or ulcer in the mouth.
- (g) Evacuate the patient quickly to the nearest dispensary or hospital.
- (h) If breathing fails, start artificial respiration.

Ques 4 - What is the first aid treatment for scorpion bite?

- Ans (a) If blood has been drawn, the wound should be cleaned well with antiseptic lotion.
- (b) Evacuate casualty to the nearest dispensary or hospital.

Ques 5 - What is the first aid treatment for rabid dog bite?

- Ans (a) Immediately wash with 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.

Ques 6 - What is the first aid treatment for foreign body in eye?

- Ans 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 a handkerchief, 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.

Ques 7 - What is the first aid treatment for foreign body in nose?

- Ans
- (a) Blowing the nose and sneezing may expel the foreign body.
- (b) Make the casualty breath through the mouth.
- (c) Do not try to remove the foreign body.
- (d) Send the patient to the nearest hospital

Ques 8 - What is the first aid treatment for drowning?

- Ans (a) Wet clothes should be loosened.
- (b) Mouth, throat and nostrils should be cleaned of mucus and of 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.

Ques 9 - What is the first aid treatment in case of electric shock?

Ans

- (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.

SECTION -5

DRESSING OF WOUNDS

Ques 1 - What is the classification of wounds?

- Ans -
- (a) Inside Wound
 - (b) Lacerated Wound.
 - (c) Punctured Wound.
 - (d) Gun Shot Wound.
 - (e) Shell Wound.
 - (f) Contusion.

Ques 2 – What is the first aid of wounds?

- Ans -
- a) Place the patient in 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 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.

SECTION-6

YOGA: INTRODUCTION AND EXERCISES

Ques 1 – What are the benefits of yoga?

Ans - (a) It removes stress, strain, tension and anger.

(b) Yoga harmonizes all disturbances in the body and eradicates ill effects completely.

(c) It brings efficiency and mental clarity.

(d) A person who develops his power of thoughts through Yoga has charming and dynamic personality.

(e) Yoga helps in purifying the disrupted natural rhythm and harmony of the body, bestows grace, heals and makes one free from all ill effects.

SECTION-7

PHYSICAL AND MENTAL HEALTH **(Only for SD/SW cadets)**

Ques 1 – Define physical health?

Ans - Physical health is absence of disease and infirmity and it is assessed by taking health state measurements of the body.

Ques 2 – Define mental health?

Ans - Mental health refers to the successful performance of mental function, resulting in productive activities, fulfilling relationship with other people, ability to adopt to change and cope up with adversities.

Ques 3 - What are the elements of Good Health?

Ans - (a) Absence of disease.

(b) Ability to work hard with efficiency and enthusiasm.

(c) Ability to endure stress and strain.

(d) Cheerfulness.

(e) Courage.

(f) Freedom from anxiety.

(g) Self control and self confidence.

(h) Sense of well being.

(j) Wholesome mental attitude.

Ques 4 - What are the characteristics of healthy mind?

Ans Characteristics of healthy mind are:-

- (a) Normal appetite.
- (b) Calmness.
- (c) Cheerful outlook.
- (d) Good temper.
- (e) Socially acceptable habits.
- (f) Well regulated instincts.
- (g) Normal physical vitality.
- (h) Receptivity to new ideas.
- (j) Sex consciousness

Ques 5 - What measures will ensure mental health?

- Ans .(a) Favourable home and school environment.
- (b) Regular medical examination.
 - (c) Provision of educational and vocational guidance.
 - (d) Provision of co-curricular activities

SECTION-8

FRACTURES, TYPES AND TREATMENT **(Only for SD/SW cadets)**

Ques 1 - Define fracture?

Ans - Fracture is a discontinuity or break in a bone, resulting in the dissolution of the supporting frame work of the body.

Ques 2 - What are the first aid measures for fractures?

Ans - The first aid measures are as under:-

- (a) Reassure the patient and make him comfortable.
- (b) Apply splints to immobilize the fracture with any common article like stick, rifle etc.
- (c) Relieve him of discomfort and pain. Keep the patient warm.
- (d) Do not meddle with the fracture.

Ques 3 - What is the first aid for dislocation?

- Ans (a) Do not try to reduce the dislocation.
- (b) Tie sling or bandage to immobilize the joint, apply cold compress to reduce the swelling.
- (c) Send the patient to the nearest hospital for early treatment.

SECTION-9

EVACUATION OF CASUALTIES **(Only for SD/SW cadets)**

Ques 1 - How to prioritize casualties for treatment?

- Ans (a) **Priority I** – cases requiring resuscitation and urgent surgery.
- (b) **Priority II** – cases requiring early surgery and possibly resuscitation.
- (c) **Priority III** – All other casualties who require minor treatment.

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ADVENTURE ACTIVITIES

SECTION 1

INTRODUCTION

Q 1 : What do you understand by adventure training?

Ans: The training given to the cadets/ youth by the NCC to develop the quality of leadership, self-confidence, determination and feelings of team spirit.

Q 2: Why NCC conducts the adventure activities?

Ans: To inculcate the quality of leadership & determination in the cadets.

Ques 3 – What are the various land base adventure activities?

- Ans - (a) Mountaineering.
(b) Mountaineering Expeditions.
(c) All India Treks.
(d) Cycle and Motor Cycle Expedition.

Ques 4 – What are the various Naval activities?

- Ans - (a) Sailing expedition.
(b) Scuba Diving.
(c) Boat pulling.
(d) Wind surfing.
(e) Kayaking.

Ques 5 – What are the various air based activities?

- Ans - (a) Para Sailing
(b) Slithering
(c) Para jumps

Ques 6. What are the aims of adventure activities?

- Ans - (a) To develop and enhances the spirit of adventure which is inherent in all human beings.
(b) Inculcate self reliance, confidence, discipline and leadership qualities.
(c) Promote Co-operation and team spirit.
(d) Spread the achievements of NCC and it's importance to remote areas.

SECTION 2

TREKKING

Ques 1 – What are the aims of trekking?

Ans - (a) Inculcate a spirit of adventure, exploration, inquisitiveness and practical investigation.

(b) Develop stamina, endurance, self confidence, team spirit and esprit-de-corps.

(c) Develop love for nature and concern for environmental cleanliness.

(d) Promote National Integration.

SECTION 3

CYCLE EXPEDITION: PLANNING, ORGANISATION & CONDUCT **(JD/JW Cadets Only)**

Ques 1 – What are the types of cycle expeditions?

Ans (a) To places outside the state.

(b) Places of historical and religious importance.

(c) Places of natural beauty.

(d) Distant countryside / remote places

(d) To visit certain historical places.

Ques 2 - What all points should be borne in mind while planning a cycle expedition?

Ans (a) Realistic -and not over ambitious.

(b) Physical standards of cadets.

(c) Financial constraints.

(d) Number of cadets.

(e) Selection of route and halts.

(f) Logistic plan.

(g) Selection of cadets.

(h) Collection of information.

(j) Liaison with civilian / military authorities.

SECTION 4

PARASAILING EQUIPMENT & CONDUCT **(Only for SD/SW cadets)**

Ques 1 – What is the basic equipment required for para sailing?

Ans (a) Para sail canopy.

(b) Harness.

(c) Two ropes.

(d) Two Yoke.

(e) Release Mechanism.

(1) The prime Mover (jeep or motor launch).

Ques 2 – What all crew are required for para sailing?

Ans - (a) Controller

(a) Tow Crew

(b) Launch crew

(c) End Helper

Ques 3 – What all precautions must be taken during para sailing?

Ans - (a) All the equipment brought for use is in serviceable condition.

(b) The course/track is smooth for the vehicle run and no obstacle exist on it Le. Trees, poles, electric lines, telephone lines etc.

(c) A dummy practice launch should always be carried out.

(d) No launch is to be made when winds are turbulent or dusty.

(e) All the members responsible for conducting para sailing are conversant of their duties.

(f) Take off should always be made directly into the wind.

(g) The canopy will be thoroughly checked for any damage.

(h) At take off, if the para sailor trips or falls, the vehicle will be stopped immediately.

(j) In case para sailor rotates or swings more than 45 degrees, the vehicle will be slowed and landing procedure will be carried out.

(k) The damaged para sail / canopy should not be used.

(l) Helmet must be used by the para sailor.

CHAPTER 10

ENVIRONMENT AND ECOLOGY

SECTION 1-WHAT IS ENVIRONMENT?

Ques 1. Define environment?

Ans - The conditions in which an organism exists make up its environment.

Ques 2. What are the affects of environment degradation?

Ans – (a) Global warming.

(b) Acid Rain

(c) Depletion of ozone layer.

Ques 3. What is the role of NCC cadets towards environmental degradation?

Ans – NCC Cadets can take following actions to curb environmental degradation: -

(a) Tree plantation.

(b) Guide and motivate family and friends to control environmental degradation.

(c) Water conservation

(d) Disposal of waste

(e) Educate the people

SECTION 2-WHAT IS ECOLOGY?

Ques 1. Define ecology?

Ans - The science which deals with the study of the eco-system is called ecology.

Ques 2 – What is green house affect?

Ans - It is the effect arising due to increased carbon dioxide content and increase in global temperature and depletion of ozone layer due to chlorofluorocarbons used, poses the greatest threat to the very existence and survival of human beings and flora and fauna around the globe.

SECTION 3- CONSERVATION OF ENVIRONMENT AND ECOLOGY

Ques 1. What measure the youth should adopt to check environmental degradation?

Ans - Following measures must be taken by youth : -

(a) Keeping air, land, rivers, and water bodies clean and natural.

(b) Tree plantation and stoppage of indiscriminate felling of trees.

(c) Prevention of wastage and over-use of all natural resources.

(d) Re-using industrial wastes.

- (e) Consumption of non-renewable resources by using renewable resources as far as possible.
- (f) Modern sewage disposal techniques.
- (g) Restrictions on using chemical substances and toxins harmful to soil, water and air.
- (h) Fumes, smoke and exhaust gases to be rendered harmless by innovative design of machinery and technology.
- (j) Treatment of effluents.
- (k) Observing strict emission levels.
- (l) Elimination of nuclear waste.
- (m) All waste to be biodegradable.
- (n) Non-biodegradable waste to be recycled.
- (o) Water bodies to be kept chaste.
- (p) Protection of nature in all forms.
- (q) Protection of all life-forms.
- (r) Strict policies, regulations and incentives for protection and conservation of nature and life-forms.
- (s) Impetus to Research and Development for environment-friendly technology.
- (t) All development involving the bio-sphere to be environment-friendly with ecological harmony or "Economic Development on Ecological Principles"
- (u) Management of environmental pollution, at all levels including homes, such as smoke, use of sprays, garbage disposal, non-bio-degradable waste, water pollution.
- (v) Protection of wild life.
- (w) Checking human population explosion.
- (x) Cleanliness drives for rivers, water-bodies and soil (to remove non-bio-degradable).
- (y) Ensuring environmentally rational behaviour in oneself and others.

(z) Developing environmental consciousness amongst common people through classroom instructions, posters and hoardings, public and media campaigns.

SECTION 4- POLLUTION AND ITS CONTROL

Ques 1. Define pollution?

Ans - Pollution is defined as imbalance in the atmosphere caused by pollutants.

Ques 2 – What are the various kinds of pollution?

Ans - It is of following kinds : -

- (a) Land Pollution
- (b) Air Pollution
- (c) Water Pollution
- (d) Sound Pollution

Ques 3 – How is water pollution caused?

Ans - It is caused by following means: -

- (a) Discharge of domestic waste.
- (b) Discharge of industrial waste
- (c) Discharge of agricultural waste

Ques 4 - What measures the NCC cadets adopt to control pollution?

Ans - (a) To develop consciousness among common people to control all pollution. Plant more and more trees.

(b) The use of loud horns or mindless blowing of horns by motor vehicles should be banned.

(c) The water bodies should not be used as waste reservoirs.

(d) Various sources of drinking water, and water resources should be well protected so that dirty water does not enter these water bodies.

(e) Environmental education should be made compulsory in all educational institutions.

(f) Excessive use of pesticides and insecticides should be avoided.

(g) In all towns and cities there should be proper arrangement of dustbins to collect garbage being produced in the houses.

(h) In the factories strict precaution should be instituted to avoid pollution of various types.

(j) Running of old and pollution emitting vehicle should be banned.

(k) The pollution control Administrative Authorities must have independent powers to implement their decisions

SECTION 5- FOREST ECOLOGY AND POLLUTION **(Only for SD/SW cadets)**

Ques 1 - What is the importance of forests?

Ans - Forests are our natural resources. They have a vital role in maintaining a balanced & healthy eco-system. Forests help in global recycling of water, oxygen, carbon-dioxide and nitrogen in a balanced way.

Ques 2 – What is the influence of forests on ecology and pollution?

Ans - (a) Forests control the pollution of all types and maintains healthy eco-system.

(b) Maintains balance between the oxygen and carbon dioxide for quality environment.

(c) Carbohydrates synthesised by the forest plants are a major source of energy consumed by herbivores feeding on plants and carnivores feeding on herbivores.

(d) Checks floods, draught and soil erosion.

(e) Forests control humidity of the environment and regulate the weather conditions.

(f) Forests bring down the temperature and maintain favourable weather conditions.

(g) The forests protect balance between flora and fauna, thus keep the balance in nature.

SECTION 6- WILD LIFE **(Only for SD/SW cadets)**

Ques 1 - What is the main reasons for extinction of certain plant and animal species?

Ans - (a) Destruction of their natural habitats

(b) Over-grazing by domestic animals

- (c) Poaching for meat, skin, fur, ivory, rhino horn etc.
- (d) Export of some species.

Ques 2 – How to manage and protect the wild life in India?

- Ans -
- (a) Protection of natural habitats through control of exploitation.
 - (b) Maintenance of protected areas like parks, sanctuaries, reserve forests.
 - (c) Protection through legislation .
 - (d) Impose restrictions on export of rare plants and animals.
 - (e) Encourage Non-Government Organisations to participate in protection of wild life.
 - (f) Spread general awareness among the masses.

CHAPTER-XI

SELF DEFENCE

SECTION-1

PRECAUTIONS AND GENERAL BEHAVIOUR OF

BOY AND GIRL CADETS
(JD/JW Cadets Only)

Ques 1 – What precautions should be taken by boys and girl cadets so that their conduct is never questionable?

Ans - These are as under : -

- (a) Realize their responsibilities and become role model for the youth.
- (b) Keep away from drugs, alcohol and tobacco.
- (c) Must keep good company.
- (d) Develop healthy hobbies like reading, music, painting, gardening etc.
- (e) Do not waste your time.

Ques 2 – What should be the general behaviour of NCC cadets?

Ans - It should be as under : -

- (a) They should be strictly disciplined, peaceful, friendly and co-operative.
- (b) Have a sense of healthy competitiveness and remain free of jealousy
- (c) Maintain positive attitude and have mutual respect.
- (d) Boys should never indulge in eve teasing.
- (e) All must behave elegantly.

Ques 3 – What are the good habits which NCC cadets must imbibe?

Ans - These are as under : -

- (a) Rising early.
- (b) Prayers.
- (c) Morning exercise/PT.
- (d) Cleaning-up and Breakfast.
- (e) School/College/ studies(as applicable).
- (f) Mid-day meal.
- (g) Afternoon short rest /studies.
- (h) Evening sports.
- (j) Relaxation (watching TV, reading informative books and magazines, newspapers).
- (k) Studies.
- (l) Dinner.
- (m) Cleaning and change.
- (n) Adequate sleep at night.

SECTION-2

PREVENTION OF UNTOWARD INCIDENTS

Ques 1 – What are various untoward incidents plaguing the society which must be prevented by cadets?

Ans - These are as under : -

- (a) Road Safety
- (b) Pick-pocketing, Hooliganism, Theft and Robbery
- (c) Eve-Teasing, Molestation and Sexual – Harassment
- (d) Smoking and Alcoholism.

Ques 2 - How to avert road accidents?

- Ans -
- (a) walk carefully on the roads.
 - (b) Follow all safety rules.
 - (c) Take into account all signals.
 - (d) Start early to reach in time.
 - (e) Do not over-speed.
 - (f) Do not mix drinking and driving.
 - (g) Cross roads at zebra-crossing.
 - (h) Where there is no zebra crossing, one should look towards both sides and then cross.
 - (j) Hold children's hands, when they are going to cross roads.
 - (k) Children must be taught all the road safety rules.

Ques 3 - How to prevent Pick-pocketing, Hooliganism, Theft and Robbery?

Ans - Following measures must be taken: -

- (a) To prevent pick-pocketing, one should avoid travelling in crowded places, and should try to carry little cash and valuables.
- (b) Cadets should not indulge in hooliganism.
- (c) If cadets see hooligans indulging in such activities, and if it is a small and manageable group and cadets are in a large number, they can try for a peaceful dispersion.
- (d) If the incident cannot be controlled, cadets should report the same to nearest police-station or to any law & order authority.

(e) Cadets must ensure prevention of robbery & theft and report any such incidents to law and order authority.

(f) Cadets must make good contribution in prevention of such incidents in their neighbourhood.

Ques 4 – How to discourage Eve -Teasing, Molestation and Sexual - Harassment ?

Ans -

(a) Cadets must abide by moral values right from young age.

(b) They must learn to respect dignity of opposite sex.

(c) Girls should dress up elegantly so that they don't attract indecent remarks.

(d) Girls should avoid travelling alone in darkness.

(e) Work together with the opposite sex in a healthy environment.

(f) Boy cadets must understand that eve-teasing, molestation and sexual harassment are criminal offences.

Ques 5 - How to discourage Drugs, Smoking and Alcoholism?

Ans - It must be ensured that: -

(a) Cadets should spend time with their families and should introduce their friends to them.

(b) Cadets must understand that drug addiction, smoking and alcoholism are health hazards, and social evils and these are to be avoided.

(c) Cadets must spread awareness and positive thinking in the society.

(d) Cadets must remember that laws are implemented severely to penalize those found guilty of selling drugs or encouraging people to take drugs.

SECTION-3

VULNERABLE PART OF BODY

Ques 1- What are the vulnerable parts of the body?

Ans - Eyes, ears, temples, nose, mouth, chin, front and sides of throat, solar plexus, abdomen, fork (testicles), knees and insteps. Base of skull, spine (specially cervical and Lumber regions), kidneys, coccyx or testicles.

SECTION-4

PHYSICAL SELF DEFENCE/UAC

Ques 1 – What are the essential principles of unarmed combat?

- Ans - (a) Ruthlessness
- (b) Determined effort.
 - (c) Attack vulnerable parts of opponent.
 - (d) Efficiency of initial attack.
 - (e) Surprise and speed of attack.
 - (f) Retaining initiative.

CHAPTER-XII

POSTURE TRAINING

SECTION-1

AIM AND PRINCIPLES OF POSTURE TRAINING AND ITS IMPORTANCE **(Only for SD/SW cadets)**

Ques 1 – What is the object of posture training for NCC cadets?

Ans -

- (a) Develop the personality of cadets.
- (b) Build their physique and teach them correct postures.
- (c) Make them more self-reliant.
- (d) Coordinate body movements.

SECTION-2

ANATOMY AND RELATIONSHIP OF BODY SEGMENTS

Ques 1 – Define major joints, their location, direction of their movements and their functions?

Ans - These are a under : -

S.No.	Type	Where Joined movements	Directions of	Functions
(a)	Ball & Socket	Hip Shoulder Trunk sideways	Forward Backward and rotation	Bending, straight-ening, extending
(b)	Condy-loid	Head, Neck Wrist Fingers, Toes sideways	Forward Backward	Bending and straightening
(c)	Hinge	Elbow, Knee Ankle Fingers	Forward Backward	Bending and straightening
(d)	Pivot	Fore-arm, Head, Neck	Around	Rotation, right left, in and out
(e)	Irregular	Foot Hand	Gliding	In and out movement

SECTION - 3

ANALYSIS OF GOOD POSTURE

Ques 1 – What are the basic points of correct posture?

Ans - These are as under ; -

- (a) The body is held as tall as possible without strain.

(b) The head held correct and the chin slightly drawn in (vertical line-chin to sternum).

(c) The shoulders are slightly posterior to the centre of gravity (Straight line from shoulder to sternum).

(d) The chest is high (Sub-costal angle of the ribs at least at right angle).

(e) The abdomen is in (Abdomen flat).

(f) The spinal curves are not exaggerated (Gentle curves).

(g) The pelvis is tilted slightly upward in front and downward in back (55 degrees).

(h) The knees are straight but not still.

(j) The weight of the body falls back of the middle of the foot on the longitudinal arches. The plumb line through the middle of the patella should fall between the bases of the second and third toes.

(k) The body is free for movement without strain and with the least expenditure of energy.

(l) The entire body is in the true anatomical position.

(m) The vital organs are free for most efficient function.

Ques 2 - How to attain the correct posture?

Ans - (a) The individual possesses sufficient strength and tone of the opposing muscle groups.

(b) There is adequate organic vigour and the body is free from infection.

(c) There is sufficient strength of ligaments and muscles to permit correct body position without undue strain on these ligaments or muscles.

(d) The individual knows what correct body mechanics is.

(e) The individual has had sufficient practice in the correct position. The muscle sense of the correct position must be fully developed.

(f) The external conditions for maintaining correct body mechanics are conducive to correct posture i.e. chairs must fit the body.

SECTION-4

CAUSES OF BAD POSTURE, REMEDIAL AND

PREVENTIVE MEASURES

Ques 1 – What are the various causes of bad posture?

Ans - These are as under : -

- (a) Due to Muscular and Organic Defects
- (b) Lack of Nourishment.
- (c) Fatigue Due to Over Work
- (d) Due to Illness and Infections
- (e) Due to Bad Habits.
- (f) Due to Poor Hygiene.

SECTION-5

BALANCED ALIGNMENT AND EXERCISE

Ques 1- Describe balanced position when standing.

Ans - These are as under ; -

- (a) Your knees will be free and easy, neither bent nor thrust back.
- (b) Your hips will be under you neither leading nor thrust back.
- (c) Your abdomen will be up and in, neither relaxed nor protruding.
- (d) Your chest will be held up and easy, neither sagging nor too high and leading.
- (e) Your shoulder blades will be drawn down and flat on your back.
- (f) Your arms will hang naturally and relaxed at your sides, neither rigid nor too relaxed.
- (g) Your trunk will be with in normal limits of curves, neither too straight and flat nor too rounded and hollow and you will stretch your back straight upward towards the crown of your head. Your head and chin will be easy and centre over your trunk with chin held at right angles to front of your neck.

SECTION-6

BALANCED DIET

Ques 1 – Define balanced diet?

Ans - A diet is **Balanced** if it contains all the nutrients like Carbohydrates, Proteins, Fats, Vitamins and Minerals in the correct ratio.

SECTION-7

CORRECT STANDING AND EXERCISES

Ques 1 – Define correct standing?

Ans - It is as under :-

- (a) Weight of the body should be on both feet.
- (b) Knees should be relaxed.
- (c) Line of abdomen should be almost straight
- (d) Pelvis should be held squarely over the base of support
- (e) Chest over pelvis
- (f) Shoulders resting easily over rib cage
- (g) Head over shoulder
- (h) Chin should be parallel to feet.

SECTION - 8

CORRECT WALKING AND EXERCISES

Ques 1 – Define correct walking?

Ans - While walking;

- (a) Heel should be in contact with the ground
- (b) Weight of the body should be transferred to the balls of feet
- (c) Inner line of feet should be straight,
- (d) There should be no body bulge in front
- (e) Heel cord seen in rear view is straight
- (f) Not bent inward at ankle level,
- (g) Relaxed arm swing
- (h) Feet swing forward parallel
- (i) The body alignment is good.

SPECIALISED SUBJECTS

CHAPTER 1

ARMED FORCES

SECTION -1

BASIC ORGANIZATION OF ARMED FORCES

Ques 1 - What all major operations have been fought by Indian Army since independence?

- Ans - (a) Kashmir Operations against Pakistan 1947-48.
- (b) Sino- Indian Operations in NEFA (Arunachal) and Laddakh 1962.
- (c) Indo-Pak war 1965.
- (d) Indo – Pak war 1971.
- (e) Kargil conflict 1999.

Ques 2 - What are names of Army commands?

- Ans - (a) Northern Command
- (b) Western, Command
- (c) Central Command
- (d) Southern Command
- (e) South Western Command
- (f) Eastern Command
- (g) Training Command

Ques 3 - Name the fighting arms?

- Ans - (a) Armour
- (b) Infantry
- (c) Mechanized infantry

Ques 4 - Name the Supporting arms?

- Ans - (a) Artillery
- (b) Engineers
- (c) Army Air Defence
- (d) Army Aviation corps
- (e) Signals

Ques 5 – Name the supporting services of the Army?

- Ans (a) Army Service Corps
- (b) Army Medical Corps
- (c) Army Ordnance Corps
- (d) Corps of Electronics and Mechanical Engineers

- (e) Remount and Veterinary Corps.
- (f) Army Education Corps
- (g) The Intelligence Corps
- (h) The Corps of Military Police
- (h) Judge Advocate General Branch
- (k) Army Physical Training Corps
- (l) The Pioneer Corps
- (m) Defence Security Corps

Ques 6 – Name the various commands of the Navy?

- Ans - (a) Western Naval Command with HQ at Mumbai.
- (b) Eastern Naval Command with HQ at Vishakhapatnam.
- (c) Southern Naval Command with HQ at Cochin.

Ques 7 – Name the various commands of Air Force?

- Ans - (a) Western Air Command.
- (b) Central Air Command
- (c) Eastern Air Command.
- (d) South Western Air Command.
- (e) Southern Air Command.
- (f) Training Command.
- (g) Maintenance Command.

SECTION-2

BADGES AND RANKS

Ques 1 - Name officers' ranks of Army in ascending order?

- Ans - (a) Lieutenant
- (b) Capt
- (c) Major
- (d) Lieutenant Colonel
- (e) Colonel

- (f) Brigadier
- (g) Major General
- (h) Lieutenant General
- (i) General
- (j) Field Marshal

Ques 2 - Name officers' ranks of Air Force descending order?

- Ans - (a) Marshal of the Air Force
- (b) Air Chief Marshal
 - (c) Air Marshal
 - (d) Air Commodore
 - (e) Group Captain
 - (f) Wing Commander
 - (g) Squadron Leader
 - (h) Flight Lieutenant
 - (i) Flying Officer

Ques 3 - Name officers' ranks of Navy in ascending order?

- Ans - (a) Sub Lieutenant
- (b) Lieutenant
 - (c) Lieutenant Commander
 - (d) Commander
 - (e) Captain
 - (f) Commodore
 - (g) Rear Admiral
 - (h) Vice Admiral
 - (i) Admiral
 - (j) Admiral of the fleet

SECTION-3

HONOURS AND AWARDS

Ques 1 –Name the gallantry awards in the face of the enemy?

- Ans - (a) Param Vir Chakra.
- (b) Maha Vir Chakra.
 - (c) Vir Chakra.
 - (d) Sena, Nao Sena and Vayu Sena Medal.
 - (e) Mention in Despatches.
 - (f) Chiefs of Staff Commendation Card.

Ques 2 –Name the gallantry awards other than in the face of the enemy?

- Ans (a) Ashoka Chakra.
(b) Kirti Chakra.
(c) Shaurya Chakra

Ques 3 – Name the NCC awards for NCC personals?

Ans – NCC awards to WTLOs, ANOs, GCIs and NCC Cadets are as under: -

- (a) Raksha Mantri's Padak.
- (b) Raksha Mantri's Prashansa Patra.
- (c) Raksha Sachiv's Prashansa Patra.
- (d) Maha Nideshak's Prashansa Patra.
- (e) Maha Nideshak's Prashansa Patra To Civilian Personnel

SECTION-4

CONCEPT OF COMBINED DEFENCE SERVICES

Ques 1 – What is the concept of combined defence services?

- Ans – (a) The concept of three dimensional warfare or combined operations wherein the three wings of the armed forces i.e. Army, Navy and Air Force, have to operate as a single cohesive force against the enemy, is the norm of the day.
- (b) officers among the three services during various training course, sand model discussion and exercises at various levels is very useful in understanding the working ethos of other services
- (c) Currently Integrated Command having all the three services under its wing is established at Port Blair to institutionalize the concept of three dimensional warfare

CHAPTER-II

MAP READING

SECTION-1

INTRODUCTION TO MAP AND CONVENTIONAL SIGNS

Ques 1 – What is map?

Ans - A map is representation of selected natural and man made features of the whole or part of the earth's surface on a flat sheet of paper on a definite scale and in their correct relative geographic positions and elevations.

Ques 2 – What is conventional sign?

Ans - Conventional signs are symbols used to represent certain artificial or natural features/objects on the map. They are seldom drawn to scale.

SECTION-2

SCALES

Ques 1 - What is scale?

Ans - By scale it means the proportion which the distance between two points on the map bears to the distance between the same two points on the ground

Ques 2 – What are the common scales used in survey of India maps?

Ans -	(a)	16 inches to 1 Mile	1/3960
	(b)	4 inches to 1 mile	1/15840
	(c)	2.53 inches to 1 mile	1/25000
	(d)	1 inch to 1 mile	1/63360
	(e)	½ inch to 1 mile	1/126720
	(f)	¼ inch to 1 mile	1/253440
	(g)	16 miles to 1 inch (Approx)	1/1000000
	(h)	32 miles to 1 inch (Approx)	1/2000000

SECTION 3

TOPOGRAPHICAL FORMS AND TECHNICAL TERMS

Ques 1 – Define important technical terms used in map reading?

Ans (a) Bearing - The angle formed by a line joining two points and the North and South line. Bearings are always measured clockwise.

- (b) Bench Mark - A permanent mark usually cut into a wall recording exact height for future reference, marked BM with the height on Ordnance Survey Maps.
- (c) Contours - A line drawn on the map joining up all points of equal height above sea level.
- (d) Gradient - The slope of a hill expressed as a fraction.
- (e) Grid Lines - Lines running parallel to and at right angles to a North and South line through approximately the centre of the area covered by the grid system.
- (f) Grid North - Except through the origin, grid lines do not lie true North and South or East and West, Grid North is the direction of the North South grid lines on a map.
- (g) Magnetic Variation - The difference between true North & Magnetic North.
- (h) Setting - Placing a map so that North on the map points toward the North so that the objects on the map are placed in relationship to the same objects on the ground.
- (j) Trig 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.
- (k) True North - The direction of the North Pole from the point.

Ques 2 – Define important Topographical terms used in map reading?

- Ans
- (a) Basin - An area of fairly level ground surrounded by hills or the area drained by a river and its distributaries.
 - (b) Col or Saddle - A narrow ridge of high land joining up to higher hills.
 - (c) Crest - The highest part of a hill or mountain range. It is that line on a range of hills or mountains from which the ground slopes down in opposite directions.
 - (d) Dead Ground - Ground which by reason of undulations or hills is not visible to the observer.

- (e) 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 a bridge is an example of an artificial defile.
- (f) Escarpment - The steep hill side formed by a sudden drop in the general ground level usually from a plateau.
- (g) Knoll - A small isolated hill.
- (h) Plateau - A table land, an elevated region of considerable extent generally fairly level.
- (j) Ridge - The line along a hill or range of hills or mountains from which water flows in opposite directions, a divide, sometimes and the crest of a line of hills as it appears along the horizon.
- (k) Watershed - The line separating the water flowing into two different river systems, the edge of a river basin.

SECTION-4

THE GRID SYSTEM

Ques 1 - Define grid line?

Ans - A map is covered with a net work of purple lines, some running North and South and other West and East. These form a series of small squares all over the map. These lines are known as "Grid Lines".

Ques 2 - What are the basic rules for giving grid reference?

Ans - (a) A reference must always contain an even number of figures. In the normal method, it will contain six figures.

(b) Always count along the EASTING lines first from WEST to EAST and then from SOUTH to NORTH, along NORTHINGS.

(c) For the six figures reference, the third and the sixth figure represent the divisions of 1000 yards square to the nearest 10th part, so they have to be estimated and for these figures a slight latitude is allowed.

(d) 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 a four figure grid reference would suffice.

SECTION 5

RELIEF CONTOURS AND GRADIENTS

Ques 1 - Define Relief?

Ans - Relief is a name used to describe the rise and fall of the ground or in other words the hills and valleys.

Ques 2 - Define Vertical interval, Horizontal equivalent and gradient.

Ans - (a) **Vertical Interval(VI)** - The rise between successive contour lines is known as the vertical interval. On map scale 1 inch to 1 mile, the VI of each contour line is 50 feet while on the ¼ inch to a mile it is 250 feet.

(b) **Horizontal Equivalent** - The distance measured flat on the map between adjacent contour lines is horizontal equivalent (HE).

(c) **Gradient** - A gradient is a slope expressed as a fraction. If we say that a slope has a gradient of 1 inch to 7 we mean for every 7 feet of horizontal distance the slope rises or falls 1 foot vertically. Simple Formula is $VI/HE = \text{Gradient}$. The horizontal equivalent is obtained by measuring on the map and vertical interval by subtracting the contour heights.

SECTION 6

CARDINAL POINTS AND FINDING NORTH

Ques 1 - What are various types of North?

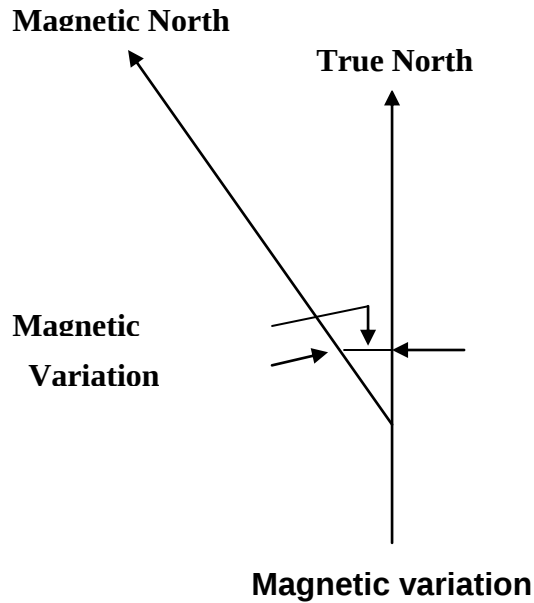
Ans - (a) **True North** - The direction of North pole from the observer.

(b) **Magnetic North-** It is the point to which an accurate compass needle points, when freely suspended.

(c) **Grid North** - It is the direction to which the North South grid lines on a map point.

Ques 2 - Explain magnetic variation with diagram?

Ans -`



SECTION-7

TYPE OF BEARINGS AND USE OF SERVICE PROTRACTOR

Ques 1 - Define various types of bearings?

Ans - (a) 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.

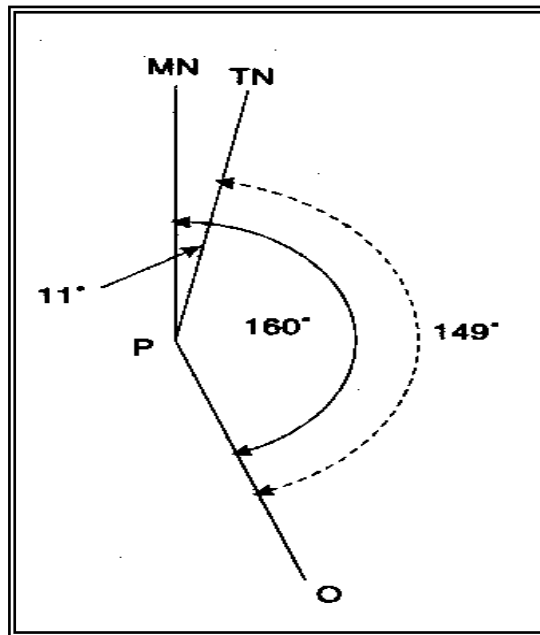
(b) **Grid Bearing.** Measured on the map from the Grid North by the help of a protractor.

(c) **Magnetic Bearing.** Measured from Magnetic North by the compass.

(d) **True Bearing.** Calculated by finding out the relation of true NORTH and Grid NORTH or Magnetic NORTH.

Ques 2 – How too convert magnetic bearing to a True bearing? Explain with the help of a diagram.

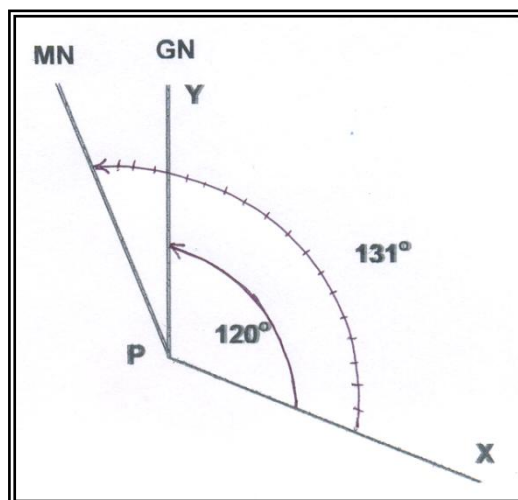
Ans - Suppose the bearing of a certain point P is measured with a compass and is found to be 160 Degrees. To convert this magnetic bearing to a true bearing, draw a diagram as given in Fig below.



First draw a vertical line to represent Magnetic North (because it is a magnetic bearing which is being considered). Next draw a line to P at an angle of 160 degrees. It is only a rough diagram, and the angle can be judged by eye. Thirdly, draw in the true North line approximately 11 degrees East of Magnetic North, with this diagram it becomes clear that true bearing (marked with a dotted line) is smaller by 11 degrees. Therefore, the true bearing of P is 149 degrees.

Ques 3 – How too convert magnetic bearing to a True bearing? Explain with the help of a diagram.

Ans - Measuring with a protractor on the map, the bearing of a Wind Mill at Y from a Church at X is found to be 120 degrees. To convert this grid bearing to a magnetic bearing, draw a diagram as under, this time starting with the Grid North line. Since the magnetic bearing is larger than the grid bearing by 11 degrees and it is therefore 131 degrees. See the diagram below: -



Ques 4 – What are the usage of service protector?

Ans - (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 correct unto 1/100th.

(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.

SECTION-8

PRISMATIC COMPASS, ITS USE AND INTRODUCTION TO GPS

Ques 1 – What are the types of compass?

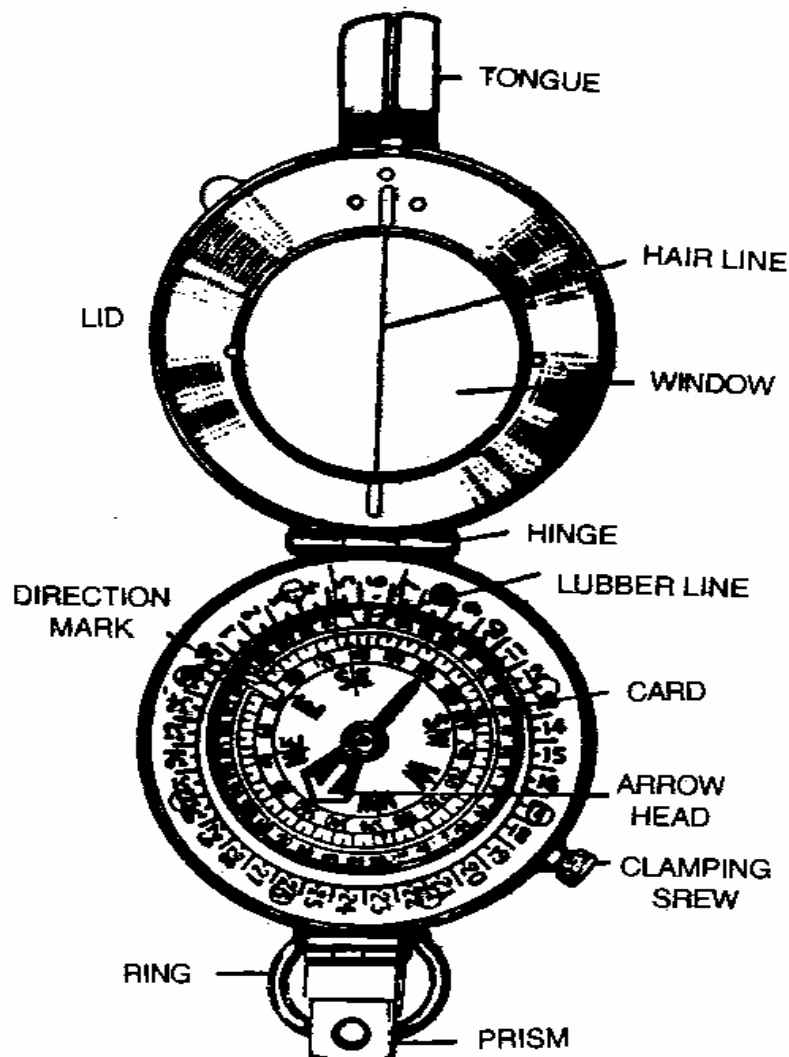
Ans - Compass is of two types as under : -

(a) Dry Type

(b) Liquid Type

Ques 2 – What are the various parts of a liquid compass?

Ans These are as under: -



Ques 3 – What is Global Positioning System (GPS)?

Ans GPS is a system of satellites and receivers that allows people and devices to pinpoint their precise location on the earth. The normal GPS operational constellation consists of 24 satellites that orbit the earth in 12 hours.

Ques 4 – What are the usage of GPS)?

- Ans -
- (a) Used by fishermen and hikers.
 - (b) Used by civilian & para military vehicles to navigate their route.
 - (c) Used by defense aircrafts, ships and specialized vehicles.
 - (d) Used in defense in battle fields and insurgency-affected areas.
 - (e) It assists troops to navigate in thick jungles, mountains and deserts.
 - (f) GPS is also used to guide missiles to pre specified targets.

SECTION-9

SETTING A MAP, FINDING OWN POSITION AND NORTH

Ques 1 – When a map is considered to be set?

Ans - 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.

Ques 2 – What are the various methods to find North?

Ans - (a) Watch method.
(b) By stars
(c) From Idgah & Mosque
(d) From Sun
(e) Compass
(f) GPS

SECTION-10

MAP TO GROUND

Ques 1 – What are the methods used to identify objects from Map to ground?

Ans - (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.

SECTION-11

GROUND TO MAP

Ques 1 – What is the intersection method of identifying objects from ground to map?

Ans - **Intersection Method.** To find out the objects which are at a larger distance or in hilly terrain, intersection method is used. In this method help of minimum two prominent objects are taken which can be easily identified on the ground. Lines are drawn from the prominent objects to the object to be identified on map. This method is used when we cannot estimate exact distance. Intersection is done in two ways:-

(a) **By Compass Bearing.** Take the bearing of the object from two known prominent objects. Draw the lines on the map. The object will be in the proximity of the intersection of the two lines. Magnetic bearing is found by two methods:-

(i) **By Compass.** Take the forward bearing from known object.

(ii) **By Back Bearing.** In war, in case we intercept the enemy's transmission, with the help of the fall of the shot we can find out the location by working out back bearing.

SECTION-12

POINT TO POINT MARCH

Ques 1 – What is night march?

Ans - When a navigation party moves at night with the help of compass and night march chart, this is called night march.

Ques 2 – What all items are required by navigation party?

- Ans -
- (a) Set compass as per bounds.
 - (b) Luminous stick.
 - (c) White cloth.
 - (d) Marching chart.
 - (e) White lime/ chalk.
 - (f) Stone pebbles for measuring steps.
 - (g) Frosted torch.

Ques 3– What is the composition of navigation party?

Ans - (a) **Guide**. He carries a luminous stick and a compass set to a given bearing.

(b) **Assistant Guide**. He has a white piece of cloth at his back for identification and a stick to measure depth of nala / pits.

(c) **Recorder**. He carries additional compass already set on given bearing, night march chart and stone pebbles. He measures the distance.

(d) **Scouts**. Number of scouts could be from 2 to 4 depending upon the route and tasks.

Ques 4 - What points should be kept in mind by all members of navigation party?

Ans - (a) While marching do not cough, talk or make any noise.

(b) While marching keep inter person distance in mind.

(c) Party must ensure safety and security.

(d) Smoking / using any kind of light is strictly prohibited.

(e) To read night march chart use frosted torch.

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CHAPTER-III

FIELD ENGINEERING

SECTION-1

INTRODUCTION TO FIELD ENGINEERING

Ques 1- Define Field engineering?

Ans - Field engineering is the study of field fortification, obstacle planning including minefields, mine warfare, and stores and equipment relating to the same.

Ques 2 – What are the various tasks performed by Field Engineers?

- Ans -
- (a) Laying of mine fields.
 - (b) Breaching of mine fields.
 - (c) Construction of field defences.
 - (d) Construction of tracks in mountains.
 - (e) Construction / maintenance of border roads.
 - (f) Water supply to troops in the field, especially in deserts.
 - (g) Construction of Helipads where-ever required.
 - (h) In Counter Insurgency Operation:-
 - (i) Detection, neutralisation and removal of IEDs and explosives.
 - (ii) Road opening etc for all type of traffic.
 - (j) Maintenance of essential services.

SECTION-2

KNOTS AND LASHINGS

Ques 1 - What is the purpose of Knots?

Ans - Knots, bends and hitches are used to join two lashings together, to form a loop in a lashing, to make a stop on a lashing or to secure a lashing to a spar, or to make a hook.

Ques 2 – What is the characteristics of Knots?

- Ans -
- (a) Knot should be strong so that it does not open due to pull and pressure.
 - (b) Knot should be in conformity to work and simple to use.

(c) Knots should be opened easily.
Ques 3 – What are the various types of lashes?

- Ans - (a) Square Lashes
(b) Diagonal lashes
(c) Parallel lashes

SECTION-3

TYPES OF MINES

Ques 1 – What is mine?

Ans - A mine is a weapon to be used with cunning and with the constant aim of catching the enemy unawares.

Ques 2- What are the various types of mines?

Ans (a) **Anti Tank Mines.** Mines designed primarily against tanks are called anti tank mines.

(b) **Anti Personnel Mines.** Mines designed primarily against personnel are called anti personnel mines. They are further classified as follows:-

(aa) Blast type.

(ab) Fragmentation type.

(iii) **Toxic Chemical Mines.** Mines used to contaminate areas. The toxic agent of each mine is dispersed by burster charges.

SECTION-4

TYPES OF OBSTACLES

Ques 1 – What is the purpose of obstacle?

Ans - (a) Delaying and disorganizing him under fire.

(b) Restricting his power of manoeuvre thereby canalizing him into a pre-selected killing ground.

(c) Disorganizing his plan of attack.

(d) Making him waste time, labour and equipment in forcing a passage.

(e) Denying him the opportunity of achieving surprise.

(f) Lowering his morale.

Ques 2 – What are essential characteristics of obstacles?

Ans - (a) Must be strong and of sufficient depth to impose maximum delay to enemy.

(b) Sited to fit in with coordinated plan; covered by fire and concealed to achieve surprise.

(c) Constructed outside the hand grenade range.

(d) It must not;

(i) Obscure the fire or observation of the defender,

(ii) Afford cover to enemy ,

(iii) Reveal the exact position of the defence,

(iv) Hinder the mobility of the defender

(v) Permit the enemy reconnaissance without interference by the defender.

Ques 3 – What are the various types of infantry obstacles?

Ans - (a) **Artificial Obstacles.**

(i) Wire obstacles.

(ii) Anti-personnel minefields.

(iii) Thorn fences.

(iv) Panji fields.

(v) Walls.

(vi) Ditches with or without water.

(b) **Natural Obstacles.**

(i) Marshes.

(ii) Rivers, nullahs and canals.

(iii) Unscalable cliffs, escarpments and steep slopes.

(iv) Dense growth like tea or rhododendrous bushes.

Ques 4 – What are the various types of vehicles and anti tank obstacles?

Ans - (a) **Anti-tank Minefields.** These are dealt with in details in section dealing with 'Types and Laying of Minefields'.

(b) **Physical Obstacles.**

(i) **Steep Slopes.** Slopes of 50 degrees can stop tanks under normal conditions. If the slopes are of loose slippery surface, even lesser angle is sufficient. However the slopes must be of sufficient length.

(ii) **Vertical Steps.** A vertical step of 6 feet can be an effective obstacle against all types of tanks.

(iii) **Ditches.** A ditch, which is sufficiently wide and deep to make the nose of the tank tilt down so much that it loses hold on the ground, is an effective obstacle.

(iv) **Water.** For a river or canal to be an obstacle against tanks it must have depth more than tanks heights and length more than $\frac{3}{4}$ of tanks length.

SECTION-5

METHOD OF WATER CROSSING

Ques 1 – What are the various kinds of improvised water crossing equipment?

Ans -(a) Groundsheet Water Belt.

(b) Tin Float.

(c) Two Men's Equipment and Groundsheet.

(d) Bamboo Pole

(e) Chattis Water Wings

(f) Water Bottle Belt

(g) Drum Rafts.

(h) Bundle of Logs

(j) Bamboo Mat Raft

(k) Hay Bundle Raft

(l) Charpoy Raft

SECTION-6

USE OF EXPLOSIVES AND IMPROVISED EXPLOSIVE DEVICE (IED)

Ques 1 – What are the main components of IED (improvised explosive device)?

- Ans - (a) Explosive.
- (b) Detonator.
- (c) Initiating Mechanism.
- (d) Power Source.

Ques 2 – Where all the IED can be planted?

- Ans - (a) Public areas (railway stations, bus stands and airports).
- (b) Public Transport (bus, train, aero plane and ship).
- (c) Public Utilities (library, offices and Industries).
- (d) Military Installations (ammunition dump, fuel oil and lubrication dump and supply depot).
- (e) VIP vehicle.
- (f) Along road / tracks, where VIP / security forces are likely to move.
- (g) Places where large congregations are likely to take place.
- (h) Places of religious worship.
- (j) Important buildings e.g. Schools, colleges, hospitals and business centre, government offices etc.
- (k) Important bridges.
- (l) Historical monuments.

Ques 3 - What are the indications of IED?

- Ans - (a) Any unattended item.
- (b) Unclaimed attractive items like cell phones, transistor, tape recorder etc.
- (c) Any object out of place.
- (d) Loose electric wire.

- (e) Any antenna wire.
- (f) Freshly dug earth.
- (g) Dry grass / leaves, cow dung / garbage etc for camouflage.
- (h) Broken road or freshly repaired road.
- (j) Fresh plaster or painting.

Ques 4 - What are the Do's with IED?

- Ans -
- (a) Remain away from suspected object.
 - (b) Be aware of booby traps.
 - (c) Warn the people about the suspected objects.
 - (d) Inform police / bomb disposal squad.
 - (e) Help police in crowd management and traffic control.
 - (f) Evacuate local population to a safe place.

Ques 5 - What are the Don'ts with IED?

- Ans -
- (a) Do not believe unattended object to be safe.
 - (b) Do not handle suspected object.
 - (c) Do not panic on detection of IED.
 - (d) Do not think only one IED has been placed.
 - (e) Do not immerse suspected object in water.
 - (f) Do not spread rumours.
 - (g) Do not bunch up near the suspected object.
 - (h) Do not cut any wire.
 - (j) Do not make loud sounds near the IED.
 - (k) Do not light a fire near IED.
 - (l) Do not be in a hurry and try to become a dead hero.

SECTION-7

CAMOUFLAGE AND CONCEALMENT

Ques 1 – What is the aim of camouflage?

Ans - It is the concealment of man and equipment from enemy's direct and indirect observation.

Ques 2 - What are the various factors which aids recognition?

Ans - (a) Shape
(b) Shadow
(c) Silhouette
(d) Surface
(e) Spacing
(f) Movement
(g) Shine
(h) Position
(i) Contrast
(j) Noise, sound and activity.

Ques 3 - What are the fundamental ways of concealing activities?

Ans - These are as under:-

- (a) **Hiding**. It is complete concealment of an object by placing a screen between the object and the observers.
- (b) **Blending**. It is the arrangement of camouflage materials on, over and around the object so that it appears to be part of the surroundings. The aim is to prevent detection of the object by a change in natural appearance of the position.
- (c) **Deceiving**. Deceiving simulates an object or disguises it so that it appears to be different.

SECTION-8

TYPES OF MINE FIELDS

Ques 1 - What are the main functions of mine fields?

- Ans
- (a) Delay and disorganize enemy attack and discourage his entering into our defended positions.
 - (b) Force the attacker to select certain approaches or routes thereby luring him into a place where he can be killed.
 - (c) Separate infantry from tanks.
 - (d) Deny close observation of main defences.

Ques 2 - What are the type of mine fields as per technical considerations?

- Ans - (a) **Anti Personnel.** Containing only anti personnel mines and providing protection only against an infantry attack.
- (b) **Anti Tank.** Containing only anti tank mines and providing protection only against an armoured attack.
- (c) **Mixed.** Containing both anti tank and anti personnel mines and providing protection against both infantry and armoured attack.

Ques – 3. – What are the tactical classification of the mine fields?

- Ans - (a) Protective.
- (b) Defensive.
- (c) Tactical.
- (e) Nuisance.
- (f) Dummy.

SECTION-9

FIELD DEFENCE

Ques 1 – What points should be borne in mind while constructing field defences?

- Ans - (a) Fire trenches should be close enough for the section commanders orders to be heard during battle.
- (b) Reverse slopes are a great aid to concealment and surprise, provided the field of fire is sufficient.
- (c) With the increasing efficiency of airburst missiles overhead protection is important but needs good concealment and sound construction.
- (d) In open country, crawl trenches may have to be dug to allow movement between fire trenches.

Ques 2 – What are the various field fortifications?

- Ans - (a) Bunker
- (b) Communication Trench.
- (c) Fire Trench.
- (d) Pill Box.
- (e) Shelter Trench

- (f) Slit Trench
- (g) Weapon Pit

CHAPTER-IV

FIELD CRAFT AND BATTLE CRAFT

SECTION-1

INTRODUCTION TO FIELD CRAFT **AND** **BATTLE CRAFT**

Ques 1 - Define Field craft?

Ans - Field Craft is an art of using the ground and the weapon available to the best of one's own advantages.

Ques 2 – What all subjects are included in Field craft?

- Ans -
- (a) Description of Ground.
 - (b) Observation and concealment.
 - (c) Judging distance.
 - (d) Recognition and description of targets.
 - (e) Movement with and without Arms

Ques 3 – What are the advantages of battle craft?

Ans - Useful in tackling minor tactical problems without confusion but the basic knowledge of field signals, section & platoon formations is essential.

Ques 4 What all subjects are included in Battle Craft?

- Ans -
- (a) Field signals.
 - (b) Section formation
 - (c) Fire control orders.
 - (d) Fire and movements.
 - (e) Section battle drill.

FIELD CRAFT

SECTION-2

DESCRIPTION OF GROUND

Ques 1 - What are the various type of grounds?

Ans (a) **Broken Ground.** It is uneven and is generally interspersed with nullahs, bumps and field in the ground. It is suitable for move of infantry and hinders observation of activities.

(b) **Flat and Open Ground.** It is even ground with little cover e.g. bushes, hedges and similar foliage. It is not suitable for move of Infantry by day.

(c) **High Ground.** Ground far above the general level of the area e.g. hill. It facilitates domination of area around it by observation or fire or both.

(d) **Dead Ground.** Ground that is hidden from an observer's view. It can not be covered by flat.

Ques 2 – What is the procedure for description of ground?

Ans - (a) Fore Ground Up to 300 yards

(b) Middle Distance From 300 yards to 500 yards

(c) Distance Beyond 500 yards

Ques 3 - What is the procedure for indication of ground?

Ans - (a) **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,

(b) **Boundaries.** After giving general line of direction give LEFT and RIGHT boundaries of your area e.g.

(i) No. 1 section – Aadha baen 600 PILI JHONPRI nam JHONPRI section ke baen wale jawan se JHONPRI tak ki line baen had.

(ii) Similarly indicate right boundary.

(iii) Dived the ground into fore ground, middle and distance. Having done so start from LEFT to RIGHT systematically and describe.

(iv) In attack describe the ground nearest to you first i.e. foreground, then middle and then distance, in defence reverse the procedure.

SECTION-3

OBSERVATION AND CONCEALMENT

Ques 1 - What is the importance of observation and concealment?

Ans - (a) A soldier who is trained in both can locate and kill his enemy without being seen himself.

(b) Ground observation of enemy provides one of the most valuable sources of information on which the plans of higher commanders are based.

(c) In defence good concealment enables a defender to mystify and deceive the enemy and in the event of an attack repel the enemy by producing fire at close range from an unexpected quarter.

Ques 2 - What are the fundamentals for correct use of cover?

Ans - (a) Whenever possible look through the cover and not over it.

(b) If it is not possible to look through the cover, look round it rather than over it.

(c) It is necessary to look over the cover, avoid breaking straight line.

(d) The sky-line is the worst background you could choose, but if you can not avoid observing over the cover and against the sky line, use something to break your silhouette.

(e) When firing from inside a building keep well back making use of the shadow.

(f) A rough, dark and irregular background which matches your clothing, provides considerable cover from view.

(g) Isolated cover is dangerous because it will attract attention of the enemy and can be easily indicated in a fire order.

(h) Avoid sky line.

(j) Avoid regular spacing.

(k) Avoid gaps for fire position.

(l) Cross gaps as a body and at irregular interval at the double.

SECTION 4

JUDGING DISTANCE

Ques 1 – What are the various methods of judging distance?

- Ans - (a) Unit of measure.
(b) Appearance method.
(c) Section average.
(d) Key ranges.
(e) Halving.
(f) Bracketing

Ques 2 - When the distances are over-estimated?

- Ans - (a) Light is bad.
(b) The sun is in the observer's eye.
(c) The object is small in relation to its surroundings.
(d) Looking through a valley of narrow lane e.g. street.
(e) Lying down.

Ques 3 - When the distances are under-estimated?

- Ans (a) The light is bright or the sun is shining from behind the observer.
(b) The object is large in relation to its surrounding.
(c) There is some dead ground between observer and the object.
(d) Looking up hill.

SECTION-5

RECOGNITION, DESCRIPTION AND INDICATION OF TARGETS

Ques 1 - Define target and land mark?

Ans - (a) **Target**. It is an object which is indicated with a view to bring down fire on it, whenever required.

(b) **Landmarks**. Landmark is an object which is indicated and used in the embodiment of operation orders.

Ques 2 – Describe method of indication of easy target?

Ans - (a) **Indication by Description**. An obvious target can often be described directly. For example 'No. 1 Section BRIDGE' Here BRIDGE is so obvious that no body 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 BGHICHA.

(ii) **Indication by Range**. No 1 Section 600 BAGHICHA.

(iii) **Direction and Range**. When indicting a landmark indicate direction first and than range e.g. BAEN-600, BAGHICHA.

Ques 3 - What is the sequence of targets?

Ans - The easy way to remember this sequence is to remember the word 'GRAD'. The sequence is as follows:-

(a) Designation of Group.

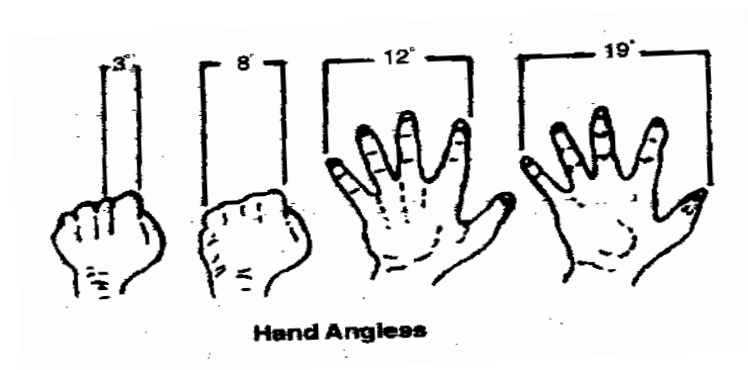
(b) Range.

(c) Aid.

(d) Description

Ques 4 – How to measure degree with hand?

Ans - **Hand Angles**. This is a rough method which is sufficiently accurate for practical purposes. The various degree measurements are given in the diagrams below. Remember to keep the left (LEFT) hand fully stretched and tilt it in the required direction. As the size of hand varies considerably the figures given below are approximate only. Each person should with the help of a degree scale check his hand for degrees.



SECTION-6

MOVEMENT WITH & WITHOUT ARMS (ONLY FOR SW)

Ques 1 - What is the various methods of movement by Rifle and LMG?

Ans - (a) **Crawling by Day with Rifle**

- (i) Monkey run.
- (ii) Leopard crawl.
- (iii) Walk.
- (iv) Roll.

(b) **Crawling by Day with LMG**

- (i) Knee crawl.
- (ii) Side crawl.
- (iii) Leopard crawl.

(c) **Crawling by Night**

- (i) Ghost walk.
- (ii) Cat walk.
- (iii) Kitten crawl.

Ques 2 - What all points must be remembered while making movements?

Ans - (a) Move from cover to cover and make use of natural camouflage. Stop, observe and listen from bound to bound and do not keep moving forward the whole time.

- (b) Watch your front and flanks.
- (c) Crawl slows the movement and hinders observation, therefore crawl only when you must. After crawling for some distance stop, listen and observe and then crawl further.
- (d) Weapons must always be kept ready for use.
- (e) Look carefully and all round for enemy.
- (f) Double across small gaps.
- (g) If shot at, drop and crawl away to a side.
- (h) Check equipment for noise.
- (j) Always consider an alternative route.
- (k) Do not disturb the birds, if this can be helped.

BATTLE CRAFT

SECTION-7

FIELD SIGNAL

Ques 1 – Describe various Hand signals?

Ans - These are tabulated as under : -

Ser No	Action	Signal
(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 bowling' 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)	Quick Time	Right hand raised to line of shoulder, elbow close to the side.
(h)	Double March	Right fist clenched, moved up and down between thigh and shoulder several times.
(j)	Follow me	Right arm swung from rear to front above the shoulder, in 'over arm bowling' fashion.
(k)	Last order completed	Right hand to salute, then arm raised in air finger extended.

(l)	Last order Not understood	Both hands, cupped behind the ears.
(m)	Commander to close	Right arm to the side at 45 degrees to the body, first clenched.
(n)	Enemy in sight specific numbers	Both arms waved on sides 'Bird fashion' followed by number, indicated by number of fingers held up.
(o)	Enemy Approaching	Both hands open, palm inwards at waist level, with inwards scooping motion.
(p)	Enemy position suspected	Both hands, first clenched, raised to shoulder level, followed by indication of direction.
(q)	Enemy LMG firing	Right hand thumb down signal.
(r)	Engage Target by Fire	Both hands clasped above the head (boxer fashion).
(s)	Attack	Punching motion with Right or Left hand according to direction of attack.
(t)	Closed to Rendezvous	Close sign followed by both hands clasped in front of body at waist level.
(u)	Infantry obstacle ahead	Both hands crossed in front of body at the waist, palm open downwards.

Ques 1 – Describe various signals with weapon and whistle?

Ans

Signals With Weapons

3. (a) Enemy in Sight in small number Rifle held above the head parallel to the ground, muzzle in the direction of the enemy.
- (b) Enemy in Sight in large number As per (a) above, but arm moved up and down several times.
- (c) Advance Both arms raised to form the letter 'U'.

Signals With Whistle

4. (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.
- (c) Enemy Aircraft A succession of short blasts.
- (d) Enemy Aircraft departed Two long blasts repeated at interval of five second.

SECTION- 8

SECTION FORMATION

Ques 1 - What are the tactical groups of section?

Ans - (a) LMG group

(b) Rifle group.

Ques 2 – Describe various section formations along with advantages and disadvantages?

Ans -

Ser No	Formation	Advantage	Disadvantage
(a)	Single File	Good for control, not vulnerable to enfilade fire, useful for moving along ditches, narrow defiles and so on.	Bad for fire production, vulnerable to frontal fire.
(b)	File.	Good for control. Useful for moving along broad roads, wide nullahs and so on.	Not good for fire production, vulnerable to frontal fire.
(c)	Diamond.	Good for control, not vulnerable to enfilade fire, good for all round fire production and observation.	Present a good target to frontal fire. Not very good for fire production to the front.
(d)	Arrow-head	Good depth, not vulnerable to frontal fire, good for fire production, probably the best formation for crossing open ground.	Control more difficult than in diamond.
(e)	Spread-head	Good depth, less vulnerable to enfilade fire than arrow head, LMG group not committed immediately on contact.	Control difficult. Delay in fire production.
(f)	Extended Line	The formation used in the final assault. Very good for fire production (from the hip) and	Control difficult. Very vulnerable to enfilade fire, no depth.

bayonet fighting.

SECTION-9

FIRE AND MOVEMENT

Ques 1 - What are the basic considerations for fire and movement?

Ans - (a) There should be no 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 without loss of control or time.

(d) Full use should be made of all available cover. When cover is lacking the use of smoke (smoke grenade) should be considered.

(e) Full use should be made of all available weapons for covering fire.

Ques 2 – How the ground should be appreciated?

Ans - It should be appreciated under the following headings:-

(a) Fire positions.

(b) Observation positions.

(c) Cover from fire.

(d) Cover from view.

(e) Obstacles.

Ques 3 – What are the common mistakes in the use of ground?

Ans - (a) Carelessness by troops while making a reconnaissance, such as unfolding a map in the open or not using a covered approach to an OP.

(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.

Ques 4 - What are the ideal points for selection of Fire positions?

- Ans -
- (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.

SECTION-10

SECTION BATTLE DRILL

Ques 1 – What are the stages of section battle drill?

Ans - The Section Battle Drill is divided into 4 stages.

- (a) Stage – 1 – Action on coming under effective fire.
- (b) Stage – II – Locating and neutralizing the enemy.
- (c) Stage – III- Attack.
- (d) Stage – IV- Re–organization

Ques 2 - What drill will be followed for locating and neutralizing the enemy?

Ans - (a) **By Observation.** Look in the area from which the 'thump' came. The time between the 'crack' and the 'thump' gives an indication of the range. If nothing is seen after about 30 seconds or so, it is very unlikely that enemy will be located by looking.

(b) **By Fire.** The section commander will give a fire control order to a couple of rifleman to fire two shots each into likely cover. The rest of the section will observe their area of observation carefully. If there is no answer to fire, then the

section commander should try another couple of rifleman at some other target. If there is still no enemy fire, either they are well trained or they have withdrawn.

(c) **By Movement.** The section commander will order one or two men to get up and double forward about 10 yards to a different cover. He might do this again if it draws no fire. If the enemy troops are there, they must be extremely well trained not to fall for these tricks and start firing at such poor targets. (A man getting up and moving fast for about 10 yards is a very difficult target to hit). If there is still no enemy reaction then the section commander must continue the advance.

Ques 3 - What are the important points during assault of section?

Ans - (a) The section commander will lead the rifle group in person, he is normally in the centre.

(b) Covering fire will be provided for all movements in the open. The angle of the fire should be as wide as possible.

(c) When the rifle group gets down into fire position after a bound, the LMG group must move forward into a new fire position automatically. Once the LMG group is in a position from which it can support the assault from a good angle, the rifle group will move in one bound. Before the assault goes in, the rifleman armed with the grenade discharger cup and the projector strim grenade should be ordered to remove these from their rifle, if necessary.

(d) Normally the assault will start at the 'walk' with firing being carried out from the shoulder or the hip (marching fire). The section doubles only during last 100 to 50 yards when the section commander gives order 'CHARGE'.

(e) No 1 and No 2 of the LMG group must carry sufficient magazines to support a normal section attack.

(f) As the assault goes in, the LMG group will fire as long as possible and then switch its fire across the objective just in front of the rifle group.

Ques 4 - What are the important points during Reorganisation?

Ans - (a) The LMG group will rejoin the fire group 'at the double' immediately it sees the rifle group take cover after the assault.

(b) The section commander will organize a search of the area of the objective for any enemy hiding or wounded. Rifle numbers detailed to search will be covered by other rifleman.

(c) The section commander will check positions of rifleman and LMG group, allot arcs of observation and detail reference points.

(d) The section commander will check:-

- (i) Causalities,
 - (ii) Ammunition expenditure, and
 - (iii) Refilling of LMG magazine.
- (e) The section commander will await the platoon commander for further orders.

SECTION-11

FIRE CONTROL ORDERS

Ques 1 - What are the important terms used in Fire control orders?

Ans - (a) **Fire Unit.** Any number of men firing under the command of one man, usually, a section. The person responsible for giving the executive order of 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 include special directions about opening and withholding fire.

(c) **Fire Control Orders.** These are orders given by the fire unit commander to direct and control the fire of the section. Emphasis should be on control and supervision. These orders are the final with complete instructions after all factors have been considered 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 field of fire which is the area upon which it will be possible to fire effectively in any direction.

Ques 2 – What are the important points which section commander must remember before giving fire control orders?

Ans - (a) **Indication.** No fire control order can be effective unless the target is clearly indicated and can be easily recognized by the men of the fire unit.

(b) **Range Visibility and Vulnerability.** It should be considered if the range, visibility and vulnerability of the target justify fire at all. Would it be better to wait and get a more vulnerable or more complete surprise?

(c) **Best Weapon to Use.** What is the best weapon to use, although the LMG is the main weapon of the section, the target may be more suitable for the fire of the riflemen only or for a combination of both weapons.

(d) **Single Round or Burst.** Should the fire be in single rounds or in burst. Should it be rapid or at the normal rate? Rapid rate is justified only on a comparatively few occasions when it allows the maximum effect to be gained from surprise when an especially vulnerable target presents itself or to cover move in the final phase of an assault.

Ques 3 – What are the important rules for giving out fire control orders?

Ans - (a) The orders should be given clearly, calmly and consciously.

(b) It should be given loudly, so as to be heard over the noise of battle but should not be louder than required.

(c) It must be given as an order, and obeyed as such.

(d) It must be given with adequate pauses, so that those being addressed may have time to take the correct action, for example, there must be time for sight adjustment after the range is ordered. No 1 Section (Pause) 300 (Pause) fire when you see a target.

Ques 4 – What is the sequence of fire order?

Ans - The suggested code work is 'GRIT', each letter of which signifies stage in fire orders as follows:-

G -The Group of the section which is addressed, that is the LMG group or the whole section. An order starting with "No 1 Section" indicates that the whole of No. 1 Section will fire. "LMG-Group or Rifles Group" means that the group named only will fire.

R -The Range to the target. To ensure accuracy of fire and to concentrate attention on a limited area of ground.

I - The Indication of the point of aim by its description.

T -The type of fire to be employed.

SECTION-12

TYPES AND CONDUCT OF PATROLS

(ONLY FOR SD CADETS)

Ques 1 – What are the essential qualities in fighting men developed by patrolling?

Ans - Patrolling develops four essential qualities of the fighting man:-

(a) Discipline

(b) Comradeship

- (c) Aggressiveness.
- (d) Alertness.

Ques 2 – What are the type of patrols?

- Ans - (a) Reconnaissance Patrols (Recce Patrols)
 (b) Protective Patrols.

Ques 3– What are the tasks of Recce of patrols?

- Ans - (a) Location and details of enemy position.
 (b) Location of obstacles laid by enemy and constant plotting of features.
 (c) Study enemy habits.
 (d) Any other specific information asked.

Ques 4– What are the tasks of Protective patrols?

- Ans (a) To deny approaches to enemy patrols and obtain earliest possible information of the approach of the enemy.
 (b) To gain and confirm topographical information including that of artificial obstacles.
 (c) To give early warning of the enemy's intentions.
 (a) To deny information to enemy patrols.
 (b) To dominate 'No Man's Land'.
 (c) To protect flanks by aggressive patrolling.

Ques 5 – What are the important points to be remembered by scouts?

- Ans - (a) Scouts should move from cover to cover using the correct methods of observation around cover.
 (b) Scouts should move by short bound in area where enemy is suspected.
 (c) A pair of scouts should move one behind another and should keep each other within easy voice control .The leading scout should often look over his shoulder to ensure that he has the second scout in visual contact. However, it is for the second scout to keep up.
 (d) Scouts must always be alert.
 (e) Scouts must protect each other by placing themselves in such a way that they can cover each other by fire.
 (f) Scouts move as individuals making use of ground and cover.

- (d) Scouts must always remain in contact with the unit through the sub-units commander.
- (e) Communication are from front to rear. Contact is visual.
- (j) Scouts must so move on ground and take cover in such a way that they do not give away each others position.
- (k) Scouts must not bunch together on bounds.

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CHAPTER-V

MILITARY HISTORY

Note – Cadets are advised to read relevant chapters of précis to get a thorough knowledge of Military history.

CHAPTER-VI

COMMUNICATION

SECTION-1

IMPORTANCE OF COMMUNICATION IN ARMY

Ques 1 – Why the efficient signal; communication is important for the Defence Forces?

- Ans - (a) Communicating between deployed troops and commanders.
- (b) Convey the details of enemy troop movements and their activities.
- (c) To change the mode of battle activities.
- (d) To implement emergency instruction in battle field.
- (e) To convey specific orders in terrain and snow bound area.
- (f) For effective operational changes in battle field.
- (g) To acquire and decipher the information and misinformation of enemy.
- (h) To prepare the troops for further operational activities.
- (j) To assess grounds level effect of operational activities.
- (k) To improve infrastructure facilities in battle field.
- (l) To carry out secure and effective communications with precaution and privacy.
- (m) Communication supply of food and evacuation of casualties.

SECTION-2

METHOD OF COMMUNICATION

Ques 1 – What are the various methods of communication?

- Ans - (a) Sign Language
(b) Voice Medium
(c) Written script
(d) Runners and message bearers
(e) Line and cable
(f) Wireless

SECTION-3

TYPES OF COMMUNICATIONS, ADVANTAGES/DISADVANTAGES

Ques 1 – What are the advantages and disadvantages of Line communication?

Ans - These are as under : -

Advantages

- (a) Reliable and practically free from electrical interference.
- (b) Relatively secure.
- (c) Number of circuits and message carrying capacity is more but limited only by availability of material and manpower.

Disadvantages

- (a) Vulnerable to physical interference and enemy interception along the entire length of the route.
- (b) Takes time to construct.
- (c) Inflexible once it is laid.
- (d) Expensive in men and material.

Ques 2 - What are the advantages and disadvantages of Net Radio?

Ans - **Advantages.**

- (a) Is vulnerable only at terminal and is therefore reasonably protected from enemy action except by a direct hit.
- (b) Is very flexible, can be rapidly re-arranged in the event of regrouping.

- (c) Is rapid in establishing communication.
- (d) Can work on the move although range obtained will be much less than when stationary.
- (e) Is economical in personnel and equipment.

Disadvantages

- (a) Is 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.

Ques 3 – What are the advantages and disadvantages of Radio Relay?

Ans - **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) Is vulnerable physically only at terminal.
- (f) By its ability to employ multichannel equipment radio relay provides more teleprinter circuits over one link than can normally be provided over the average field cable. Thus it has much greater traffic handling capacity.

Disadvantage

- (a) Liable to interception and hence insecure. Has relatively greater security than net radio, depending upon the siting 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 reasonable suitable to get a 'quasi optical path', this presents difficulty in siting.

- (d) Location of terminal and intermediate stations may not suit tactical layout and may, therefore, create additional protection requirements.
- (e) Can not work on the move.
- (f) Slightly more expensive in men and material than in the case of net radio.
- (g) Needs critical siting.

SECTION-4

COMMUNICATION MEDIA

Ques 1 - What are the various transmission lines?

- Ans - (a) Parallel Wire type
(b) Coaxial type
(c) Wave Guide type

Ques 2 –What are the various types of propagation of waves and explain each in brief?

- Ans - (a) **Ground Wave Propagation**. Used for long and medium waves, limited range is 30 Kms.
- (b) **Sky Wave Propagation**. Used for HF range up to 30 MHz communication, range is 100 km to 1000 Kms. These make use of ionosphere layer existing to a height of 150 -200 kms from the surface of earth.
- (c) **Space Wave Propagation**. The propagation of VHF and UHF frequency takes place in straight lines. The range is limited by curvature of earth and so distance between two neighboring station is approx 50 Kms.
- (d) **Tropospheric Scatter Propagation**. Also known as tropo scatter or fwd scatter propagation, extended height up to 8-10 Kms from the surface of earth.

SECTION-5

RS ANPRC-25

Ques 1 – What are the special feature and facilities available in Radio Set ANPRC-25?

- Ans - (a) It is a portable set.
- (b) It has RT communication facilities.
- (c) Can be used on ground and man pack.

- (d) Facilities of remote operating and re- broadcasting is available.
- (e) Power supply can be increased with booster unit to increase the communication range.
- (f) Protection from Heat and Moisture.
- (g) VHF is pre-tuned.
- (h) Suitable for Para Dropping.
- (j) Compatible with RS VA and VA Mk II and VC.
- (k) Range will be doubled when it is used with GPA.
- (l) Can be used in all type of geographical areas.

Ques 2 –What is the weight and frequency range of Radio set ANPRC -25?

Ans - (a) **Weight**

- (i) Radio Set - 6.10 Kg.
- (ii) Battery - 1.60 Kg.
- (iii) Accessories - 3.08 Kg.
- (iv) Complete Station - 10.78 Kg.

(b) **Frequency Range**

- (i) Frequency range of this set is 30 MHz to 75.95 MHz which is fixed with two bands.
 - (aa) Band I- 30 MHz to 52.95 MHz
 - (ab) Band II - 53 MHz to 75.95 MHz
- (ii) Its frequency range is connected with 920 channels. Channel spacing from one channel to another channel is 50 KHz.

Ques 3 – What is communication range and power supply of Radio set ANPRC -25?

Ans - (a) **Communication Range**

- (i) With antenna AT 892 - 8 Km.
- (ii) With Antenna AT 271 - 8 Km.
- (iii) With booster Unit - 25 Km
- (iv) With GPA with Booster - Range becomes double.

(b) **Power Supply Consumption**

Battery Dry HT/LT 15/3 V IA. Life of this battery is in the ratio of 1:9 for 20 hrs, in which transmission can be done for one hour and message can be receive for 9 hrs.

SECTION -6

CHARACTERISTIC OF WALKIE TALKIE

RADIO SET GP 338 MOTOROLA

Ques 1 - What are the facilities available in RADIO SET GP 338 MOTOROLA?

Ans - (a) It is portable and light in weight.

(b) Can be operated easily.

(c) It can be operated in VHF/UHF and 2 way simplex mode.

(d) 128 channel of this radio set can be preset into 8 zone.

(e) 16 channels can be preset into single zone.

(f) Frequency of this radio set can be programmed in 25 KHz channel space with the range of 12.5 to 20 KHz.

(g) Option of selective call facilities available.

(h) Call alert can be given to receiver station.

(j) Can select required zone.

(k) Start/stop facilities of scan operation available.

(l) Add/Delete from scan list facilities available.

(m) Menu key facilities are available.

(n) Provision of receiving signal strength indicator (RSSI) are available.

(o) Provision of name/Tone Tagging facility available.

(p) Provision of talk around indicator facility available.

(q) Provision of 14 character Alfa numerical display LCD facility available.

- (r) Provision of clock/reminder alarm facility available.
- (s) Audible alert tone indicator is provided.
- (t) Seven programmable buttons are provided.
- (u) Facility of emergency siren top button is provided.
- (v) Battery gauge indicator facility is provided.
- (w) Accessory connectors is provided with radio set.
- (x) Provision of DTMF key pad (Dual Tone Mute Freq).
- (y) Clock and alarm is provided.
- (z) Time out timer facility is provided.
- (aa) Provision of battery saver.
- (ab) Power level can be adjusted.
- (ac) Provision of MDC-1200 signalling encode/decode (Motorola digital code).

Ques 2 – What is the weight and frequency range of Radio Set GP 338 Motorola?

Ans - (a) **Weight and Measure**

- (i) Weight and measure of this radio set is as follows:-
- (ii) Dimension with NI MH high cap battery - 137 x 57.5 x 37.5 mm.
- (iii) Wight with NI MH high cap battery - 420 gms.

(b) **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.

Ques 3 – What is the communication range and name of power supply of Radio Set GP 338 Motorola?

Ans - (a) **Communication Range** Communication range of this radio set is 4 to 5 Km and 20 to 40 Km with repeater.

(b) **Power Supply** Power supply can be provided to this radio set by the following batteries.

- (i) Ni MH high cap 7.2 volt.
- (ii) Ni MH ultra high cap 7.2 volt.
- (iii) Ni Cd High cap FM 7.2 volt.
- (iv) Ni Cd High cap 7.2 volt.
- (v) Lithium 7.2 volt.

SECTION -7

LINE COMMUNICATION

Ques 1 – What are the basic functions of telephone sets ‘L’, ‘F’, ‘J’, ‘EE, 8B’?

- Ans - (a) It works on magneto signalling.
- (b) Calling is done by magneto.
 - (c) CB calling and clearing is done.
 - (d) It provides speech communication.
 - (e) It works in all weather conditions

Ques 2 – What are the facilities if Switch Board Telephone 15 Lines?

- Ans - (a) 15 Lines can be provided.
- (b) Can work with either magneto, CB, CBS or auto exchanges.
 - (c) Has got both internal and external ringer.
 - (d) Two exchanges can be linked up to provide 30 line facility.
 - (e) A lamp indicator has been provided to warn the operator about an incoming call.
 - (f) A ringing visual indicator has been provided.
 - (g) Facility exists for night alarm.
 - (h) Apart from the dry battery, power source can be provided by secondary battery also.
 - (j) Lighting facility for the switch board is provided by means of specially designed lighting unit.

Ques 3 – What are the advantages and functions of Telephone Set 5A/5B?

Ans - The telephone set Field 5A/5B has the following functions and advantages:-

- (a) Facility exists for installing a autodial and hooking with an auto exchange.
- (b) Facility for line test exists.
- (c) A device has been installed in the micro phone for noise cancellation.
- (d) In H position the range of the telephone is increased considerably.
- (e) Facility exists on the both 5 A/5 B for remote operating.
- (f) Made of superior magneto and can function with CB/CBS exchanges.

Ques 4 - What is the [power supply and consumption of the Telephone Set 5A/5B?

Ans - It is powered by 2 X 1.5 Volt No 3 cells or 3 V external batteries and the power consumption of set 5 A is 20 mA and set 5 B is 15 mA. It can receive and sent signal waves with a bell due to generator

Ques 5 -What is the main difference between Telephone set 5 A and 5 B?

Ans - **Telephone Set 5 A**

Telephone Set 5 B

- | | |
|--|---------------------------------------|
| (a) Small in size | Large in size |
| (b) Light in weight | Heavier |
| (ci) Auto call can be attached | Auto call can not be attached |
| (d) Bell is tubular type | Bell is Gong type |
| (e) CB Loop resistance is 200, 250, 300. | CB Loop resistance is from 200 to 350 |
| (f) TRL switch exists | TRL switch does not exists |
| (g) Threaded type of line terminal | Push type line terminal |

Ques 5 - What are the important phrases used while operating the exchange?

Ans - (a) “ Number please , Sir”.

(b) “ You want number Sir”.

- (c) “ Sorry , Sir Number is engaged , Sir”.
- (d) “ I will ring you back , Sir”.
- (e) “ Call for you from Speak up, please”.
- (f) “ Have you finished . Sir”.

SECTION -8

LATEST TRENDS AND DEVELOPMENTS

Ques 1 – What are the latest trends in communication?

Ans - These are as under : -

- (a) Tropo-scatter
- (b) Modem
- (c) Fax
- (d) Telex
- (e) Satellite
- (f) Optic fiber communications
- (g) Computer system
- (h) Internet
- (i) Cell phone
- (j) Multimedia
- (k) Videophone

Ques 2 - Name various types of satellites?

- Ans -
- (a) Weather Satellite.
 - (b) Scientific Satellite.
 - (c) Communication Satellite.
 - (d) Navigational Satellite
 - (e) Military Satellite.

Ques 3 – What are the advantages and disadvantages of optic fiber communication?

Ans – (a) **Advantages**

- (i) It has wide band width carrying different types of info from low speed voice signal to high speed computer data.
- (ii) Less power requirement.
- (iii) Small cable size.

- (iv) No repeater station required.
- (v) No electromagnetic interference.

(b) **Disadvantages**

- (i) Jointing problem.
- (ii) Channel dropping not possible.
- (iii) More expensive.

Ques 4 - What are the advantages and disadvantages of Computer system?

Ans - (a) **Advantages**

- (i) Speed of process and calculations.
- (ii) Accuracy of process and calculation once the programme is proved.
- (iii) Persistence - It will continue on the same job until the end, always working in the same way, each and every day.
- (iv) Mass storage of data.
- (v) The ability to handle large volume of data.

(b) **Disadvantages**

- (i) Data loss if machine malfunctions.
- (ii) Back up hard data still required to be maintained.
- (iii) Constant power source is required.

Ques 5. What are the advantages of cell phone?

Ans - (a) More subscriber and traffic capability.

- (b) No perceptible difference between mobile and fixed subscribers.
- (c) Better quality of service.
- (d) Miniaturization using very large scale integration (VLSI) technology which enables ever decreasing size and weight of the hand set.
- (e) Higher speed of data exchange.
- (f) Can be used in an integrated mode with computer network.

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CHAPTER-VII

OBSTACLE TRAINING

SECTION-1

OBSTACLE COURSE

Ques 2 – What is the importance of obstacle training for NCC cadets?

Ans - Obstacle training inculcates self-confidence & team spirit and infuses courage, patience & makes them physically fit.

CHAPTER-VIII
HOME NURSING

SECTION -1

INTRODUCTION TO HOME NURSING

Ques 1 – What are the qualities of a good nurse?

Ans - A good nurse must possess the following qualities:-

- (a) **Honesty and Truthfulness.** A nurse should be honest to her profession. She should confess her mistake and not risk the life of the patient by hiding it.
- (b) **Sympathy and Understanding.** A good nurse should deal with the patient with understanding and compassion. She must appreciate the pain and suffering of the patient.
- (c) **Cheerfulness, Gentleness and Willingness.** A cheerful nurse reduces the sufferings of the patients to half. Her gentleness reduces their pain and discomfort. "A warm smile may be more therapeutic than a dose of medicine".
- (d) **Obedience and Discipline.** A nurse should have self discipline and should obey the orders of the doctor and carry them out without argument.
- (e) **Observant.** A Nurse should observe the minutest details of the patient's condition. If there is the slightest change in the patient's condition, she should immediately report it to the Doctor.
- (f) **Tact and Sense of Humour.** A tactful nurse can deal easily with the irritable patients. Her sense of humour helps her to bear the hardships of profession cheerfully.

SECTION -2

THE ROLLER BANDAGE AND ITS APPLICATION

Ques 1 – What are the sizes of various bandages?

- Ans - (a) Bandage for Finger - 1" wide
(b) Bandage for Head and Arm - 2 ½"
(c) Bandage for Trunk - 6"
(d) Bandage for Leg - 3 ½"

Ques 2 – What are the general rules of bandages?

- Ans (a) Face the causality.
(b) Hold the head of the bandage in the right hand.
(c) Apply the outer side of the free end to the part and where possible lock it in position by a superimposed turn.
(d) Bandage firmly from below upwards and from within outwards over the front of the limb.
(e) Apply the layer of the bandage so that it covers neither too tight nor too loose.
(f) When completed secure the bandage by a safety pin or adhesive strapping.

SECTION -3

THE SICK ROOM: PREPARATION, CLEANING, LIGHTING AND VENTILATION

Ques 1 – What points should be borne in mind while cleaning the sick room?

- Ans (a) All cleaning work should be done without disturbing the patient after the toilet is over and the bed remade.
(b) Light furniture should be removed before the room is swept and dusted. After dusting, each piece should be wiped with a weak solution of disinfectant and then polished with dry cloth.
(c) Dusting should be done with a damp cloth. The floor should be cleaned after scattering damp tea leaves so that dust does not rise.
(d) At night, flowers should be removed from the vases and fresh flowers arranged in the morning.

Ques 2 Define Sick Room?

ANS: The sick room should be that room of the house which is away from all noise and through which there is no passage. However, it should have a bathroom and lavatory close by. It should face South or South-West.

Ques 3 Define Sick Room?

- Ans
- (a) Preparation
 - (b) Cleaning
 - (c) Lighting
 - (d) Ventilation
 - (e) Cross Ventilation
 - (f) Wide Streets with Open Spacing.
 - (g) Cleaning of Air Through Trees
 - (h) Effects of Heat

SECTION -4

PULSE , RESPIRATION AND TEMPERATURE **TAKING AND RECORDING**

Ques 1 – Define respiration?

Ans - The inhalation and exhalation of a person is called respiration

Ques 2 – What is the pulse rate of various ages?

- Ans
- (a) Infants 30-40 per minutes.
 - (b) Children 24-28 per minute.
 - (c) Adults 15-20 per minute.

Ques 3 – Define body temperature?

Ans Temperature. The normal temperature of a man is between 97° and 99° F. There is slight $\frac{1}{2}$ ° F variation between the daily temperature in the morning and evening. The lowest temperature is between 2 AM and 4 AM.

Ques 4 – What is the method of taking temperature?

Ans - Keep the bulb of the thermometer pressed under the armpit or beneath the tongue or in the groin for 2 minutes.

Ques 5 – Define pulse?

Ans - The pulse is the heart beat and is most commonly felt at the radial on the point of the wrist. The average pulse rate is 72 beats per minute. In case of infants, is 100 to 140 beats per minute and in case of children 90 to 100 beats per minute.

SECTION -5

OBSERVATION OF THE SICK: SIGNS AND SYMPTOMS TO BE NOTED

Ques 1 – What important points should be observed in a patient for proper treatment?

Ans - These are as under: -

(a) **Appearance of the Patient**

- (i) The colour of the skin whether pale, flushed blue or yellow.
- (ii) Whether moist or dry, hot or cold, smooth or rough, covered with rashes, bruises or discolored.
- (iii) If any swelling or edema.
- (iv) If pain, its place and duration.
- (v) Facial expression and other signs of discomfort.

(b) **Temperature, Pulse and Respiration.** Take temperature, pulse and respiration twice a day or four times a day or eight time a day, as desired by the doctor and maintain TPR Chart.

(c) **Stools**

(i) Frequency and whether it shows constipation or diarrhoea condition.

(ii) **Colour**

(aa) Normal brown.

(ab) Clay coloured which shows obstructive jaundice.

(ac) Black shiny which shows bleeding from the stomach or duodenum.

(ad) Full black which shows effect of medicines like iron.

(iii) **Composition.** Presence of abnormal material as blood, pus, gall stones, worms, undigested food. Specimen of stool is to be left for the doctor to see in a well covered container.

(d) **Urine.** In case of urine the following should be observed:-

(i) **Frequency.** Increased frequency is due to inflammation of the bladder.

(ii) **Quantity**

(aa) Urine output is reduced in fever, in conditions of dehydration and in a acute nephritis.

(ab) Urine quantity is increased in case of diabetes and inflammation of the kidneys.

(iii) **Colour Abnormalities**

(aa) **Red** – Due to presence of a lot of blood.

(ab) **Dark Greenish Brown** – Due to presence of bile.

(ac) **Smoky** – Due to some blood being present.

(ad) **Orange, Green or Blue** – Due to presence of some drugs.

(iv) **Deposits.** If the urine is allowed to stand, the following may be observed:-

(aa) A sandy deposit white or pink.

(ab) A whitish cloud showing mucous.

(ac) A thick greenish deposit due to pus.

(Early morning specimen should be kept in a clear, covered , glass bottle).

(e) **Cough and Sputum.** Report on it must state:-

(i) Amount.

(ii) Colour.

(iii) Whether expectorated easily or with difficulty.

(f) **Vomit**

(a) Quantity.

(b) Time in relation to food.

(c) Whether it causes pain or relieves it.

(d) Material vomited such as blood.

SECTION -6

FEEDING A HELPLESS PATIENT

Ques 1 – What are the important precautions to be taken while feeding a helpless patient with fluid diet?

- Ans – (a) The mouth of the patient should be washed and wiped.
(b) If the patient can sit up, the fluid can be given in a cup or in a glass.
(c) If the patient wants to take fruit juice with a straw he/she should be provided that.
(d) If the patient can not sit up, he/she should be fed with a feeding cup or a feeder.
(e) The bed clothes should be protected by placing a clean napkin beneath the patient's mouth.
(f) The nurse should place her left arm, under the first pillow to raise the patient's head slightly.
(g) The flow of the fluid should be regulated so that too much of it does not flow into the patient's mouth.
(h) One mouthful should be given at one time pausing to allow her time for chewing. Feeding can be done with a tea spoon also.
(j) In case of jaw injuries, a small rubber tube is attached to the spout of the feeding cup and then put between the teeth.
(k) The patient should be given small quantity to swallow at one time.
(l) After feeding the patient, lips should be wiped with a clean towel.

Ques 2 – What are the important precautions to be taken while feeding a helpless patient with solid food?

- Ans (a) Food should be served in an attractive manner arranged attractively on a side table.
(b) One dish should be brought at one time.
(c) The food should be served hot. It should be put in a plate in the kitchen before bringing to the patient.
(d) Patient should be fed with a spoon.
(e) As soon as food is finished the plate should be removed.

SECTION-7

MEDICINES AND THEIR ADMINISTRATION

Ques 1 –What precautions should be taken while administering the liquid medicines to patient?

- Ans - (a) Check the label with the prescription. If handling a new medicine read the instructions carefully.
(b) Shake the medicine well.

- (c) Put your thumb near the correct marking of dosage on the medicine glass. Hold the glass in level with the medicine bottle. Pour away from the label so that it does not become illegible. Replace the cork immediately.
- (d) Read the instructions once again before actually giving the medicine to the patient.
- (e) Take the medicine on a tray with a glass of water and spoon in case the medicine requires stirring. If the medicine has a bitter taste, give the patient some sweet drink.
- (f) Put the medicine bottle in the correct place.
- (g) Never pour back any unused medicine, throw it away.

Ques 2 –What precautions should be taken while administering the other medicines to patient?

- Ans
- (a) In case of pills, tablets, capsules and powder, remember that a pill has a sugar coating and a capsule has a gelatine coating and hence can be easily swallowed with water.
 - (b) Tablets if not swallowed by the patient may be crushed and put on the back of the tongue for swallowing.
 - (c) Powder must be poured at the back of the patient's tongue and water poured in his mouth.
 - (d) Iron mixture should be given with straws so that the teeth are not stained.
 - (e) If the patient is not too weak, he/she should be asked to clean his/her teeth.

SECTION -8

FEVER, INFECTION, DISINFECTION AND SPECIFIC INFECTIOUS DISEASES

Ques 1 –What is fever?

Ans - Whenever there is an inroad of disease germs in the body, due to some infection, it raises its temperature to put up a fight against the invasion. The state of more than normal temperature is called 'Fever'.

Ques 2 –What are various names of fevers considering the temperature?

- Ans
- (a) The normal temperature of the body is 97° F to 99° F.
 - (b) The temperature above 99° causes pain, restlessness, headache and body ache.
 - (c) Moderate temperature from 99° F to 103° F is called Pyrexia.
 - (d) High temperature from 103° F to 105° F is called High Pyrexia.

(e) Very high temperature over 105° F is called Hyper -Pyrexia.

Ques 3 –What are various types of fevers as per severity?

Ans (a) **Constant.** In this the temperature remains the same all the 24 hours as in pneumonia and scarlet fever.

(b) **Intermittent.** The temperature rises very high and falls very low. It appears when there is severe infection.

(c) **Remittent Fever.** This is a very high fever. It rises more than 1° during 24 hours. It is found in case of tuberculosis and sepsis.

(d) **Irregular.** It has no set pattern of rise and fall of temperature.

Ques 4 Define infection?

ANS: The spreading of germs of a disease from a sick person to a healthy person is called infection.

Ques 5 - What are the media of infection?

ANS: (a) **Through Air.** Disease germs spread from a sick person to a healthy person when the sick person breathes out foul germs and fit person inhales it. The germs are harboured by the healthy person till they multiply and become strong enough to show symptoms of the disease. Diseases like tuberculosis and influenza spread in this manner.

(b) **Through Water.** Water gets contaminated when patients of a disease wash into it their faeces, urine, sputum and vomit. These germs are carried by rivers and streams and sink into wells, ponds and lakes. When this water is used by healthy persons for washing and drinking, the germs remain dormant in his body till his resistance becomes poor and he falls victim to diseases. Cholera, enteric fever, dysentery, typhoid and jaundice spread in this manner.

(c) **Through Insects.** Germs of various diseases are carried by insects. The anopheline female mosquito, house fly, sand fly, fleas, ticks all act as carriers of disease. The mosquito, sand fly, fleas and ticks bite a patient, take the germs of the diseases in their blood, harbour them till they find a healthy man to bite and pass on the germs into his blood, till after a period, the healthy person also starts showing signs of the disease. Malaria, plague and sand fly fever, all spread like this. Cholera, diarrhoea, dysentery, jaundice, typhoid spread in this manner.

Ques 6 - Define disinfection?

ANS: It means destroying the disease germs through various methods. It is to break the chain of infection. The following are the important disinfectants:-

Ques 7 : what are the physical and the chemical agents of disinfection?

ANS:

(a) **Physical Agents**

- (i) Light.
- (ii) Heat - both dry and moist.

(b) **Chemical Agents**

- (i) Gases.
- (ii) Liquids.
- (iii) Solids.

SECTION – 9

OPERATION: AFTER CARE, DRESSING OF WOUNDS

Ques 1 - Discuss some of the points while dressing the wound of the patient?

Ans - The following should be done to help in quick healing of wounds and keep them from turning septic:-

- (a) The hand should be properly washed.
- (b) Everything that is used while dressing the wound should be properly sterilized so that the wound does not get infected
- (c) Soiled dressing should be thrown properly in a covered waste bin and not allowed
- (d) The wound should be cleaned with proper solutions
- (e) Fresh air and sunshine assist in the quick recovery of a patient
- (f) There should be no obstruction to the free circulation of blood so that the healing process is not restricted
- (g) Proper diet should be given to the patient. Sufficient quantity of vitamin C must be ensured for quick healing.
- (h) The patient should be made to feel fit and kept cheerful.

SECTION -10

POISONS AND FIRST AID

Ques 1 What is poison?

ANS: Any substance which, if taken in large quantity causes damage to the human system or may cause death, is called poison.

Ques 2 What are the means of poison intake?

- ANS:** (a) Poisons can be swallowed by eating or drinking.
- (b) Poisons enter the system by breathing in the form of fumes or smoke.
- (c) Poisons enter the body through injections or through bites such as snakes or rabid dogs.

Ques 3 : What are the types of poison?

- ANS:** (a) Corrosive
- (b) Irritants
- (c) Stimulants
- (d) Depressors.

Ques 4: What is the first aid for the patient who has consumed poison?

- ANS:** (a) Arrange to remove the patient to hospital immediately.
- (b) Note down the name of the poison if the empty bottle is there. Preserve if there is any remaining portion of the poison.
- (c) Keep in some container any vomited matter, if it is there.
- (d) If the patient has not taken any corrosive matter induce vomiting.
- (e) If he is unconscious lay him with head turned to one side keeping his tongue out. If his respiration is failing, give artificial respiration.
- (f) If the patient is conscious and the poison which he has taken is known, the following steps may be taken:-
- (i) If he has taken some acid give him some alkali such as chalk, milk of magnesia and baking soda water.
- (ii) If it is alkali give him 2 table spoonful of vinegar or lime juice water. Make the patient drink plenty of water or give something to drink such as milk or barley water or raw eggs.

(iii) If the patient has taken some disinfectant like cresol, carbolic acid or sleeping tablets like luminal, give two table spoonful of common salt with water or raw eggs.

(iv) In case of opium and morphia poisoning, give a few crystals of potassium permanganate in a tumbler of water and make the patient vomit.

(v) If there is gas poisoning, move casualty out of the room having gas. If the breathing is obstructed give artificial respiration. The domestic antidote for poisoning is a mixture of tea powder or burnt toast and milk of magnesia mixed in equal portion.

CHAPTER-IX

INTRODUCTION TO INFANTRY WEAPONS

SECTION-1

CHARACTERISTICS OF 7.62MM SLR, AMN, FIREPOWER, STRIPPING, ASSEMBLING AND CLEANING

Ques 1 - Rif 7.62 mm SLR ka kutar (celibre) kitna hai?

Ans - 7.62 mm

Ques 2 - Bharey huey magazine ke sath Rif 7.62 mm SLR ka wazan kitna hai?

Ans - 5.1 Kg

Ques 3 - Rif 7.62 mm SLR ka kargar range kitna hai?

Ans - 275 meters

Ques 4 - Rif 7.62 mm SLR men kitne round bharey jaatey hain?

Ans - 20 Rds.

Ques 5 - Rif 7.62 mm SLR ka poora naam likho?

Ans - 7.62mm self loading rifle.

Ques 6 - Rif 7.62 mm SLR ke sath ek minute main kitne round fire kar saktey hain?

Ans - 05 Rds

Ques 7 - Rif 7.62 mm SLR ka safai ka saman likho?

- Ans - (i) Pull through.
- (ii) Oil bottle.
- (iii) Combination tool.
- (iv) Gas regulator key screw driver.
- (v) Cylinder/Chamber cleaning brush.
- (vi) Rifle cleaning brush.
- (vii) Graphite grease tube.
- (viii) Chindi.

SECTION-2

SLR : FILLING, EMPTYING OF MAGAZINE, SIGHT SETTING, LYING POSITION, HOLDING, AIMING AND FIRING

Ques 1 – Rif 7.62 mm SLR ka magazine kitne parkar se bhara jaata hai?

Ans - Do parkar se.

Ques 2 – Rif 7.62 mm SLR ki sight par kon kon se ank khude huey hote hain?

Ans - 3 to 6.

Ques 3 – Ready position par trigger ki position kahan hoti hai?

Ans - 'R' par.

Ques 4 – Rif 7.62 mm SLR se kaun kaun parkar ke fire kiye jaate hain?

- Ans - (a) Deliberate.
- (b) Snap shooting.
- (c) Rapid fire

SECTION-3

CHARACTERISTICS OF 5.56MM INSAS RIF, AMMUNITION, FIREPOWER, STRIPPING, ASSEMBLING AND CLEANING

Ques 1 – 5.56 mm Rifle ka poora naam likho?

Ans - Rifle 5.56 mm Indian Small Arms System hai.

Ques 2 - Rifle 5.56 mm ka kuta (calibre) likho?

Ans - 5.56 mm.

Ques 3 - Rifle 5.56 mm ka wazan likho?

Ans - 3.6 Kg.

Ques 4 - Rifle 5.56 mm ka kargar range likho?

Ans - 400 meters.

Ques 5 - Rifle 5.56 mm ka rate of fire likho?

- Ans - (a) Normal - 60 rds/min.
(b) TRB (Three Round Burst) - 90 rds/min.
(c) Intense - 150 rds /min.
(d) Cyclic - 600 to 650 rds/min.

SECTION-4

CHARACTERISTICS OF 7.62MM LIGHT MACHINE GUN (LMG) AMMUNITION, FIREPOWER, STRIPPING, ASSEMBLING AND CLEANING

Ques 1 – 7.62 mm LMG ka poora naam likho?

Ans - 7.62 mm Light Machine Gun.

Ques 2 – 7.62 mm LMG ka rate of fire likho?

- Ans (a) Normal - 28 rds (One mag) per min.
(b) Rapid - 112 rds (four mag) per min.
(c) Cyclic - 450 – 500 rds per min.

Ques 3 – 7.62 mm LMG ka kargar range likho?

- Ans (a) On bipod - 500 yds.
(b) On tripod - 1000 yds.

Ques 4 – 7.62 mm LMG ke magazine mein kitne rounds hain?

Ans - 30 Rds

Ques 5 – 7.62 mm LMG kis sidhant ar kaam karti hai?

Ans - Gas

Ques 6 – 7.62 mm LMG ke change leaver ki kitnee position hoti hai?

Ans - 3.

SECTION-5

TECHNICAL DATA OF INFANTRY WEAPONS

Ques 1 - 84 RL ka kutar kitna hota hai?

Ans - 84 mm

Ques 2 - 84 mm RL ka wazan likho?

Ans - 16.100 Kg

Ques 3 - 84 mm RL se kitne parkar ka ammunition fire kar sakte hain?

Ans – 06 parkar ka.

Ques 4 - 81 mm Mor se kitne parkar ka ammunition fire kar sakte hain?

Ans - Three.

Ques 5 – Hand Grenade No 36 ka killing area kitna hai?

Ans - 8 Mtr raidus.

Ques 6 - Hand grenade No-36 ka fuze kitne second ka hota hai?

Ans - 4 second ka.

Ques 7 - 7.62 mm machine Gun ka rate of fire likho?

Ans - (a) Normal - 100 rounds per minute.

(b) Rapid - 200 rounds per minute.

(c) Cyclic - 600-1000 rounds per minute.

MISC

AUTH OF CADET APPTS: NCC UNITS

(Auth-PE of NCC units & Trg Ests-1979)

<u>SD/SW UNIT- 160 Cdts</u> (Coy – 160 Cadets, with 3 Pls -53, 53, & 54 Cadets)									
Ser No	Unit	Coys /Sqn	SUO	UO	WO	Sgt	Cpl	L Cpl	Total
1.	Inf Unit	Bn HQ	2	0	2	2	2	0	8
		Coy HQ	1	0	2	1	0	0	4
		Pl	0	1	0	1	3	6	11
		5 Coys	7	15	12	22	47	90	193
2.	Girls Pl	Coy HQ	1	0	2	0	1	0	4
		Pl	0	1	0	1	3	6	11
<u>JD/JW TP- 100 Cdts</u>									
Ser No	Troop		CSM	Sgt		Cpl	L Cpl		Total
1.	Boys Tp		1	2		3	5		11
2.	First ½ Boys Tp		1	1		1	3		5
3.	Second ½ Boys Tp		0	1		2	2		6
4.	Girls Tp		1	3		8	12		24
5.	First ½ Girls Tp		1	1		4	6		12
6.	Second ½ Girls Tp		0	2		4	6		12

REFRESHMENTS TO NCC CADETS

1. Refreshments to cadets should consist of following items only: -
 - (a) Milk
 - (b) Shakarpara biscuits.
 - (c) Besan Laddoos
 - (d) Bananas
 - (e) Buns and butter
 - (f) Eggs
 - (g) Iddlies made of urad dal and rice
 - (h) Masala Dosa

- (i) Vada – Made of chana dal
- (j) Poori and potatoes
- (k) Coffee/tea/cool-drinks
- (l) Kara Bhath
- (m) Kesari Bhath
- (n) Rice puddings

Auth-NCCO-08/67.

ACR CALENDAR - CHECK LIST **NCC UNITS**

Ser No	Service	Category	Date			
			Due for initiation	Nominal Roll to reach at Dte	To reach at Gp HQ	To reach at NCC Dte
1.	Army	Col	01 Sep	01 Aug	05 Sep	15 Sep
		Maj to Col (TS)	01 Jun	01 May	05 Jun	15 Jun
		JCOs	01 Jun	-	05 Jun	15 Jul
		Havs	01 Oct	-	05 Oct	15 Nov
		NKs	01 Jan	-	05 Jan	15 Feb
2.	NCC	WT NCC Offrs	01 Jul	15 Jun	05 Jul	15 Jul
		ANOs	01 Jan	-	05 Jan	-
		GCIIs	01 Jan	-	05 Jan	25 Jan
3.	Civil Staff	All	01 Apr	-	05 Apr	-

REVISED WPN/AMN SCALES: NCC UNITS

Applicable wef 01 Apr 2005

AUTH - HQ DG NCC letter No-19404/CS/DGNCC/Lgs (Navy & Eqpt) dt 12 Apr 2005.

Ser No	Wpn	Scale		Remarks
		Wpn	Amn	
1.	.22 Rif (All types)			
	Army SD	02/Coy	20/Cdt	
	Army JD	1/Tp	10/Cdt	
	Air SD	1/Flt	10/Cdt	
	Air JD	1/Tp	10/Cdt	
	Girls SW	6/Bn	20/Cdt	
	Girls JW	1/Tp	10/Cdt	
2.	.22 Imported Rif			500 Rds of amn per Rif held for the Trg Yr.
3.	7.62 mm SLR			
	Army SD	2/Coy	12/Cdt	BDR for 10% of Cdt Str
4.	7.62 mm SLR DP			
	Army SD, Air SD & Girls SW	150 per Major Unit & 75 per minor unit	-	
5.	7.62 mm LMG DP	1/Coy	-	
6.	7.62 mm LMG			
	Army SD (Inf)	02 per unit	7/Cdt (CTN)	CTN amn for 10% of Cdt str, Tracer-Nil.

7.	Smoke Candle			
	Army SD (Inf)	-	6/Coy	
8.	Proj Mini Flare 16 mm			
	Army SD	1/Coy	White-9 Red & Green -6	
9.	12 Bore 4 Shot			
	Air SD	2/Sqn	20/Cdt	
10.	Plastic Pigeon			
	Air SD	-	40/Cdt	

ANNUAL RANGE COURSE NCC

As per revised scales of Arms/Amn wef 01 Apr 2005

<u>The Miniature Rg Course (.22 Rifs)</u>						
<u>This course will be fired by ANOs of Jr Div (Army Wing)</u>						
Practice No	Practice	Tgt	Rg in Yds	Rds	Instrs	Scoring
1.	Deliberate	1'x1'	25	10	(a) Posn lying with rest. (b) 2 practices of 5 Rds each.	Bull & inner - 3 Pts Magpie - 2 Pts Outer - 1 Pt HPS - 30
<u>The Miniature Rg Course (.22 Rifs)</u>						
<u>This course will be fired by Cdts & ANOs of Sr Div (Army Wing)</u>						
1.	Introductory shoot	1'x1' with white aiming mark	25	5	Posn lying with rest.	Grouping, 2 & 3 rds
2.	Deliberate	1'x1'	25	10	(a) Posn lying with rest. (b) 2 practices of 5 Rds each.	Bull & inner - 3 Pts Magpie - 2 Pts Outer - 1 Pt HPS - 30
3.	Competition	Fig 12	25	5	(a) Posn lying with rest. (b) 5 Rds to be fired at a time each.	3 Pts per hit HPS - 15 Pts
<u>The Miniature Rg Course (.22 Rifs)</u>						
<u>This course will be fired by Cdts of Jr Div (Army Wing)</u>						
1.	Introductory shoot	1'x1' with white aiming mark	25	5	Posn lying with rest.	Grouping, 2 & 3 rds
2.	Deliberate	1'x1'	25	5	(a) Posn lying with rest. (b) 1 Practice of 5 Rds.	Bull & inner - 3 Pts Magpie - 2 Pts Outer - 1 Pt HPS - 15
<u>Long/Short Rg 7.62 mm Rif Course</u>						
<u>This course should be fired by Cdts of Sr Div (Army Wing) during ATC</u>						
1.	Introductory shoot	1'x1'	25	2	Posn lying with rest.	Nil
2.	Deliberate	4'x4'/1'x1'	25	5	Posn lying with rest.	Bull & inner - 3 Pts Magpie - 2 Pts Outer - 1 Pt HPS - 15
3.	Deliberate	4'x4'/	25	5	Posn lying without rest.	Bull & inner - 3 Pts

		1'x1'				Magpie - 2 Pts Outer - 1 Pt HPS - 15
<u>Long/Short Rg Course - LMG</u> <u>This course should be fired by Cdts of Inf Units of Sr Div (Army Wing) during ATC</u>						
1.	Deliberate	4'x4'/ 1'x1'	100/25	7	(a) Practice to be fired from lying posn. (b) 2 Rds single shot, 5 Rds automatic (Two bursts of 2 to 3 Rds each)	Bull and inner - 2 Pts Magpie & outer - 1 Pt HPS - 14 Pts