

**NCC DIRECTORATE**



**BHUBANESWAR**

**CADET'S HAND BOOK**

**COMMON SUBJECT  
ALL WINGS  
(FOR JD/JW AND SD/SW)**

# CADET'S HAND BOOK

## COMMON SUBJECTS

### ALL WINGS



(FOR JD/JW AND SD/SW)

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**NCC**

**CHAPTER-I**

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## **NCC**

### **SECTION-1**

#### **GENERAL**

##### **Introduction**

1. The National Cadet Corps (NCC) has its genesis in the ‘University Corps’, which was created under the Defence Act, 1917 with the object to make up the shortage of the Army. In 1920, when the Indian Territorial Act was passed, The ‘University Corps’ was replaced by the ‘University Training Corps (UTC)’. In 1942, the UTC was renamed as the ‘University Officers Training Corps’ (UOTC). The need to create a youth organisation at National level to train the young boys and girls to be better citizens and future leaders of our great country in all walks of life, including Defence forces, was rightly realized by our leaders. A Committee under Pandit HN Kunzru was set up in 1946 at the behest of our first Prime Minister, Pandit Jawaharlal Nehru. The NCC came into existence on 16<sup>th</sup> July, 1948 under the NCC Act XXXVI of 1948 under the Ministry of Defence (MOD).

##### **NCC Motto**

2. The Motto of the NCC is ‘Unity and Discipline’ which was adopted on 23 Dec 1957. In living upto its motto, the NCC strives to be and is one of the greatest cohesive forces of our nation, bringing together the youth hailing from different parts of our country and moulding them into united, secular and disciplined citizens of our nation.

##### **Selection of NCC Flag**

3. In 1954 the existing tricolour flag was introduced. The three colours in the flag depict the three Services of the Corps, red for the Army, deep blue for the Navy and light blue for the Air Force. The letters NCC and the NCC crest in gold in the middle of the flag encircled by a wreath of lotus, give the flag a colourful look and a distinct identity. Each lotus represents one NCC Directorate (Dte).

##### **Aims**

4. The aims of NCC as approved by MOD in Mar 2001 are as under:-

(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.

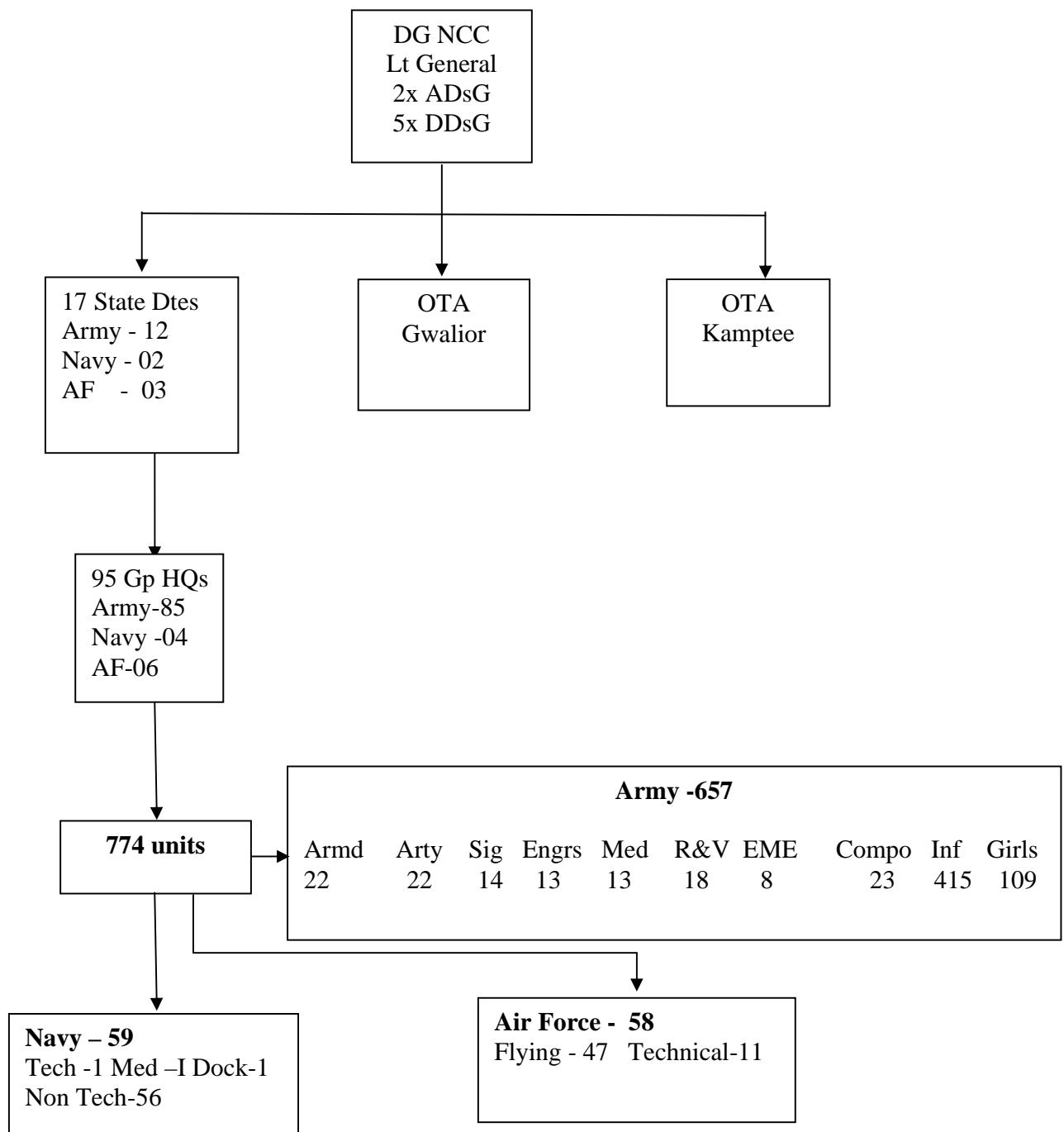
(c) To provide a suitable environment to motivate the youth to take up a career in the Armed Forces.

## **SECTION 2**

### **ORGANISATION**

1. The NCC organization is administered through the MOD. The Defence Secretary is overall in-charge, who is responsible to the Govt, of India for efficient functioning of the NCC and other matters.
2. The NCC is headed by Director General (DG), an Army Officer of the rank of Lieutenant General, who is responsible for the functioning of the NCC in the country through the Dte Gen NCC situated at Delhi. The DG at the Dte Gen NCC is assisted by two Additional Directors General (ADsG), one Major General from the Army and the other a Rear Admiral from the Navy or an Air Vice Marshal from the Air Force. There are five Deputy Directors General (DDsG) of the rank of Brigadier and equivalent; three Brigadiers and one Commodore/Air Commodore and one civilian officer.
3. At the state level, the country has been divided into 17 Directorates (Dtes) covering all States and Union Territories. These Dtes are headed by an officer of the rank of Brigadier or its equivalent from the other two Services. Each of the State NCC Dte controls two to fourteen Group Headquarters (Gp HQ), headed by an officer of the rank of Colonel or its equivalent. In all, there are 95 Gp HQs in the country, who exercise control over a network of 657 Army Wing Units (including Technical and Girls' Unit), 59 Naval Wing Units and 58 Air Squadrons. Details of NCC Dte's and Gp HQs are given in Appendix 'A' & 'B' respectively. The NCC unit is commanded by a Lt Col/ Col (TS) or equivalent. In addition the NCC has two training establishments- Officers Training School (OTS), Kamptee (near Nagpur) and Women Officers Training School (WOTS), Gwalior where professors and teachers from colleges and schools are specially trained to impart training to the cadets as Associate NCC Officers (ANOs).

## **ORGANISATIONAL STRUCTURE**



4. The NCC has been organized into three wings i.e. Army, Navy and Air Wing. Each Wing consists of Junior Division (JD) and Senior Division (SD). Each Wing in addition to JD and SD also has a Girls Division, consisting of Junior Wing (JW) and Senior Wing (SW).

5. The NCC is staffed by personnel drawn from the three Services

- (a) Regular officers drawn from the three Services.
- (b) Whole Time Lady Officers.
- (c) Associate NCC Officers.
- (d) Girl Cadet Instructors
- (e) Permanent Instructional (PI) Staff.
- (f) Civilian Gliding Instructors.
- (g) Civilian Staff

(i) **Regular Officers**. The NCC Directorates are headed by Service Officers of the rank of Brigadier and equivalent, Group Headquarters are headed by Service Officers of the rank of Colonel and equivalent and Units are headed by Service Officers of the rank of Colonel (TS)/Lieutenant Colonel/Major and equivalent. They are responsible for proper training, planning and execution of NCC activities.

(ii) **Whole Time Lady Officers(WTLOs)**. A cadre of Whole Time Lady Officers (WTLO) with cadre strength of 110 officers has been sanctioned in 1995. They are to be commissioned partly through departmental channel and partly through UPSC in a phased manner.

(iii) **Associate NCC Officers (ANOs)**. ANOs are teachers or lecturers in the respective schools or colleges, who volunteer to serve in the NCC. They are responsible for training and administration of the NCC sub units attached to their schools/colleges and for the overall discipline of the cadets placed under their charge. They are paid an honorarium for their service by the State Government. They are granted commission in NCC on a part time basis.

(iv) **Girl Cadet Instructors (GCIs)**. For training of Girl Cadets, a cadre of Girl Cadet Instructors (GCIs) was instituted in the sixties. This is a group 'C' post. The GCIs look after the administration in the Girl's Battalions and also perform escort duties for Girl Cadets when they go for camps and adventure activities. In order to give them better promotional avenues, the cadre has recently been restructured into three grades viz Grade I, II and III instead of two grades earlier.

(v) **Permanent Instructional Staff (PI Staff).** PI staff for the NCC consisting of Junior Commissioned Officers and Non-commissioned Officers of the Armed Forces are posted on tenure basis on Extra Regimental Employment.

(vi) **Civilian Gliding Instructors (CGIs).** CGIs are posted to NCC Air Wing Squadrons. Their primary task is to train NCC cadets in flying.

### **SECTION-3**

#### **PHILOSOPHY OF TRAINING**

##### **Introduction**

1. Training in NCC instils qualities like nationalism, patriotism, discipline, team spirit, esprit-de-corps, leadership and self confidence and promotes overall personality development. NCC gives a tremendous opportunity to one and all for betterment, irrespective of caste, creed, religion or economic status. Based on the aims of NCC, the organisation has laid down training syllabi for the cadets. The syllabi for the Junior Division cadets covers a period of two years and for Senior Division cadets a period of three years. Except for minor variations, the syllabi for each Division is similar for both Boy and Girl cadets. The training year matches the academic and financial years.

##### **Training Activities**

2. The training activities of NCC can be broadly classified as under:-

- (a) **Institutional Training Camps and Attachment Training**
  - (i) Camp Training.
  - (ii) Attachment Training (Service/Units).
  - (iii) Naval Wing Activities.
  - (iv) Air Wing Activities.
- (b) **Social Service and Community Development Activities.**
- (c) **Youth Exchange Programme (YEP).**
- (d) **Adventure Training and Sports.**

## **Institutional Training.**

3. This training is mostly carried out in schools and colleges by the cadets. In addition, depending upon the type of wing, basic knowledge of that Service is imparted to the cadets e.g gliding and powered flying for Air Wing cadets and boat pulling and sailing for Naval Wing cadets.

4. **Camp Training.** Camp training constitutes the most important part of NCC training. Every cadet in the NCC is expected to attend at least two camps during one's tenure to complete the Training Syllabi.

(a) **Annual Training Camps (ATC).** These are held within the state under the aegis of respective NCC Directorates. The camps are of 12 days duration for senior boys/girls and 10 days duration for junior boys/girls.

(b) **Centrally Organised Camps (COC).** These camps are of an all India nature and are planned by HQ DGNCC in consultation with the Directorates nominated to conduct them. Selected cadets, as per the vacancies allotted to each Directorate, participate in these camps. The following types of centrally organised camps are conducted.

(i) **Leadership Camps.** These camps are conducted on all India basis. There are four Advance Leadership Camps (ALC) and three Basic Leadership Camps held each year.

(ii) **Thal Sainik Camp (TSC).** Two TSCs are conducted at RD parade ground, Delhi Cantt every year i.e. one for SD/JD boys and the other for SW/JW girls.

(iii) **Vayu Sainik Camp (VSC).** This Centrally Organised Camp is organised for Air Wing Cadets. Cadets from all Directorates attend the camp. VSC is generally conducted in the month of Oct.

(iv) **Nau Sainik Camp(NSC).** This Centrally Organized Naval Camp is conducted annually for selected Naval Wing Cadets. Boat pulling, regatta and sailing competitions are the main attractions of this camp.

(v) **Rock Climbing Camps.** Rock climbing camps are held each year to expose the cadets to the basics of rock climbing and to inculcate the spirit of adventure.

(vi) **National Integration Camps (NIC).** The Camps are conducted on an all India basis and help bridge the cultural gap among various states of India. In addition the NCC conducts NICs at remote and forward areas to promote national integration. Special NICs are conducted regularly at Leh, Srinagar, North Eastern Region and at Port Blair.

(vii) **Republic Day Camp (RDC) and Prime Minister's (PM's)**

**Rally.** The Republic Day Camp is a prestigious camp inaugurated by the Vice President of India and visited by the Raksha Mantri, Raksha Rajya Mantri, Chief Minister of Delhi, the three Service Chiefs and other dignitaries. During the Camp a Horse show and cultural programmes are held wherein important dignitaries are invited as Chief Guests. The camp culminates in the Prime Minister's Rally on 27 January every year which showcases all the activities of NCC.

5. **Attachment Training.** NCC Army Wing cadets are given an opportunity to live and work in regular Service units in the form of attachment training. Every year a large number of officers and cadets including women officers and Senior Wing girl cadets get attached to various units of the Army for a duration of two weeks.

(a) **Attachment to Indian Military Academy (IMA) and Officers Training Academy (OTA).** Every year selected SD/SW cadets are given attachment training with IMA and OTA respectively.

6. **Naval Wing Activities.** Naval wing syllabus is common for both boys & girls. During sea training naval subjects like Seamanship, Navigation, Communication, Gunnery, Damage Control and Ship Safety are taught to cadets. Swimming, Scuba Diving and Wind Surfing are other interesting activities.

7. **Air Wing Activities.** Gliding, Microlite Flying and attachment training with Air Force Stations/Establishments are the main activities.

**Social Service and Community Development**

8. NCC has adopted community development activities with the aim of NCC cadets imbibing selfless service to the community, dignity of labour, importance of self help, need to protect the environment and to assist weaker sections of society in their upliftment. Some of the major activities are:-

(a) **Tree Plantation.** NCC cadets plant saplings and look after them in conjunction with the concerned State Departments.

(b) **Blood Donation.** Cadets donate blood as voluntary service whenever needed by Hospitals/Red Cross.

(c) **Old Age Homes.** Old Age Homes in the country are patronised and regularly visited by NCC cadets.

(d) **Adult Education.** NCC cadets visit remote areas, villages and underdeveloped areas to emphasise the need for education and to assist in the conduct of the Adult Education Programmes.

(e) **Community Work.** Cadets of NCC participate in the rural and urban community projects and other development works like village track improvement, cleaning of streets and ponds, sanitation drives etc.

(f) **Disaster Relief.** NCC has always extended immediate support during natural disasters and accidents. NCC cadets are trained to provide services during floods, earthquakes, cyclones and major train accidents etc.

(g) **AIDS Awareness Programme.** NCC participates actively in the AIDS Awareness Programme and is presently working alongwith UNAIDS and DG AFMS in carrying out AIDS Awareness Programmes throughout the country.

(h) **Cancer Awareness Programme.** NCC cadets actively participate in Cancer Awareness Programmes organised at various cities.

#### **Youth Exchange Programme (YEP)**

9. The aim of YEP is a country-to-country exchange of cadets belonging to NCC/equivalent Govt/Youth Organisations of friendly countries and participation in NCC activities of the host country to create an increased awareness among participants and appreciation of each others' socio-economic and cultural realities.

#### **Adventure Training and Sports**

10. NCC takes part in Subroto Cup Football Tournament, Jawahar Lal Nehru Hockey Cup Tournament and Mavlankar Shooting Championship on regular basis. Other than this, NCC cadets take part in Mountaineering, Trekking and Cycle/Motorcycle expeditions, Parachute Sailing, Para Courses, Slithering , Desert Safari and White Water Rafting.

#### **Cadet Induction in NCC**

11. Induction into NCC is on voluntary basis and students both boys and girls can join at the age of 13 years in Junior Division (JD)/Junior Wing (JW) (Class VIII to X) and in Senior Division (SD)/Senior Wing (SW) from class XI onwards.

#### **12. Eligibility Conditions for Certificate Examination**

(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 3<sup>rd</sup> 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).

(d) **Grading**

(i) 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:-

- (aa) Grading `A' - Cadets obtaining 80% marks or above.
- (ab) Grading `B' - Cadets obtaining 65% marks and above but below 80%.
- (ac) Grading `C' - Cadets obtaining 50% marks and above but below 65%.
- (ad) Fail - Cadets obtaining less than 45% in any paper or less than 50% of the aggregate.

13. **Authorisation of Clothing Items.** On joining NCC a cadet does not have to pay for his/her uniform. Certain clothing items are given to cadets on retention basis and few items on returnable basis. Details of these items are given as at Appendix 'C' & 'D' respectively.

**SECTION-4**

**NCC SONG**

**Introduction**

1. The desirability of composing a NCC song was considered in January 1956. The official song of the NCC – ‘Kadam Mila Ke Chal’- was adopted in 1963 and registered in 1969 with the approval of the Ministry of Defence. In 1974, it was felt that the NCC song has failed to catch the imagination of the youth and there was a need for a change.

2. Director of documentary film on NCC , ‘A Cadet’s Diary’, happened to hear the song- ‘Ham Sab Hindi Hain’- which appears to have been first sung at a Youth Festival at Chandigarh, sometime during 1968-69 and he introduced it in the documentary film. The song was a hit and played repeatedly in Republic Day Camps. In 1980, the word ‘Hindi’ was substituted with ‘Bhartiya’.

### **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.  
Bikhre-Bikhre 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**

### **INCENTIVES FOR NCC CADETS**

#### **Introduction**

1. From time to time Central and State Governments announce number of incentives for NCC Cadets. These incentives are in the field of employment as well as academics and personal incentives including medals, trophies, cash awards etc. These are listed as under:-

#### **Concession in Employment**

- |  |   |
|--|---|
| 2. (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 WTLs.   |
| (g) State Governments  | Preference in State Services in certain States.   |
| (h) Industry   | Some Industries give preference to NCC 'C' Certificate holders for various jobs.  |

3. State-wise incentives are given as Appendix ‘E’

### **Financial Benefits**

4. The expenditure incurred on NCC training is borne by the Govt. A cadet does not have to pay for uniform, camps, parade, adventure sports, or transportation from a central place to the place of training. In addition they are given good refreshment during parade and wholesome meals during camps. In order to make cadets’ association with NCC more pleasant and rewarding, various kinds of financial assistance are also given to the deserving cadets.

### **Cadets Welfare Society**

5. In order to provide financial assistance and relief to cadets who sustain injury/death during NCC related activities, a Society named ‘NCC Cadets Welfare Society’ was established and registered in Feb 1985 under the Societies Registration Act 1860.

6. **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 2<sup>nd</sup> Best Cadet awards at Group level.
- (e) To conduct sports and adventure activities which cannot be funded by Public Funds.

7. **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.

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

8. **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.

9. **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 2<sup>nd</sup> Best Cadet. A total of 760 cash awards are given every year.

10. **Sports and Adventure Activities.** In Oct 1996 the scope of the Society was expanded to fund such sports and adventure activities which cannot ordinarily be funded by Public Funds. The Society also grants loans for conduct of sports/adventure activities pending sanction of funds from MOD.

#### **Sahara Scholarships.**

11. 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.

12. A total of 1016 scholarships with the following breakdown are given as follows:-

<b><u>Category</u></b>	<b><u>No. of vacancies per Group HQ</u></b>	<b><u>Total</u></b>	<b><u>Amount per Scholarship</u></b>
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	A total of 66 Scholarships.	66	Rs 30,000/-
	<b>Total</b>	<b>1016</b>	

**Appendix ‘A’**  
 (Ref to Para 3 Sec 2  
 of Chapter 1)

**LIST OF NCC DIRECTORATES/TRAINING ESTABLISHMENTS**

Ser No	Directorates/Training Establishments	Location
1.	Andhra Pradesh	Secundrabad
2.	Bihar & Jharkhand	Patna
3.	Delhi	Delhi
4.	Gujarat, Dadra & Nagar Haveli and Daman and Diu	Ahmedabad
5.	Jammu & Kashmir	Jammu
6.	Karnataka & Goa	Bangalore
7.	Kerala & Lakshadweep	Thiruvananthapuram
8.	Maharashtra	Mumbai
9.	Madhya Pradesh & Chattishgarh	Bhopal
10.	NER	Shillong
11.	Orissa	Bhubneshwar
12.	Punjab, Haryana, Himachal Pradesh & Chandigarh	Chandigarh
13.	Rajasthan	Jaipur
14.	Tamil Nadu, Pondicherry, Andaman & Nicobar	Chennai
15.	Uttar Pradesh	Lucknow
16.	Uttaranchal*	Dehradun
17.	West Bengal & Sikkim	Kolkata
18.	NCC Officers Training Academy	Kamptee
19.	NCC Officers Training Accademy	Gwalior

**\*Note:- New NCC Dte for State of Uttaranchal has become effective wef 01 Aug 2006.**

**Appendix ‘B’**  
 (Ref to Para 3 Sec 2  
 of Chapter 1)

**DETAILS OF GP HQs**

Ser No	Directorate	NCC Gp HQ
1.	AP	Guntur Hyderabad Kakinada Secunderabad Tirupati Vishakhapatnam Warangal Niizamabad Kurnool
2.	Bihar & Jharkhand	Bhagalpur Gaya Muaffarpur Patna Ranchi
3.	Delhi	Delhi ‘B’ Delhi ‘C’
4.	Gujarat	Ahmedabad Baroda Rajkot V V Nagar
5.	J&K	Jammu Srinagar
6.	Kar & Goa	Bangalore ‘A’ Bangalore ‘B’ Belgaum Bellary Mangalore Mysore
7.	Kerala & Lakshadweep	Calicut Eranakulam Kollam Kottayam Trivandrum

8	MP & Ch	Bhopal Gwalior Indore Jabalpur Raipur Saugor
9.	Maharashtra	Amaravati Aurangabad Kolhapur Mumbai 'A' Mumbai 'B' Nagpur Pune
10	NER	Dibrugarh Guwahati Imphal Jorhat Shillong Silchar Tezpur Kohima
11.	Orissa	Berhampur Cuttack Sambalpur
12.	PHH & C	Ambala Amritsar Chandigarh Jalandhar Ludhiana Patiala Rohtak Shimla
13.	Rajasthan	Jaipur Jodhpur Kota Udaipur
14.	TNP& AN	Chennai 'A' Chennai 'B' Coimbatore Madurai Pondichery Trichy

15	UP	Agra Aligarh Allahabad Bareilly Ghaziabad Gorakhpur Kanpur Lucknow Meerut Varanasi 'A' Varanasi 'B'
16.	Uttaranchal	Dehradun Roorkee Nainital
17.	WB & Sikkim	Burdwan Kolkata 'B' Kolkata 'C' Darjeeling Kalyani Kharagpur
<b>Total Gp HQs</b>		<b>95</b>

**Appendix 'C'**  
 (Ref to Para 13 Sec 3  
 of Chapter 1)

**DETAILS OF RETENTION ITEMS**

Ser No	Item	Scale of Authorisation				Remarks
		SD	JD	SW	JW	
<b>ARMY BOYS</b>						
1.	SHIRT PWPC KHAKI	2	2	-	-	
2.	SHORT PWPC KHAKI	1	2	-	-	
3.	TROUSER PWPC KHAKI	2	-	-	--	
<b>ARMY GIRLS</b>						
4	SHIRT PWPC KHAKI	-	-	2	2	
5.	TROUSER PWPC KHAKI	-	-	2	2	
<b>NAVY BOYS</b>						
6.	SHIRT PWPC WHITE	2	2	-	-	
7.	SHORT PWPC WHITE	-	3	-	-	
8.	TROUSER PWPC WHITE	2	-	-	-	
9.	SHIRT PWPC NAVY BLUE	1	1	-	-	
10.	SHORT PWPC NAVY BLUE	1	1	-	-	
<b>NAVY GIRLS</b>						
11.	SHIRT PWPC WHITE	-	-	2	2	
12.	TROUSER PWPC WHITE	-	-	2	2	
<b>AIR FORCE BOYS</b>						
13.	SHIRT PWPC LBG	2	2	-	-	
14.	SHORT PWPC LBG	1	2	-	-	
15.	TROUSER PWPC LBG	2	-	-	-	
<b>AIR FORCE GIRLS</b>						
16.	SHIRT PWPC LBG	-	-	2	2	
17.	TROUSER PWPC LBG	-	-	2	2	
<b>COMMON ITEMS</b>						
18	SALWAR WHITE	-	-	2	2	
19.	KAMIZ WHITE	-	-	2	2	
20	BERET RIFLE GREEN	1 (a)	1(a)	1	1	(a) For all cadets less SIKHS For Sikhs only.
21.	PAGREE RIFLE GREEN					

Ser No	Item	Scale of Authorisation				Remarks
		SD	JD	SW	JW	
22.	SOCKS NTP WHITE	2X3*=6 (Navy)	2x2*= 6 (Navy)	2x3*=6 (Navy)	2x2*=4 (navy)	*Tenure
23.	SOCKS NTP BLACK	2X3*=6 (Army, Air )	2x2*= 6 (Army, Air)	2x3*=6 (Army, Air)	2x2*=4 Air	*Tenure
24.	SHOES LEATHER BLACK	1(Air)	1(Less Army in J&K and NER)	1	1	
25.	BOOTS ANKLE DMS	1 (Army and Navy)	1 (Army in J&K & NER)	-	-	
26	SHOES CANVAS BROWN	1 (For all less Navy)	1 (For all less Navy)	-	-	
27.	SHOES CANVAS WHITE	1 (Navy)	1(Navy)	1	1	
28.	VEST WOOLEN	-	1(Army, J&K and NER)	-	-	

**Appendix 'D'**  
 (Ref to Para 13 Sec  
 3 of Chapter 1)

**DETAILS OF LIFE CYCLE ITEMS**

Ser No	Item	Assessed fair life in Army (in months)	Scale of Authorisation
(a)	(b)	(c)	(d)
1.	Bag Kit Universal	120	Army SD & Army JD, 15% of cadet str.
2.	Blanket Barrack	120	At 10% of auth strength of SD & JD in cold regions & 3% in hot regions.
3.	Cap FS Disruptive	72	Army SD and JD minus Sikh cadets @ 10%.
4.	Durries IT	120	Army SD, JD, SW, & JW @ 9%.
5.	Coat Combat	168	Army SD & JD @ 2%.
6.	Ground Sheet	120	Army SD JD SW & JW @ 6%.
7.	Water Bottle	60	All wings @ 15% of cadet strength.
8.	Anklet Web	240	Army SD @ 10% of cadet strength.
9.	Belt Waist Web	168	Army wing SD and JD, SW (Army& Air). JW and Air Wing (SD & JD) @ 100%.
10.	Cape water proof	240	Army SD and JD @ 20% for units located in J&K and NER and @ 5% for the rest.
11.	Over-all combination	36	Army SD (Army, Arty, Engrs, Sigs & EME) @ 100% of cadet strength.
12.	Net Mosquito	60	Army wing @ 15% of total cadet strength.
13.	Jersey P/O Woollen Khaki	60	SD Army and JD Army SW (Army) & JW (Army) AP, Bihar, Gujarat, Karnataka, Kerala, Mah, Orissa, Tamil Nadu and West Bengal
14.	Jersey P/O Woollen Black	60	SD Navy and JD Navy @ 10% of authorized str. Delhi, MP, Punjab
15.	Jersey P/O Woollen Grey	60	SD Air and JD air Raj and UP @ 25% of auth str.J&K and NER @ 80% of auth str.

(a)	(b)	(c)	(d)
16.	Shirt Angola	60	SD Army and JD Army, SW and JW
17.	Trouser Serge Khaki	60	SD Army and JD Army, SW and JW
18.	Trouser Serge Black	60	SD Navy and JD Navy
19.	Trouser Serge LBG	60	SD Air and JD Air
<b>AIR CLOTHING</b>			
20.	Overall flying	36	50% of the auth str of SD and JW Air wing Cadets in the Air sqn on loan basis @ scale 01.
21.	Boot flying	36	50% of the auth str of SD and SW Air wing cadets in the Air sqn on loan basis @ scale 01.
22.	Gloves flying	36	50% of the auth str of SD and SW Air wing Cadets in the Air Sqn on loan basis @ scale 01
23.	Boot Rubber Knee	24	For NER and Kerala @ 20% of auth str and for Karnataka, AP, Orissa and West Bengal @ 10% auth str.

**Appendix 'E'**  
 (Ref to Para 3 Sec 5  
 of Chapter 1)

**STATE WISE INCENTIVES**

<b>State</b>	<b>Employment Field</b>	<b>Academic Field</b>
Andhra Pradesh	<p>(a) Preference is being given to National Cadet Corps 'B'/'C' certificate holders for recruitment in police service and transport department</p>	<p>(a) One seat is reserved for admission to various degree and diploma courses and 5% seats for LLB Courses in Osmania University.</p> <p>(b) Seats are reserved in Govt Polytechnics and PG Degree Diploma Courses.</p> <p>(c) 1% of total seat in courses of study reserved in Engineering Colleges.</p> <p>(d) 0.25% of seats are reserved for admission into Medical Courses.</p>
Bihar & Jharkhand	Bonus marks are given to NCC 'B' and 'C' certificate holders for recruitment in the Police and Forest Department	Bonus marks are awarded to NCC Certificate holders for admission in various courses in the Universities of Patna, Ranchi, Mithila and Bhagalpur
J&K	10% or one post, whichever is higher, reserved in non-gazetted service in Police, Home guards, Forest and Excise Departments for NCC 'C' Certificate holders. Similar reservations are for Girl Cadets in Police and as nurses, receptionists and telephone operators	
Karnataka & Goa		10 seats in Medical, 5 in Non-allopathic, 50 in Engineering, 10 in Technical , 8 in B ED, 3 in Post Graduation and 47 in Polytechnics for outstanding NCC Cadets.
Kerala & Lakshadweep		(a) Reservation of seats in Engineering Colleges, Polytechnics, Ayurveda College, Medical Colleges, and BSc Nursing

<b>State</b>	<b>Employment field</b>	<b>Academic Field</b>
Madhya Pradesh	Preference being given to 'C' certificate holders for recruitment in all state jobs.	<p>(b) Bonus marks for Pre- Degree courses, Degree courses, Post Graduate courses, B.Ed Courses and Teachers Trg. Course</p> <p>(c) Weightage Marks for admission to higher studies.</p>
Maharashtra		<p>(a) Preference is given for admission to the postgraduate/professional/degree college.</p> <p>(b) 10 Marks being added to final marks to NCC Cadets selected for participation in Republic Day Camp.</p> <p>(a) University of Mumbai gives maximum of 10 grace marks to NCC cadets appearing at various degree examinations.</p> <p>(b) 2% marks are given to NCC Cadets of Maharashtra University.</p> <p>(c) 3 Marks are given for admission in medical colleges.</p> <p>(d) 10 Seats are reserved in Engineering Colleges for NCC cadets representing State in the all India competition.</p> <p>(e) Weightage of 4 marks for admission in ITI.</p>
NER-Assam	Preference is being given to National Cadet Corps 'B'^C' certificate holders for recruitment to Police Service and Govt.jobs.	<p>(a) Two seats are reserved for best National Cadet Corps cadets for admission in diploma &amp; certificate courses in engineering and technology.</p> <p>(b) One seat each in Assam Engineering College and Jorhat Engineering College, Jorhat.</p> <p>(c) Preference for admission in Post Graduate courses in Gauhati University.</p>

<b>State</b>	<b>Employment field</b>	<b>Academic Field</b>
Arunachal Pradesh	Preference in recruitment to the state Police Service. Reservation of 10% posts in the Police Department. Posts of women constable and women Hawaldar are reserved for girl cadets.	Relaxation of 5% marks for admission to educational institutions including technical institution under State Govt.
Manipur		
Meghalaya		
Nagaland	Preference to NCC 'B' and 'C' certificate holders in the matter of recruitment to the State Police Force.	Relaxation of 5% marks for admission to educational institutions including technical institutions under State Govt.
Tripura	Preference to NCC 'B' and 'C' certificate holders in the matter of recruitment to the State Police service and Government jobs.	
Orissa	Preference for recruitment to State Police Force.	Additional weightage of marks over and above the aggregate marks obtained for admission in various colleges.
Haryana	Preference for recruitment in Home Guard Deptt and State Police Force. Preference for recruitment to State Police Force.	
HP		Weightage for admission to various courses of study in Himachal Pradesh University
Punjab		Weightage of marks given for admission in various courses in State Govt Polytechnics, Colleges and Universities.
Rajasthan	Preference in the recruitment to the State Police Force.	Weightage of marks is given by the university of Rajasthan for the purpose of admission to various courses of the university.
TN and Andaman Nicobar	<p>(a) Tamil Nadu Public Commission while selecting candidates to the post in Civil Services, takes into consideration the NCC Certificates possessed by the candidate.</p> <p>(b) Out of 12 marks for the oral test in the B.T and P.G Assistance recruitment/appointment in Tamil nadu, <math>\frac{1}{2}</math> mark is awarded for NCC activities.</p>	1 seat reserved in Under Graduate Courses in each college and 1 seat in any Post Graduate Course and Polythchnic, where NCC Scheme is available

<b>State</b>	<b>Employment field</b>	<b>Academic Field</b>
Pondicherry	Preference for selection to various posts in all Departments of Pondicherry especially in Police.	A weightage of 2% of marks for BA/BSc/B.Com course
Uttar Pradesh	Preference to NCC cadets in recruitment to the service in State Government. 8% posts are reserved in State Government for part time NCC officers and NCC cadets who become disabled during the course of training.	Bonus marks/weightage by various Universities for admission in various Degree, B.Ed and Post Graduation courses.
Uttaranchal		One seat in each branch in Kumaon Engineering College, GB Pant Engineering College and Govt Polytechnics and two seats each in Kumaon University and Garhwal University for B.Ed.
West Bengal & Sikkim	Weightage being given for enrolment in police. 20% weightage is being given to NCC cadets for recruitment in Home Guard.	

In the case of state's like Delhi, Gujarat, Dadra Nagar Haveli, Chattisgarh and Mizoram incentives in the form of concessions for employment, education are not being given. However, other incentives like scholarships and cash awards are being given in these States.

## **CHAPTER-II**

### **NATIONAL INTEGRATION**

<b><u>INDEX</u></b>			
<b>CHAPTER-II NATIONAL INTEGRATION</b>		<b><u>JD/JW</u></b>	<b><u>SD/SW</u></b>
SECTION-1	Indian History and Culture	✓	✓
SECTION-2	Religion and Customs of India	✓	✓
SECTION-3	Unity in Diversity	✓	✓
SECTION-4	National Integration and its Importance	✓	✓
SECTION-5	Famous Leaders of India like 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	✓	-
SECTION-6	India and Its Neighbours	✓	-
SECTION-7	Contribution of Youth in Nation Building	✓	✓
SECTION-8	Nation State, National Interests and Objectives	-	✓

## **SECTION-1**

### **INDIAN HISTORY AND CULTURE**

#### **General**

1. India was one of the oldest centres of the prehistoric cultures of the world . India was also the cradle of one of the earliest civilizations in history - the Harappan culture. The Harappan culture was the first urban culture to flourish in India. Many of its features distinguished it from all its contemporary cultures in other parts of the world and made it a distinctly Indian civilization. Larger in extent than any of its contemporary civilization, it spread over parts of Baluchistan, Sind, Punjab, Haryana, Rajasthan, Western Uttar Pradesh and Gujarat and had links with some other parts of India as well as with contemporary civilization in West Asia.
2. The next major phase in ancient Indian history is the Vedic age which began with the coming of the Indo - European speaking people. It laid the culture that began to emerge during this phase and was the result of the inter- mixing of the Indo - Aryans with the pre-existing inhabitants of India. The next phase covering the period from about the sixth century BC to about 200 BC is marked by far reaching changes in almost every aspect of life in India. This period saw the spread of agriculture over large parts of the country, the rise of cities and the formation of the state. The period also saw the rise and decline of the first all - India empire in Indian history. This period is important not only for political unity but also for culture unity. Two major religions, Jainism and Buddhism which arose in the sixth century BC, left a lasting influence on Indian life and culture. This period saw the spread throughout the country of belief and practices associated with Hinduism, including Vedic religion as well as Buddhism. The Varna system of social organization popularly known as the caste system, which had arisen in the Vedic Age, now became well established and gradually became the dominant form of social organization throughout the country. This form of social organization was peculiar to India. The process of cultural unity is best exemplified by Ashoka. He unified almost the entire country under the empire but renounced the use of war as state policy. Instead he declared the victory of righteousness as the real victory.
3. The next phase in Ancient Indian history cover the period from about 200 BC to about AD 300. This phase is extremely important for 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. In economic life this period is significant for advancement of India's international trade both by land and sea routes and the emergence of cities and towns unknown to earlier phase of ancient Indian history. In political life, large parts of North Western, Northern and Western India were ruled by dynasties of non Indian origin. These were the Indo-Greeks, the Sheiks, the Parthians and the Kushanas. A significant event was the growth of the Mahayana sect of Buddhism, which the Kushana ruler Kanishka patronized and the development of the great Buddhist art associated with it.

4. The last phase of the ancient period of Indian History starts in early fourth century AD and ends in about the eighth century. 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. Because of these achievements, this period is often described as the classical age of the Indian civilization. In religion, this is a period of decline of Buddhism and the rise of Brahmanical religion of Hinduism as we know it today. Great progress was made in literature, both religious and secular, in Sanskrit which also became the language of the court in most part of the country. 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.

### **The Mediaeval Period**

5. During the mediaeval period, some of the achievements of the ancient times were carried forward and new magnificent structures were built on those foundations. The period from the eighth to twelfth century in political life is dominated mainly by the presence of large number of states the bigger ones among them tried to establish their supremacy in Northern India and the Deccan. The main contenders in this struggle for supremacy were the Pratiharas, the Palas and the Rashtrakutas. In the South the most powerful kingdom to emerge during this period was that of the Cholas. In the tenth century, the Turks emerged as a powerful force in Central and West Asia and carved out Kingdoms for themselves. The Turks first invaded India during the late tenth and early eleventh century and Punjab came under Turkish rule. Another series of Turkish invasions in the late twelfth and early thirteenth century led to the establishment of the Sultanate of Delhi. Within a few centuries after the rise of Islam in Arabia, it became the second most popular religion in India with followers in every part of the country.

6. The establishment of the Sultanate of Delhi marked the beginning of a new phase in the history of mediaeval India. Politically it led to the unification of Northern India and part of the Deccan for almost a century. Its rulers, almost from the time of the establishment of the Sultanate, succeeded in separating it from the country from which they had originally come. The Sultanate disintegrated towards the end of the fourteenth century leading to the emergence of a number of kingdoms in different parts of the country. Some of these, for example the Bahimani and Vijayanagaram Kingdoms, became very powerful. In society, the period is important for the introduction of new elements - the Turks, the Persians, the Mongols and the Afghans, besides the Arabs who had settled down in some coastal regions of India.

7. The growth of a composite culture reached its highest points under the Great Mughals in the sixteenth and seventeenth centuries. The Mughals built an empire which once again brought about the political unification of a large part of the country. Like Ashoka earlier, Akbar, the greatest of the Mughal emperors, followed a policy of 'sulk-kul' (peace with all).

## **The Modern Period**

8 . The eighteenth century marks the beginning of the modern period of India's history . Politically, the period saw the decline of the Mughal empire and the rise of a number of small and big independent States in different parts of the country for about 150 years. In spite of this, however, the process of the growth of a composite culture continued. The process of colonization of vast areas of the world by a few European countries had been underway since the sixteenth century. Changes of a comparable nature failed to take place in India, as also in other countries of Asia and Africa. There was also no awareness of the importance of the changes taking place in Europe inspite of contacts with European traders, missionaries and others. From about the middle of the eighteenth century, the conquest of India by the British began. It was completed in a few decades and by the middle of the nineteenth century, the entire country was under the direct or indirect rule of the British. For the first time in her history. India came under foreign rule. She was ruled by foreigners who had not come to settle but to rule in interest of their mother country. A new system of exploitation of a country came into being. Under the new conditions created by foreign rule, the people of India were awakened and this awakening expressed itself, finally, in the struggle for independence, the end of imperialist exploitation of India and building of a new India. The nationalist movement united the Indian people on a new basis. It recognized and cherished the unity in diversity and the composite nature of India's culture as its unique feature.

9. As early as in the nineties of the eighteenth century Raja Ram Mohan Roy came to the forefront of Indian National struggle. Before him Surendra Nath Banerjee and others had set the ball rolling though not with great momentum. The Indian National Congress established by AO Hume in 1885 was the first All India Organisation. The birth of the Indian National Congress gave a new direction to the National movement in India. In the beginning the Congressmen were loyal to the British Crown. They only demanded some favours for the educated people of India . In the first stage extending from 1885 to 1900 the members of the Congress only wanted to get a share in the British administration. The second phase of Congress politics extends from 1900 to 1918. During this period revolutionary groups began to take the lead. During the third stage from 1919, Gandhiji began to dominate the Congress organisation. During World War-1, Gandhiji co-operated with the British Government. The Jallianwala Bagh tragedy and the Rowlatt Act resulted in the non-cooperation movement on a widest possible scale. The Congress organisation under Gandhiji became a mass movement representing the interests of the whole of India. The National movement for freedom began to spread among the workers and the peasants as well. The socialists and the communists also joined in. As the National movement spread, British rulers pursued their policy of 'Divide and Rule'. They set the Muslims against the Hindus and the Hindus against the Muslims. In 1927, the Simon Commission visited India to study the political situation. The Commission was received with black flags at Lahore. Lala Lajpat Rai received a lathi blow on account of which he died. This ugly incident created a stir in the whole country. The Congress started the Civil Disobedience Movement in which more than 90,000 people were arrested. The movement was withdrawn in 1931 as a result of the Gandhi-Irwin Pact. Ramsay MacDonald gave his communal award in 1932. Gandhiji observed a fast unto death to undo the separate presentation given to Harijans under the leaders of the suvarna Hindu and the Harijans.

10. The Government of India Act 1935 was put into force in 1937. The Congress contested elections for the provincial legislatures, won a vast majority of seats in 8 out of 11 Indian provinces and formed Ministry. However, World War II broke out in 1939 and the Congress party resigned from the Ministry. Gandhiji again took the reins in his hands. He wanted complete independence for India. The British Government sent Sir Stafford Crips to solve the political dead - lock. The mission proved a failure. Next came the Cabinet Mission. As the political parties of India could not reach an agreement, the Mission gave its own award. The Executive council of the Governor General was to be selected in order to frame the Constitution of India. The Congress and the Muslim League did not agree. The League clamoured for the creation of Pakistan. Lord Atlee, the British Prime Minister, fixed June 1948 as the final date for the transfer of power. Lord Mountbatten was sent to India as Viceroy. He held talks with the leaders of the Congress and the League. Both agreed to part company. India was partitioned according to the Indian Independence Act 1947.

### **Dimensions of Indian Culture**

11. Various races have been coming to India from time immemorial. The civilizations of these races differed a great deal from one another. On entering India, they had conflicts with the earlier inhabitants of the country. These conflicts affected their respective cultures and through the process of assimilation and synthesis, Indian culture grew all the more richer.

### **Effect of Negrito Race**

12. According to J H Huntton, the oldest race reaching India was Negrito. They were not very high from the point of view of civilization. They did not know how to make use of the instruments made of stones and bones, how to cultivate the land, how to make earthenwares or how to build houses. They are now found in Andaman Island only. The race which arrived in India after the Negrito race was Proto-Australoid or the primitive Australian race. They are specially found in Central India or in South - East India in the present age. They are also called 'Austric' in English and 'Agneya' in Hindi. Santhal, Munda, Birho, Asur, Kobra, Coorg, Jaung and such other tribes are related to the Proto-Australoid race. The people of Australoid race influenced the material and religious life in India. Indians learnt, in the material field, how to cultivate the land with the help of pick - axe and to grow rice, bananas, coconuts, brinjals, betel leaves, lemons, jamboo fruit and cotton from them. In the religious field, they brought to India many things like the belief in rebirth, various fabulous stories about the origin of creation, a myth about incarnation of God in a tortoise, belief about the existence of Gods in stones, the worship of various creatures like snakes, crocodiles, monkeys etc. The interesting stories in Mahabharat and Ramayan about Vasuki, the ruler in 'Patal Lok', the origin of the creation from snakes and eggs, interesting stories about Ganesh, etc have been taken from the mythical of this race. Perhaps this very race taught the Indians how to count the dates according to moon phases and fixation of sacred festivals etc.

13. **Arrival of Dravidians and Their Influence.** The people of Dravidian or Mediterranean race came to India after the Proto-Australoid race. They were more civilized than the people of both the races which came to India earlier. Under their

influence new Gods and new methods of worship came to the Indian religious field. In fact, the word ‘Pooja’ (worship), belongs to Dravidian language. The acceptance of an idol, as representative of some God, to offer it flowers and tree leaves, to offer it vermilion and sandal paste, to burn incense before it to ring bells, to sing to dance before it, to offer and accept sweets and such other ways of worship were given to India by the Dravidians. The chief new Gods, who began to be worshiped under the influence of the Dravidians, were Shiva, Uma, Kartikeya, Hanuman, Shitla and Ganesh etc. Under the Dravidian influence, the number of Gods increased. Gods and Goddesses, village God, family God and other Gods of Hindu religion supposed to be 330 million in number, are all the result of their influence. The importance of the sacred places of worship increased under the influence of the Dravidians. In the same way, they also preached the worship of the trees, like worship of tulsi, banyan, peepal, bel and many others. It was the Dravidians who gave Indians the festivals of Holi and Basant.

14. **Arrival of Aryans and Their Influence.** Aryans made the greatest contribution towards the development of Indian culture. It is their tongue which is in use today in major parts of India. Their Vedas are the main roots of Indian culture. The contribution of the Aryans towards the Indian culture has been thus described by Dr Jadunath Sarkar: (1) A feeling of sympathy and adjustment (2) Wonderful evolution of science and philosophy (3) Aryans’ fixation of adjustment among different castes through their principle of ‘Varna’ system (4) Spread of civilization among the demons and wild tribes through ‘Tapovan’ system.

15. **Muslim Influence.** Muslims came to India after the Aryans. In his book titled ‘Influence of Islam on Indian Culture’, Dr Tarachand has written that the influence of Muslims on the various parts of Indian life has been very great and this influence has been seen specially on Hindu customs, on the very minute things of their family, on music, dress, cooking methods, marriage traditions, festivals, fairs and on the institutions and manners of the Maratha, Rajput and Sikh courts.

16. **Influence of the British.** After the Muslims, the British deeply influenced all aspects of Indian culture. The spread of English language brought hundreds of English words into the Indian languages. The influence of western culture on the prose, novel, one-act plays and poetry, etc in Indian literature can be clearly seen. Western education created a wave of reformation in the whole country. On the one hand, the ideas of equality, freedom and nationality helped in uprooting the social evils like Sati custom, killing of female child, child marriage and prohibition of widow marriage, on the other hand, they created a political awakening in the country. 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. This influence has regularly been on the increase and it is also needed for the country’s progress, although its assimilation is equally necessary.

## **Conclusion**

17. India's culture has been such that it did not develop into a finished form in any period. Throughout her long history, India's culture has been changing and developing due to internal factors and contacts with other cultures. This process of change and development continues. The culture of India, as of any other country, is not a fixed entity. Many aspects of culture, if they progress, get discarded others are changed, sometimes beyond recognition, some others continue to survive and remain impertinent, while many new elements are added. A remarkable feature of Indian historical and cultural development has been its continuity. This continuity has few parallels in the history of other civilisations.

## **SECTION -2**

### **RELIGIONS AND CUSTOMS OF INDIA**

#### **Introduction**

1. India is a multi religious democratic country. There are six major religions in India with percentage of population as under :-

(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 %

2. The historical analysis has proved that religion has played an obstructive role in the rise of nationalism. In ancient and mediaeval time it has worked as a system of exploitation. Under the British rule religion acted as a main barrier against national unity. The creation of Pakistan was final blow rendered by political mobilization on communal lines. The above problem was due to some religion oriented political parties, which is on the decline. Secondly the public has realized the fact that religion is a private affair of an individual and it should not be mixed with political affairs of the state. That is why most of the advanced democratic states have adopted secularism in their constitution, which is a factor for unity in multi-religious societies like ours.

## **Main Religions of India**

3. **Hinduism.** Religion for the Hindu is experience or attitude of mind. It is not an idea but a power, not an intellectual proposition but a life conviction. It is consciousness of ultimate reality. Man becomes aware of God through experience. The source of Hindu thought is the Vedas. The Hindus believe in meditation and yoga. The goal of religious quest is earned by intellectual and moral discipline. The Hindus believe in re-birth, spirit and salvation. Perfection in life as per Hinduism is attained through knowledge of truth. Divinity can be realised in mind and spirit. We must attain an integrated vision, a wholesome life, health and strength of body, alertness of mind through meditation and yoga. The theory of Hinduism lays stress on Bhakti, Karma and Re-birth.

4. **Islam.** Islam means ‘Submission’ or resignation to Allah (God). The Quran, the highest authority is revealed and created being the eternal word of God incarnate. All the prophets from Adam to Mohammad and the books revealed to them are regarded as religious heritage of Islam. Muslims have to bear witness to the oneness of God and message of Muhammed and have to observe prayer five times daily with a weekly Juma prayer on Friday noon. They have to pay Zakath (religious tax) to the rightful beneficiaries and the minimum is two and half percent of the net annual income. They keep dawn to dusk fast for purity of soul in the ninth month of Ramzan of the Islamic year. The wealthy Muslims and who can afford make pilgrimage to Haj once in life time. Islam has its influence in three continents of Asia, Africa and Europe. It gives right of properties to women also. The Islamic teaching highlights are purity of life, charity to the poor and spread of brotherhood.

5. **Christianity.** Christianity founded by Jesus Christ, commands the largest following in the world. Christ was born in 4 BC in Judaea. He started preaching about the kingdom of God when he was thirty. His activities roused the opposition of the Jewish high priests who accused him. He was crucified on the orders of Pontius Pilate, the Roman Governor. Christianity preaches charity, love and peace. The message of Jesus Christ is given in the Holy Bible. Christianity is not a religion but a way of life which guides the actions and life for mental peace and love of humanity.

6. **Jainism.** Jainism derives its name from Jaina (the Conqueror). Mahavira belonged to a princely family in Vaishali. At the age of 30 he renounced the world and spent 12 years in austerity and meditation in search of truth. At the age of 47, while meditating, he received enlightenment. As per Jainism teachings, anger, pride, deception and greed must be counteracted by the ten best virtues such as forgiveness, humility, straight forwardness, contentment, truthfulness, restraint, austerity, purity, chastity and renunciation. To keep himself steady on path of liberation and to destroy karma, a monk has to bear all the trouble that might cause him pains. The monk has to practice austerity external and internal. It is pure meditation which ultimately leads to liberation.

7. **Buddhism.** Buddhism was founded by Gautam Buddha who was son of Indian Prince Suddhodan. The sorrow and suffering of the world tormented his heart and he abandoned his house and started pursuit for enlightenment. Gautam found enlightenment while meditating under a Pipal tree at the age of 42. Buddha preached that

emancipation from cycle of re-birth i.e Nirvana can be attained by path of self purification, with doctrine of love and mercy. Buddhism is essentially a religion of kindness, humanity and equality. It denounces all claims to superiority on grounds of birth or caste. The status of man in society is determined by his own conduct and actions.

8. **Sikhism.** God the original Guru, imparted his message to his disciple Nanak , who having absorbed the divine spirit became the Guru himself. The message is known as Gurmat. He who follows the teaching of Gurmat is a pure person and known as Sikh. The same spirit was passed on to the successive Gurus and ultimately the divine spirit has been passed onto the sacred script of 'Guru Granth Saheb'. The teachings of Sikhism are that God is one. Equality in society and leading a life of purity are important. Man can attain God while leading a normal family life. The institution of Gurudwara and common kitchen (langar ) are noble examples of equality in Sikhism.

### **Customs of India**

9. India is a multiracial, multilingual civilization with rich culture heritage and has provided peaceful atmosphere for the development of many religions. Indian culture and customs are influenced by these religions. The customs of India depict very colourful panorama. There are certain customs which are prevalent in a particular religion and some are common to all religions of the country.

10. Indian festivals are famous in the world. 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. The customs are of various types in relation to local customs, caste customs and family customs. There are different customs of Hindu marriage as compared to a Muslim marriage or a Sikh marriage. Similarly there are different customs of celebrations. All these customs have been protected by law.

11. There are certain religious customs which pertain to particular religion only like Mundan ceremony in Hindus and Naming ceremony in Sikhs. These customs have religious value and are a means of entertainment also.

12. There are certain customs regarding dresses and ornaments of women. These are associated with particular regions which gives a very colorful dimension to Indian customs and traditions, Similarly, all regions have their distinctive ornaments.

13. India being a big country with different races and religions has rich customs related to festivals, religious ceremonies, dresses, marriage, architecture, painting, song, dance and food habits. The customs and traditions of India though varied has binding force in them which ultimately serves as a unifying factor of Secular India.

## **SECTION-3**

### **UNITY IN DIVERSITY**

#### **Introduction**

1. India is a vast country with diversity in caste, religion, customs and traditions where people from different ethnological groups having different languages or dialects, follow different rituals in daily life and work together shoulder to shoulder. Inspite of diversity in physical features and social systems, there is unity in India. It is held together by many ties like territory, language, culture and economic inter-dependence etc. Our history is replete with examples that illustrate the set-backs suffered by us because of our disunity. Mohammad Gauri was able to set his foot on Indian soil because of internal friction and disunity between two Indian rulers. The British too followed the policy of 'Divide and Rule' and kept the doors of freedom closed, because they could disunite Indians easily.

#### **Importance of National Unity**

2. National unity is also essential for social peace and harmony. We can enjoy peace and security, if there is a mutual trust and goodwill among all the sects of people of the country. No progress can be made in the field of art and literature, science and cultural advancement and economic well-being if disruptive tendencies and divisive forces are around to tear asunder the very fabric of national life. Also we can play an effective role in the international field if we can set our own house in order first.

#### **Fundamentals of Unity**

3. Some of the essentials for National Unity are as given below:-

(a) **Language.** Narrow minded love towards one's own language and negative feeling towards others is a major hindrance to unity. No country can stand on the pillars of an alien language. A language, instead of dividing, should be a unifying force. A via media acceptable to all would go a long way in bringing about linguistic unity in the country. Alongwith regional languages one national language should be fully developed. Languages of different states should be encouraged in the educational institutions.

(b) **Casteism.** It is felt in offices and colleges, in politics and almost in all walks of life. The feeling of belonging to an upper caste and hatred for the lower caste is not only an offence against mankind it is a threat to India's unity. The system of casteism and untouchability would eat into the very vitals of a society. Casteism should be tackled with an iron hand. There should be no communal or special constituents. The minority communities should be given their due share of advancement and communal favouritism should be sternly dealt with.

(c) **Education.** In India about half of the total population is illiterate. An illiterate person cannot understand what is good or bad for himself or his

country. Literacy is an important ingredient for unity. The pattern of education should be so oriented that it encourages love, brotherhood and unity amongst various communities. There could be exchange of teachers from one state to another and there should be no bar on the students of one state for admission into the universities of other states. It would help to cement the bonds of unity which is an essence of any nation.

(d) **Communalism.** Communalism means discriminatory feelings of an individual against another on the basis of religion or caste. This also endangers the unity of our country. Fundamentalism is the greatest challenge to India's unity. This has to be sternly dealt with. The politicians who encourage provincialism and regionalism should be debarred from elections as members of legislative bodies. All citizens should regard themselves as Indians first and build unity between different sections of our society.

(e) **Regionalism.** India is a vast country where regional diversities exist. The feeling of loyalty towards one's own state or region first is also a major hindrance in unity. People from different parts of the diversified subcontinent should meet under a common wing of national consciousness, forgetting the regional differences, sharing the feelings of togetherness and realise the proud feeling in themselves of being part and parcel of a common Indian diaspora.

### **Relevance of NCC in Unifying India**

4. 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 gain experience to live together, co-operate with each other and work in harmony with cadets of other states whom they have not known before, thus helping in strengthening unity as under:-

(a) **Ethics and Social Values.** These are very important values in day-to-day activities on the ground and are the essentials of personality. NCC helps to cultivate these values through which the spirit of unity and value of personal sacrifice are ignited in the minds of cadets.

(b) **Cultural and Traditional Values.** Our country has diverse groups which have been divided on grounds of religion, caste, creed and language. NCC organises various camps and group activities where ample opportunity is given to the cadets to closely watch the cultural and traditional shows of other regions. It provides the cadets with an opportunity to appreciate each other's uniqueness and cultivate friendship.

(c) **Discipline and Patriotism.** A cadet is trained to give selfless service to society and be available anytime for national cause. NCC can be described as the nation's disciplined, trained and motivated young force available for national service to provide assistance in various places as well as provide future leadership and participation in all walks of life.

## **SECTION-4**

### **NATIONAL INTEGRATION AND ITS IMPORTANCE**

#### **Introduction**

1. Indian civilisation is one of the oldest civilisations in the world. In the past people belonging to different races and religions came and settled here. They brought with them their distinctive language and life style. Different tribes with their distinct languages intermingled with various tribes of our country. That is why our culture is described as an example of composite culture. It is made up of all communities, races and religions.

#### **National Integration**

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

3. We must understand that national integration does not mean uniformity of all. It does not stand for uniformity of religion, dress and food habits etc. It means both preservation of diverse cultures and at the same time living and working in harmony with each other. No country or society can survive if its people do not remain united. The feeling of togetherness and a sense of belonging are absolutely necessary for a nation to survive. Such a feeling can only be generated through the process of integration. Thus national integration is a positive concept which provides strength to the people to fight against all evil forces. It provides a congenial condition in which people can make good progress.

#### **Importance**

4. National integration has assumed greater importance in the recent years due to the fast changing ethos and moral values in the society. The need for national integration was probably never felt before as is felt today. The turbulent atmosphere and the deteriorating law and order situation in the country due to various religious, social and political factors have led to the realisation of the necessity of national integration.

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

6. National integration assumes greater importance particularly in a country like India where people with different languages, religions, races and culture are required to be weaved together. The unity in diversity of which we are proud of can only be maintained if we have the understanding and respect for each other's religion, customs and traditions. It is said that 'United we stand and divided we fall'. If we have to survive as a nation and safeguard our sovereignty and national integrity, we have to remain united. National integration is a pre-requisite for the survival and prosperity of any nation and hence needs no emphasis. National integration is a must to achieve the basic for survival of any nation such as:-

- (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.

7. It is the duty of each and every citizen of our country to strive to achieve unity inspite of diversity and further cement it. We must remember that there should be no divisions between North and South or East and West of India. There is only one India of which we all Indians are inheritors. We are Indian first and Indians last.

## **SECTION -5**

### **FAMOUS LEADERS OF INDIA**

#### **General**

1. Though there are many famous leaders in India, post independence and pre-independence , only a few of these are being discussed here like Mahatma Gandhi, Bhagat Singh, Lal Bahadur Shastri, Chander Shekhar Azad, Subash Chandra Bose, Swami Vivekanand , Jawaharlal Nehru , Maulana Abul Kalam Azad and Sardar Vallabhbhai Patel.

## **MAHATMA GANDHI**

### **Birth And Upbringing**

1. Mohandas Karamchand Gandhi, in later life called Mahatma Gandhi as also Gandhiji, was born on 02 October 1869, at Porbandar. He was born in a middle class family. His grandfather had risen to be the Dewan and was succeeded by his son Karamchand, the father of Mohandas. Putlibai, Mohandas's mother, was a saintly character, gentle and devout, and left a deep impression on her son's mind.

### **Youth and Study in England**

2. After matriculating from high school, Gandhi joined the Samaldas College in Bhavnagar, where he found the studies difficult and the atmosphere uncongenial. Meanwhile, his father had died in 1885. A friend of the family suggested that if the young Gandhi hoped to take his father's place in the state service he had better become a barrister which he could do in England in three years.

3. During the early period of his stay in England Gandhiji went through a phase which he has described as aping the English gentleman. He got new clothes made, purchased a silk hat costing nineteen shillings. Having passed his examinations, Gandhiji was called to the Bar on 10 June 1891, and sailed for India two days later. Gandhiji's life career can particularly be divided into three stages. The first stage started when after completing his studies he came to India where he settled himself as a lawyer but could not get a roaring business with the result that he had to accept a business engagement with a muslim firm for South Africa. Upto this time he was known only to a few persons as a lawyer. Second period is from 1921 to 1947 and his third period is from 15 August, 1947 to 30 January, 1948.

### **On the Threshold of Manhood**

4. After completing his studies when he reached Bombay he learnt to his profound sorrow that his mother had died. The news had been deliberately kept back from him to spare him the shock in a distant land.

5. Having failed to establish himself as a lawyer in Bombay, Gandhiji returned to Rajkot where he started again. But he did not make much headway and was unhappy and out of tune with the atmosphere of petty intrigue that was rampant in the small state of Kathiawar. In this predicament came an offer from Dada Abdulla & Co. to proceed to South Africa on their behalf to instruct their counsel in a lawsuit. It was a godsend opportunity. Gandhiji sailed for South Africa in April 1893. There he was shocked to see the ill treatment being meted out to Indians and the contempt of the white men towards the coloured race to the extent they were not even allowed to travel in the 1<sup>st</sup> class compartment of the trains. They were considered as coolies and Gandhiji himself was called a coolie barrister. The incident of Gandhiji being thrown off the train at the behest of a white man, although he had a legitimate ticket, had a profound effect on Gandhiji and he organized the people to fight against this racial discrimination peacefully. He achieved some success.

### **Emergence of Mahatma**

6. He left South Africa in the middle of 1896 and came to India. The three years stay in South Africa persuaded Gandhiji that he could not now desert a cause he had so warmly espoused. He, therefore, took six months leave to visit India. He tried to educate and convince the Indian public about the conditions of Indians in Africa. However, in the meanwhile he received urgent message to come back to Natal by the Indian settlers. He left for Africa in the middle of December 1902. He found that the conditions in South Africa had become deplorable and the government was so harsh that in Transvaal no person could enter the colony without a permit and Indian settlers were usually not issued such permits. In 1906 the Transvaal government proposed ordinance requiring all Indians to register themselves and carry a certificate with them all time. Gandhiji explained the consequences of such an ordinance to the people and got their full support to agitate against this, in a new type of passive resistance which Gandhiji termed as Satyagraha. The state became independent and the ordinance became an act and Indians were asked to register, Gandhiji successfully advised the people not to register and only 500 out of 13,000 registered. The authorities holding Gandhiji responsible for the resistance arrested him and put him in jail for approximately 3 months. A compromise was worked out. However, the government did not keep up their part of the promise. This resulted in Gandhiji resuming his struggle which was joined by the masses including women. Gandhiji could arouse the sympathies of the British public and also the secretary of State for India. His struggle bore fruits and the Indians in South Africa were made to live an honourable and respectful life.

### **Great Soul in Beggar's Garb**

7. In 1914 Gandhiji returned to India with honours and decided to guide Indian political life. Gandhiji settled down on the bank of the river Sabarmati, on the outskirts of Ahmedabad, where he founded an ashram in May 1915. He called it the Satyagraha Ashram. The inmates, about twenty-five men and women, took the vows of truth, ahimsa, non-stealing, non-possession and control of the palate and dedicated themselves to the service of the people.

8. His first satyagraha in India was in Champaran, in Bihar, where he went in 1917 at the request of poor peasants to inquire into the grievances of the much-exploited peasants of that district, who were compelled by British indigo planters to grow indigo on 15 percent of their land and part with the whole crop for rent.

9. In 1918 Gandhiji tried to improve the working conditions of workers in the textile mills of Ahmedabad. His confidence in British sense of justice was rudely shaken due to passing of Rowlatt Act and Jallianwala Bagh tragedy and he became a non-co-operator. He lost his faith in British impartiality and entered Indian politics with full vigour and force. He was determined to win freedom for India through his weapon of non-violence and passive resistance. He also realised that Hindu-Muslim unity was most essential for India's freedom and decided to struggle for it as well.

### **Mahatma and the Masses**

10. From 1919 till his death in 1948, he occupied the centre stage and was the hero of the great historical drama which culminated in the independence of his country. He changed the entire character of Indian political scene.

11. In March 1930 Gandhiji started his famous Dandi March and was arrested for the same and finally released in 1931. In the same year Gandhi-Irwin Pact was concluded. In 1931 he went to London to attend a conference as the sole representative of the Indian National Congress. In January 1932 Gandhiji was again arrested. It was at this stage that by observing fast unto death he foiled government attempts to separate Harijans from Caste Hindus. In 1942 Gandhiji started his famous 'Quit India' movement which awakened the mind of the Britishers and made them realize that India was not going to bear any injustice now. Gandhiji was, however, much shocked to learn that Hindus and Muslims were fighting with each other on political issues. He could easily see that a great sacrifice was required to harmonise and promote mutual goodwill and relations between the two communities. He decided to go on fast until people of both communities decide not to resort to communal hatred as a political weapon.

12. It is unfortunate that the father of the nation who sacrificed and guided the nation so ably could not reap the fruits of Independence. On 30<sup>th</sup> January, 1948 when he was going to address a prayer meeting the sage who preached non-violence was shot dead by Nathu Ram Godse.

### **BHAGAT SINGH**

#### **Introduction**

1. **Bhagat Singh** (September 27, 1907–March 23, 1931) was an Indian revolutionary, considered to be one of the most famous martyr of the Indian freedom struggle. For this reason, he is often referred to as **Shaheed Bhagat Singh**. He is also believed by many to be one of the earliest Marxists in India and has been labelled so by the Communist Party of India (Marxist). He was one of the leader and founders of the Hindustan Socialist Republican Association.

#### **Birth and Upbringing**

2. Bhagat Singh was born into a Sikh family to Sardar Kishan Singh and Vidyavati in the Khatkar Kalan village near Banga in the Jalandhar district of Punjab. As a child, he was deeply affected by the Jallianwala Bagh massacre that took place in Punjab in 1919. When Mahatma Gandhi started the Non Co-operation Movement in 1920, he became an active participant at the age of 13. He had great hopes that Gandhiji would bring freedom in India. But he was disappointed when Gandhiji called off this movement following the Chauri Chaura riot in 1922. At this point he had openly defied the British and had followed Gandhiji's wishes by burning his government-school books and any British-imported clothing. In 1923, Bhagat Singh famously won an essay competition set by the Punjab Hindi Sahitya Sammelan. This grabbed the attention of members of the Punjab

Hindi Sahitya Sammelan including its General Secretary Professor Bhim Sen Vidyalankar. At this age, he quoted famous Punjabi literature and discussed the problems of Punjab.

### **Bhagat Singh as a Revolutionary**

3. In the face of actions by the revolutionaries, the British government enacted the Defence of India Act to give more power to the police. The purpose of the Act was to combat revolutionaries like Bhagat Singh. The Act was defeated in the council by one vote. However, the Act was then passed under the ordinance that claimed that it was in the best interest of the public. In response to this act, the Hindustan Socialist Republican Association planned to explode a bomb in the assembly where the ordinance was going to be passed. It was decided that Bhagat Singh and Batukeshwar Dutt, another revolutionary, would throw the bombs in the assembly.

### **Inquilab Zindabad**

4. On April 8, 1929, Singh and Dutt threw bombs onto the corridors of the assembly and shouted "*Inquilab Zindabad!*" ("Long Live the Revolution!"). This was followed by a shower of leaflets stating that it takes a loud voice to make the deaf hear. The bomb neither killed nor injured anyone; Singh and Dutt claimed that this was deliberate on their part, a claim substantiated both by British forensics investigators who found that the bomb was not powerful enough to cause injury, and by the fact that the bomb was thrown away from people. Singh and Dutt gave themselves up for arrest after the bomb blast. He and Dutt were sentenced to 'Transportation for Life' for the bombing on June 12, 1929.

### **Marxism**

5. Bhagat Singh's political thought evolved gradually from Gandhian nationalism to revolutionary Marxism. By the end of 1928, he and his comrades renamed their organisation the Hindustan Socialist Republican Association. He had read the teachings of Karl Marx, Friedrich Engels and Vladimir Lenin and believed that, with such a large and diverse population, India could only survive properly under a socialist regime. These ideals had been introduced to him during his time at the National College at Lahore and he believed that India should re-enact the Russian revolution. In the case that India were not socialist, he believed that the rich would only get richer and the poor would only get poorer.. He became the first socialist leader in India to make any gain. Even today, socialist leaders sometimes refer back to him as the founder of Indian socialism.

### **Bhagat Singh and Mahatma Gandhi**

6. Mahatma Gandhi, always maintained that he was a great admirer of Singh's patriotism, but that he simply disapproved of his violent methods. He also said that he was opposed to Singh's execution (and, for that matter, capital punishment in general) and proclaimed that he had no power to stop it.

## **Death**

7. Bhagat Singh was known for his fearlessness of death and his appreciation of martyrdom. His mentor as a young boy was Kartar Singh Sarabha and he eventually was hanged for avenging the death of martyr Lala Lajpat Rai. In the leaflet he threw in the Central Assembly on 8th April 1929, he stated that it is easy to kill individuals but you cannot kill the ideas. Great empires crumbled while the ideas survived. He hoped his death would inspire the youth of India to unite and fight the British Empire

## **Quotation by Bhagat Singh**

8. "The aim of life is no more to control the mind, but to develop it harmoniously; not to achieve salvation here after, but to make the best use of it here below; and not to realise truth, beauty and good only in contemplation, but also in the actual experience of daily life; social progress depends not upon the ennoblement of the few but on the enrichment of democracy; universal brotherhood can be achieved only when there is an equality of opportunity - of opportunity in the social, political and individual life", from Bhagat Singh's prison diary.

## **LAL BAHADUR SHASTRI**

### **Introduction**

1. **Lal Bahadur Shastri**. (02 October 1904–11 January 1966) was the second Prime Minister of independent India and a significant figure in the struggle for independence. He was born in Mughalsarai, in United Province (now Uttar Pradesh). To take part in the non-cooperation movement of Mahatma Gandhi in 1921, he began studying at the nationalist Kashi Vidyapeeth in Kashi, and upon completion, he was given the title Shastriji or Scholar, Doctor at Kashi Vidyapeeth in 1926. He spent almost nine years in jail in total, mostly after the start of the *Satyagraha* movement.

### **Political Career**

2. After India's independence, he was Home Minister of Uttar Pradesh under Govind Ballabh Pant, the Chief Minister. He was appointed General Secretary of the Lok Sabha before gaining a ministerial post as Railways Minister. He resigned as Minister following a rail disaster near Ariyalur, Tamil Nadu. He returned to the Cabinet following the General Elections and became Minister for Transport. In 1961 he became Home Minister.

### **Rise to Premiership**

3. Jawaharlal Nehru died in office on 27 May 1964 and left a vacuum. The major figures of the Congress Party were unable to find enough support thus the name of Lal Bahadur Shastri came up as the compromise candidate and he became Prime Minister on 09 June 1964. Shastriji, though mild-mannered and soft-spoken, was a Nehruvian socialist and thus had wide appeal among the masses.

4. Shastriji worked by his natural characteristics to obtain compromises between opposing viewpoints. He commanded a great deal of respect from the masses, and he used it to advantage in pushing the Green Revolution in India; which directly led to India becoming a food-surplus nation, although he did not live to see it.

### **War with Pakistan**

5. The chief problem was Pakistan laying claim to half of the Kutch peninsula, Pakistan sent incursion forces in August 1965, who skirmished with Indian tanks. But Pakistan's main aggressive intentions were upon Kashmir. And in September 1965, major incursions of militants and Pakistani soldiers began, hoping not only to break-down the government but incite a sympathetic revolt in Kashmir valley. The revolt did not take place, India sent its forces across the Line of Control and war broke out on a general scale. Massive tank battles took place in Punjab, and while Pakistani forces made little gains, Indian forces captured the key post at Haji Pir, in Kashmir, and brought the Pakistani city of Lahore under artillery and mortar fire.

### **Tashkent**

6. A ceasefire was declared, and the soft-spoken, mild-mannered Shastriji became a national hero. In January 1966 Shastriji and Pakistani President Muhammad Ayub Khan attended a summit in Tashkent (former USSR, now in modern Uzbekistan), organised by President Kosygin of USSR. Shastriji signed a treaty with Pakistan on 10 January 1966 known as Tashkent Declaration, but to the shock of nation the very next day he died of a heart attack. He is the only Indian Prime Minister to have died in office overseas. All his life, he was known for his honesty and humility.

### **Memorial**

7. He was the first person to be posthumously awarded the Bharat Ratna and a memorial 'Vijay Ghat' was built for him in Delhi. The slogan Jai Jawan, Jai Kisan (Hindi for "Hail the soldier, Hail the farmer") is attributed to Shastriji.

## **CHANDER SHEKHAR AZAD**

### **Introduction**

1. Chander Shekhar Azad was a revolutionary freedom fighter. Azad was born at a place called Jhalra in Madhya Pradesh. He ran away from home when young, reached Kashi (Benaras) and joined the freedom struggle when still young. In 1921, he received his first punishment for revolutionary activities. He was sentenced to fifteen lashes. With each stroke of the whip the young patriot shouted "Bharat Mata Ki Jai". He was undaunted and scared the British with his courage and rebellion against the oppression of the Indians.

### **Exploitation by the British**

2. The Indian National Congress was founded in 1885 with the motive to end the British rule over India. The British government imposed a tax on salt and essential commodities of the Indian masses and in 1888 the tax was raised to unbearable proportions.

3. Gopal Krishna Gokhale, addressed the eleventh session of the Congress held at Pune, creating a sense of national consciousness among the Indian people over this inhuman tax. Mohandas Karmachand Gandhi launched the Non-Cooperation Movement in 1920. Chander Shekhar, a 14-year-old student of Banaras Sanskrit Pathasala, was arrested for taking part in the movement.

### **Azad**

4. On being produced in court, the British magistrate asked what his name was. He replied, "My name is Azad (free), my father's name is Swatantra (independent) and my residence is "Prison". There was steel in his voice and his eyes shone with pride. He was hand-cuffed and the magistrate was infuriated and ordered fifteen lashes. Flogged with every lash the boy shouted 'Vande Mataram' and 'Mahatma Gandhi Ki Jai' (Worship of Mother India and Long Live Mahatma Gandhi). The entire public who witnessed the resolute endurance of the boy hailed him as 'Azad'. Since then he came to be referred by the name.

### **Azad as a Revolutionary**

5. After the withdrawal of Non-Cooperation Movement, the Revolutionary movement reasserted itself. Azad was introduced to the revolutionaries by Manmath Nath Gupta and he joined the Hindustan Socialist Republican Army in 1922.

6. He was appointed the leader of the army in Uttar Pradesh and the Commander-in-Chief of the Army in 1924. He thus became 'instant terrible' to the Police in Punjab and Delhi. The first armed insurrection took place on 09 August 1925, conceived by Ramprasad Bismal and ably assisted by Chander Shekhar. He was involved in the 'Kakori Train Case' in which the government treasury was seized while the train was in Lucknow, Police unearthed Azad's involvement in it. Ramprasad and Ashfaqullah were hanged. Then came the murder of British officer Saunders at Lahore on December 17, 1928. Azad master-minded the throwing of a Red Pamphlet on the floor of the Legislature on 08 April 1929. The investigators discovered a huge bomb factory of the revolutionaries in Lahore. Many members of the Army were arrested because of betrayals. Chander Shekhar was left alone.

7. On 06 July 1930 Azad initiated an armed robbery in Delhi and collected Rs. 14,000. Police was now on the trail of Azad and a reward of Rs. 10,000 was on offer to capture him dead or alive. On 27 February 1931 at 09.30 AM Azad went to Alfred Park to meet his comrades-in-arms. Someone had tipped the Police and Azad was encircled by them. Knowing he was cornered, he took the small pistol in his possession and a few cartridges. He fought single handed with the police.

8. His body was riddled with bullets. One bullet was left in Azad's pistol. He put the pistol on his temple and fired the last shot. He fell dead.

9. His people christened him 'Azad'. He was not a man but a movement for Swaraj or Swatantra. Chander Shekhar Azad left the following message for his countrymen. "**Let the representatives of the people return to their constituencies and prepare the masses for the coming revolution. We want to emphasize the lesson often repeated by history that it is easy to kill individuals, but you cannot kill ideas. Great empires crumbled while the ideas survived**". He will always remain immortal in the annals of history as a man who sacrificed his life for the freedom of his country.

## **SUBHASH CHANDRA BOSE**

### **Introduction**

1. Netaji Subhash Chandra Bose was one of the great leaders of India's national struggle who felt that sacrifice alone could prepare a nation for independence. He believed in action rather than words and had faith in Indian culture and civilization. According to him though Gandhiji had raised the movement for national struggle to great heights yet non-violence and Satyagraha were not the methods for acquiring independence. He properly understood the value of propaganda at national and international levels as an instrument and useful weapon for national liberty. He was opposed both to communism and communist philosophy. He appreciated fascism because it believed in concrete action rather than theory. Beyond that he did not subscribe to fascist philosophy. His individual life was full of struggle for the independence of his nation. National independence was the sole object of his life. In the economic field his ideas were close to socialist philosophy. He pleaded for the use of scientific inventions for large scale production for the economic regeneration of the country.

### **His Early Life**

2. Subhash Chandra Bose was born at a village in 24 Paraganas district of West Bengal. His father Janaki Nath was a lawyer in Orissa. The family was well educated and cultured. Subhash got his early education in a missionary school at Cuttack from where he passed his high school examination.

### **Influences on Subhash Bose**

3. Subhash Chandra Bose was influenced by the writings and teachings of Swami Vivekanand and was highly inspired by him. He not only learnt from him broadness in outlook but also the pride in the glory of the India's past. It was from him that he got the idea that India had a mission of spreading civilization in the world, which India alone could do as a free Nation. Among others who influenced him was Aurobindo Ghosh. Subhash Chandra Bose neither wrote nor spoke too much. His ideas and thoughts are available in his book 'Indian Struggle' (1920-1934) which is a specimen of his patriotism and inspired career.

## **His Ideas**

4. (a) **On Politics.** Subhash Chandra Bose was working at a time when the national congress was on the crossroads and required to decide between Gandhian right wing views and Subhash Chandra's left wing philosophy. He appreciated Gandhiji for his devotion to the cause of national freedom, but beyond that Gandhian philosophy and method of working did not appeal to him. According to him Gandhian ethical approach was not the only solution to national problems.
- (b) **On Communism.** Subhash Chandra Bose was very critical of Communist philosophy. No doubt he was a leftist in the Congress but his interpretation of leftist philosophy was different from that of commonly understood Communist philosophy. He was a supporter of socialism and aimed at wiping out poverty and illiteracy from India. He also stood for the abolition of Zamindari system and wanted to relieve the agriculturists of their dependence. He also felt that there should be no system of land lordism. According to him, one of the methods of achieving it was cultivation and introduction of co-operative system in all important walks of life.
- (c) **On Indian History.** According to Subhash Chandra Bose India's past was very glorious and the nation could rightly take pride in her heritage. It was a dynamic culture which not only changed with the passage of time but also adjusted very conveniently to changed circumstances. Decay, however, came when dynamic instinct was replaced by stagnancy and nation became inactive. Modern times bring new outlook introducing inaction in life but according to him such preachings as 'Fate' and 'Ahimsa' are the cause of decline of the nation.
- (d) **On Hindu - Muslim Unity.** According to Bose separatist distinction between the Hindus and Muslims was only an artificial creation. He said that political system of pre-British days could not be characterised as Muslim rule because important Hindu personalities were associated with Muslim rule both at the centre as well as in the provinces.
- (e) **On Fascism.** Subhash Bose was very much influenced by the fascist method of the struggle and their determination and will power. He was convinced that the nation will have to show determination and get ready to struggle hard for attaining independence and freedom. He was also inspired by the onslaught which the fascist leaders made on the social, economic and political institutions of their time in order to rid the society of its evils.

## **Formation of Forward Bloc**

5. In 1939 Subhash Bose was elected as president of the Congress defeating Gandhi's candidate Dr Pattabhai. The victory was a symbol of Subhash Bose's popularity but some members of Congress Working Committee could not adjust themselves to Subhash Bose's ideas, uncompromising attitude and opposition to British rule in India, as well as criticism made by him about Gandhiji's philosophy of 'ahimsa' and 'non-violence'. The result was that there was friction in the organisation and Subhas

Bose left and founded a new organization known as Forward Bloc. Its aim and objects were to make an attempt to bring congressmen closer to the Bloc.

### **Assessment of his Work**

6. There is perhaps little doubt that Subhash Bose was one of the top ranking nationalists and patriots of India. The very fact that he left the land of his birth to organise his struggle for liberating Mother India from a foreign soil is in itself sufficient proof of his patriotism. The vigour and energy with which he could manage affairs both in Japan and Germany and the capability with which he organized Indian National Army are themselves proof of his administrative capability and presence of mind.

7. The British realised the magnitude of the Indian National Struggle for freedom and also the brewing discontentment among Indian Armed Forces only due to him and his INA. It was also due to his untiring efforts that the struggle for freedom got worldwide outlook leading to the British Government's bowing before Indian nationalism. He was perhaps one of the few Indian leaders who vigorously pleaded that social and political reforms must go hand in hand. He was a patriot of the first order and lived and died while struggling for the freedom of Mother India. His death has been shrouded in controversy as some believe that he infact did not die in the air crash as known.

## **SWAMI VIVEKANAND**

### **Introduction**

1. Swami Vivekanand had a burning love for the country and believed that India has both to give to the West as well to take from it. According to him Indian religion is the most rational and dynamic one. He was a true Sanyasi and chief exponent of Hindu philosophy with remarkable power of understanding and that of giving exposition of Indian religion and its spirit. He undoubtedly inspired the Indian youth and his lectures and ideas were torch-bearers for the nationalists. He believed in the theory of Vedanta and Maya and his source of influence were Upanishads and Brahmans. He had deep love for the down-trodden and the poor because, according to him, true religion is in uplifting those who have been neglected by the society.

### **His Early Life**

2. Swami Vivekananda's birth name was Narinder Nath Dutta. He was born on 12<sup>th</sup> January, 1863 in a very well-to-do and educated family. From his very childhood the influence of his mother on him was immense and this was subsequently reflected in his ideas as well. It was in a very dramatic manner that he came in contact with Rama Krishna Paramahansa after he completed his early education. It is usually believed that Rama Krishna Paramahansa saw him in meditation and recognised him as soon as he came in his contact. Gradually Vivekanand began to get the confidence of his Guru and became his most popular and loving disciple. The greatest influence on Swami Vivekanand was that of Shri Ram Krishna Paramahans. He learnt everything which his Guru could teach.

## **His Works**

3. Swami Vivekanand's ideas are available to us mostly in what he said at the Congress of Religions at Chicago and also in his lectures from Almora to Colombo. It was through these lectures that he tried to expound his Philosophy. However, his other works are the 'Jnana Yoga', 'The East and West', 'Modern India', 'The Mission of Vedanta', 'India and Her Problems', 'Own Duties to the Masses', 'The Cycle of Caste' and 'Karma Yogi'. The works of Swami Vivekanand have been brought out in eight volumes by Rama Krishna Mission under the title 'The Complete Works of Swami Vivekanand'.

## **His Ideas**

4. (a) **On Politics.** Swami Vivekanand very clearly and without any ambiguity declared that his ideas in no way should be interpreted as a political philosophy. The main reason behind it perhaps was that he did not wish that he should indulge in political controversies.

(b) **On Religion and Politics.** According to Swami Vivekanand religion was life and soul of India and in our land no political philosophy can flourish unless it is closely associated with religion. Religion spiritualises politics and makes it healthy.

(c) **On State Activities.** It was during his tour of the country that he saw with his own eyes the miserable condition of millions of Indians with poverty writ large on their faces. He, was stricken on seeing the agony and starvation. He therefore, came to the conclusion, that it is the foremost duty and function of a State to see that the poor and the needy are uplifted and essential unity of India is maintained.

(d) **On Socialism.** Swami Vivekanand was essentially a socialist in the sense that he stood to help the poor and down-trodden. His showed genuine concern for the poor than most of the so called socialists. He associated religion and God more with the poor than rich.

(e) **On Freedom.** Swami Vivekanand believed in the concept of freedom as it is most essential for proper development of all human beings. He advocated freedom both at national and international levels.

(f) **On Indian National Congress.** He was not satisfied with Indian National Congress working under the control of the liberals. He coaxed Congress to make more positive and constructive efforts to get some benefits from British Government for the people of India.

5. Inspite of the fact that Swamiji desired that his philosophy should not be interpreted to have political bias, the fact remains that his ideas left a great bearing on political life of the country and influenced many leaders.

## **JAWAHAR LAL NEHRU**

### **Introduction**

1. Jawahar Lal Nehru dominated Indian political scene for about four decades and moulded the course of Indian history according to his ideology. For about two decades he was the first Prime Minister of India and this period is known as Nehru era. He was in the forefront of national freedom struggle, next only to Mahatma Gandhi. After independence he laid the foundations of a future India. He gave the country the policy of non-alignment. He extended his whole-hearted co-operation to the United Nations Organisation (UNO) and its specialised agencies. He was also responsible for giving a Constitution to free India.

### **His Early Life**

2. Jawahar Lal Nehru was born on 14<sup>th</sup> November 1889 in very comfortable surroundings. His father Moti Lal Nehru arranged a private tutor to coach him at home. Jawahar Lal Nehru continued his studies at home up to the age of 15. In 1905 his father decided to send young Jawahar Lal Nehru to England for higher studies. After completing his degree he visited Ireland where he expressed his emotional sympathies with the Irish struggle against British imperialism. In 1912 he came back to India and joined the Bar. He, however, found that the atmosphere at the Bar was not intellectually stimulating and also his legal practice was not doing well. For eight years Jawahar Lal Nehru remained a member of the Bar and carried on with his profession in a desultory fashion.

### **Entry into Politics**

3. In 1912 Nehru attended Bankipur session of the Congress. Next year he joined the United Provinces Congress Organisation but remained quite inactive for some time. In 1915 he made his first public speech which surprised many prominent leaders of Indian political life but his interest in Indian politics grew only after 1917.

4. It was during this period that he came in contact with Gandhiji who greatly influenced his ideas and course of life and he decided to join his Satyagraha movement. It was in 1920 that Jawahar Lal Nehru for the first time came in contact with the peasants and workers and came to know of their poverty. It was also for the first time that he got first-hand information about the living standard of the millions of Indian workers and peasants. The occasion was provided due to his forcible eviction from Mussoorie under orders of the District Magistrate, Dehradun, who wanted Jawahar Lal to give an undertaking that he would not contact the Afghan delegation then staying with him in the same hotel. This opportunity of visiting the villages greatly helped him in his future life.

### **Nehru's Imprisonment**

5. In 1921 when Gandhiji started his non-cooperation movement, Nehru could not resist the temptation of remaining outside the movement. By then Moti Lal Nehru and

other prominent Congress leaders had also been arrested but all of a sudden due to Chauri Chaura incident Gandhiji withdrew his non-cooperation movement. During this period Jawahar Lal Nehru was also arrested for distributing handbills but was subsequently released from jail as it was found that the arrest was illegal. However his stay out of jail was not for long and on 11 May 1922 he was re-arrested on account of organising and enforcing a Congress decision of boycotting foreign clothes and remained in jail till 31<sup>st</sup> January 1923.

### **As Chairman of Allahabad Municipal Board**

6. In 1923 Jawahar Lal Nehru was elected chairman of Allahabad Municipality. This was a singular honour bestowed on him because at that time only prominent Congressman were elected to such post.

### **His Visits to Europe**

7. In March 1926, Jawahar Lal Nehru with his wife and daughter sailed from Bombay for Switzerland for the treatment of his ailing wife. During his stay he found an opportunity of visiting other parts of the world.

8. Towards the end of 1926 he visited Berlin where he came to know that 'Congress of the Oppressed Nationalities' was being held at Brussels in February 1927. The Indian National Congress appointed Jawahar Lal as the representative of India. It was here that he came in contact with the orthodox Communists and got the idea that national independence and social reforms must go hand in hand. During this conference he also got the idea of setting up combined Afro-Asian group. It has rightly been said that this Congress proved a great milestone in the development of Nehru's political thought. He also got an opportunity to visit Moscow in 1927 to attend the 10<sup>th</sup> anniversary celebration of Bolshevik Revolution. This visit to Moscow was very noteworthy because it influenced Nehru's political ideology and brought him close to Communism. By the end of December 1927 Jawahar Lal came back to India and attended the annual Congress Session of Madras.

### **Nehru's Role in Independence Resolution**

9. During the Madras session of the Congress he took a very active part and moved a resolution on independence. This resolution virtually plunged him into Congress politics and with great hardship could convince the Congress to pass the resolution. In 1928 he presided over the annual session of the Trade Union Congress. It was at this stage that Nehru gave his mind about the future of India. He said, "I must frankly confess that I am a socialist and a republican and am no believer in kings of industries who have greater power over the lives and fortunes of men than even the kings of old, and whose methods are predatory as those of the feudal aristocracy".

### **Independence Resolution and After**

10. After Nehru got the independence resolution passed in 1929 he became a very prominent leader of national movement. He became an accepted national leader and had a mass appeal as well. Gradually in the national and international affairs his views began to be listened to with care and attention.

### **Second World War and Nehru**

11. During the Second World War Nehru asked the British Government to give in clear words the aims and objects of its participation in war. Getting no satisfactory reply from the British Government, Congress under the inspiring guidance of Gandhiji and Nehru, decided to follow the course of 'Individual Disobedience'. He was sentenced to four years imprisonment.

### **Nehru as Prime Minister of India**

12. After independence Nehru became the first Prime Minister of India and continued to hold that post and position for the rest of his life time and died as Prime Minister of India on 26<sup>th</sup> May 1964. As Prime Minister he was a force behind giving a Constitution to free India and made India a sovereign democratic republic. He envisaged the setting up of a Planning Commission for development of Indian economy. In the international field he pursued the policy of non-alignment so that India could become a bridge between East and West. He gave the idea of Afro-Asian solidarity and unity. He was also responsible for extending India's fullest co-operation to UNO and other specialised UN agencies. Due to his efforts the famous Panch Sheel programme became the creed of many nations of the world in determining their international relations.

### **His Works**

13. Jawahar Lal Nehru was a very great writer and an orator. It was through his speeches that he came in contact with the public. His speeches have now been compiled by the Publications Division of the Government of India. He, however, could find time for writing in the prison. Some of his significant works are 'Glimpses of World History' and 'Discovery of India'. In addition, some of his letters have now been compiled and made available to us in book form. These are "Letters from a Father to His Daughter" and 'A Bunch of Old Letters'. These give his views about national and international affairs.

### **Conclusion**

His whole life was full of struggle and he sacrificed everything for the sake of India. We may conclude by saying that Nehru opened a new era in India's political, social and economic lives. He was a guiding light and inspiring personality and all leaders of India's political life and many citizens of India looked to him for guidance and inspiration.

## **MAULANA ABUL KALAM AZAD**

### **Introduction**

1. Maulana Abul Kalam was one of the fore runners of India's freedom struggle and reached the post of Congress President. He was a nationalist Muslim and his love for India was unquestionable. He was a strong supporter of Gandhian ways of freedom struggle and remained very actively involved with all the negotiations between Congress party and British government for solving India's constitutional problem. He was the first Education Minister of free India.

### **His Early Life**

2. Maulana Abul Kalam Azad was born in Mecca in 1888 in a conservative family of a Muslim Pir, who had very good following. His fore-fathers came from Herat. His father Maulana Khairuddin was brought to Delhi by his maternal grand father who was Director of Education of Delhi at that time. After first war of independence he migrated to Mecca and settled there but came back to India in 1890 and settled down at Calcutta. He had his early education under strict control of his father. At the age of 14 he took out a weekly paper 'Lasan-e-sidqua'. He completed his education at the age of 16 and thereafter started teaching. As a child he did not cherish the idea of religious intolerance. After the death of his father he went around some Muslim countries in 1908 and met some religious revolutionaries.

3. He came to the conclusion that Muslim of India must come out of their isolation and join main national stream of India's freedom struggle. He met Mahatma Gandhi and became a great champion of Hindu Muslim unity. He was opposed to two nation theory advanced by Muslim League and opposed the partition of the country till the end.

4. He remained President of Indian National Congress for six long years from 1939 onwards and guided the nation during the most difficult years of India's freedom struggle. After India became an independent nation he was given important portfolio of Education in Nehru's cabinet.

### **His Views**

5. **Religion.** Azad was a reformist and his approach and interpretation of 'Holy Quraan' was very rational. In his view the unity of brotherhood and the unity of religion constituted the message of the Quraan.

6. **Political.** Maulana Abul Kalam stood for Hindu-Muslim unity and opposed the two-nation theory as expounded by Muslim League. He opposed the views of Sir Syed Ahmed Khan that the Muslims of India should not co-operate in the country's freedom struggle. In his view liberty is a primary right of each individual and there is no justification in one nation dominating the other.

7. He had full faith in non co-operation movement. He wanted that the Muslims in India should show flexibility and follow policy of give and take. He was opposed to the

separation and sectarian nationalism outlook, as was being preached by Muslim leadership of those days. In his view both communities should struggle together because they have common destiny. He appealed to both to renounce the idea of inferiority and superiority of race and that National problems should not be approached on communal lines.

## **SARDAR VALLABHBHAI PATEL**

### **Introduction**

1. Vallabhbhai Patel (31 October 1875 – 15 December 1950) also known as ‘Iron Man of India’, was a major political and social leader of India and he was a self-educated and a successful Gujarati lawyer. He was inspired by the work and philosophy of Mahatma Gandhi. Patel organized the peasants of Kheda, Borsad, and Bardoli in Gujarat in non-violent ‘Civil Disobedience’ against the oppressive policies imposed by the British Raj. He rose to the leadership of the Indian National Congress at the forefront of rebellions and political events organising the party for elections and leading Indians into the Quit India movement. He was imprisoned by the British government on numerous occasions, especially from 1932 to 1934, and from 1942 to 1945. As the first Home Minister and Deputy Prime Minister of India, Patel organised relief efforts for refugees in Punjab and Delhi.

### **Early Life**

2. Vallabhbhai Jhaverbhai Patel was born at Nadiad, Gujarat in 1875. He was the fourth son of Jhaverbhai and Ladba Patel, and lived in the village of Karamsad in the Kheda district. As a young boy, Patel helped his father in the fields, and bi-monthly kept a day-long fast, abstaining from food and water - a cultural observance that enabled him to develop physical toughness. He passed his matriculation at the late age of 22. Patel decided to become a lawyer and for this he worked hard, travelled to England to study to become a barrister. He passed graduation examinations within two years. At the age of 36, he enrolled at the Middle Temple Inn in London. Finishing a 36-month course in 30 months, Patel topped his class despite having no previous college background. Returning to India, Patel settled in the city of Ahmedabad, and became one of the city's most successful barristers.

### **Fighting for Independence**

3. At the urging of his friends, Patel contested and won an election to become the sanitation commissioner of Ahmedabad in 1917. Patel was deeply impressed when Gandhi defied the British in Champaran for the sake of the area's oppressed farmers. He met Gandhiji for the first time at the Gujarat Political Conference in Godhra and later on became the secretary of the Gujarat Sabha.

### **Satyagraha Across Gujarat**

4. Patel supported Gandhi's Non-Cooperation Movement in Gujarat, and as President of the Gujarat Congress, personally supervised efforts across the state to recruit more

than 300,000 members and raise over Rs. 1.5 million in funds. He diligently worked in Gujarat against alcoholism, untouchability and caste discrimination, as well as for the empowerment of women. In the Congress he was a resolute supporter of Gandhiji.

### **Leading the Congress**

5. Patel became the leader of the Congress's all-India election campaign in 1934. He guided the Congress ministries that had won power across India in order to maintain unity and disallow the British any opportunity to divide the Congress. He differed with Nehru, opposing declarations of the adoption of socialism at the 1936 Congress session, and with Subhash Chandra Bose over the latter's rejection of Gandhi's leadership.

### **Quit India**

6. He participated in Gandhi's call for individual disobedience movement and was arrested in 1940 and imprisoned for nine months. He also opposed the proposals of the Cripps' mission in 1942. Patel gave emotional speeches to large crowds across India, even though his health had suffered during his stay in jail.

### **Partition**

7. Vallabhbhai Patel was the first Congress leader to accept the partition of India as a solution to the rising Muslim separatist movement led by Muhammad Ali Jinnah. He had been outraged by Jinnah's 'Direct Action' campaign, which had provoked communal violence across India.

### **Political Integration of India**

8. Patel was considered the best man for the task by the Congress Party, as well as Lord Mountbatten and senior British officials. Gandhi had said to Patel "the problem of the States is so difficult that you alone can solve it". He was considered a statesman of integrity with the practical acumen and resolve to accomplish a monumental task. Patel was willing to stand up for national interest and enforce the word of the Government.

### **Death**

9. Until his last few days, he was constantly at work in Delhi. However, his personal staff became alarmed as Patel, whom they knew to be very sharp and alert, began failing to remember details in the summer of 1950. After suffering a massive heart attack, he died on December 15, 1950.

## **SECTION –6**

### **INDIA'S NEIGHBOURS**

#### **Introduction**

1. Soon after independence , India adopted the policy of peaceful co-existence and non-alignment in international relations, Pandit Jawaharlal Nehru, the first Prime Minister of the country, laid special emphasis on maintaining cordial relations with her neighbours. However, there have been some disputes or problems with some of our neighboring countries. India has always insisted on peaceful settlement of these disputes firmly believing that the South Asian region including India, Pakistan, Nepal, Bangladesh, Bhutan, Sri Lanka and Maldives can have peace, stability, and growth only when these nations work together for this purpose. It is for this reason that India played an important role in the formation of SAARC (South Asian Association for Regional Cooperation).

#### **India and China**

2. **Some Facts about China.** Capital- Beijing, Area - 9,561000 sq. km, Population –1,102,200,000, Literacy-70%, Religion-Buddhism and Taoism, Currency-Yuan China is the most populous country in the world. It is also the third largest in terms of area. There are twenty one provinces, five autonomous regions and three municipalities Beijing, Shanghai and Tientsin in China. It is one of the oldest countries in the world. It became a republic in 1911 and finally turned into a communist state in 1949. China is primarily an agricultural country. However, it also has a strong industrial base. It is also a nuclear power. China has made remarkable advances in space technology too.

2. India and China have had cultural and trade relations since time immemorial. For centuries the two neighbour maintained friendly and cordial relations in all walks of life. Buddhism, a religion of Indian origin, became the dominant religion of China. Chinese travellers like Fa-Hien, Huen Tsang and many others visited India in search of knowledge. A number of Indian Buddhists like Buddha Bhadra, Parmartha, Guna Bhadra and Dharma Gupta visited China to propagate Buddhism during ancient times. In 1954, Chou-en-Lai, the Prime Minister of communist China, visited India. An agreement of perpetual friendship based on the five principles of Panchsheel was signed between the two countries. India also sponsored the claim of communist China to have a seat in the United Nations. Cultural and trade delegations were exchanged to promote better understanding between the two countries. However, the relation between the two countries got strained over the border issue. A big chunk of our territory was occupied by the Chinese. China claimed over 50,000 miles of India territory in the Himalayan region as its own . In 1959, the Chinese built a road through Aksai Chin part of the Laddakh region of Jammu and Kashmir state.

3. The Indo-China relations were spoiled further when China attacked India, in October, 1962. Fighting continued for a month though the dispute regarding the boundary line is yet to be resolved. India has been doing her best to normalise relations

with China. As a result, relations have improved in the field of culture, education, science and technology.

4. The Chinese economy is the fastest growing in the world, though of late it has been showing some signs of slowing down. The Chinese leadership has set a goal for itself to be militarily, politically and economically at par with the major powers of the world by 2025. Within the country, the problem of Tibet persists, but it is being suppressed with a heavy hand, like other movements for democracy.

5. China has the capability to strike any part of India with its intermediate range ballistic missiles (IRBM) and inter continental ballistic missiles (ICBM). Although China has declared no first use of nuclear weapons, the threat looms large. China has improved communication infrastructure in Tibet including rail link from Qinghai to Lhasa in Tibet (which is the world's highest railway at an average height of 14450 ft and 1140 km long) and road link in Aksai Chin area for sustaining large forces along the Indo-Tibetan border. The agreement of maintaining peace and tranquility on the Sino-Indian border and the confidence building measures were initiated in 1996. India on its part cannot afford to let down its guard, militarily and diplomatically, With China aiding Pakistan in a big way and also having its naval presence in the ports of Myanmar and its island in the Bay of Bengal, India needs to be cautious. Opening of Nathu La pass, ancient 'Silk Route', on 06 Jul 2006 for trade between two countries has opened a new chapter in the history of both the countries.

### **India and Nepal**

6. **Some facts about Nepal.** Capital-Kathmandu, Area-147,181sq, km. Population-18.8 million, a language-Nepali, Literacy-29%, Religion-Hinduism & Buddhism, Currency-Napalese Rupee. Nepal is located in the North of India. It is a land-locked country lying between India and China. It is bounded on the North by Tibet (China), on the South and West by Bihar and Uttar Pradesh. Nepal is a member of the South Asian Association for Regional Cooperation (SAARC).

7. India and Nepal have cultural and commercial relations since time immemorial. People of both the countries have relatives and friends on either side of the border. Since 1947, India has been having more or less cordial relations with Nepal. India extended financial and technological assistance to Nepal in various fields. India played a considerable role in the development and modernisation of Nepal. Many industries have been installed in Nepal with Indian assistance. The inauguration of Devighat Hydroelectric Project in Nepal in 1985 marked a significant milestone in the history of India - Nepal co-operation. The relations between the two countries improved considerably when Nepalese Prime Minister Sri GP Koirala visited India in December, 1991. This led to the conclusion of two separate treaties of Trade and Transit. Both the countries have agreed to cooperate in the field of agriculture, agro-based industries (sugar and paper), processing of cash crops, science and technology.

8. Agriculture and tourism are the mainstays of its economy, however, both have been hit due to the Maoist insurgency. Though Nepal does not face any external threats, it is suffering from severe internal problems. Inefficient governments in succession have led to an economic and social crisis, providing fuel to the Maoist movement. The insurgents strike at will, stretching the police and military to their limits. In addition, the resultant poor law and order situation has permitted anti-Indian terrorists to operate from Nepal.

9. India cannot afford to relax its vigil on the Nepalese front. It has to keep a close watch on the Maoist movement and not allow it to grow any further. The Indo-Nepal border needs to be sealed, if required, to ensure that the insurgents do not take refuge in the adjoining Indian states. In so far as aid to resurrect the ailing economy is concerned, it is in India's interest to enroll the assistance of other SAARC states to bring Nepal out of the doldrums, providing a major share itself. After the bloody palace coup in Kathmandu and sudden rise in Maoist activities, popularity of king nosedived and on uprising of local population, multiparty Government installed and powers of King were curtailed. Situation is still fluid and India needs to play greater role in stability of Nepal.

### **India and Bhutan**

10. **Some Facts about Bhutan.** Capital-Thimhu, Area - 465000 sq km, Population-1.4 million, Language - Ozengkha, Literacy-12% Religion - Buddhism, Currency - Ngyltrum.

11. The kingdom of Bhutan lies in the Eastern Himalayas. It is bordered on the North by China and on all other sides by India. In 1983 Bhutan became a founder member of the South Asian Association for Regional Co-operation (SAARC). Ties of religion, culture and friendship bind the people of India and Bhutan. India has very special relations with Bhutan. She is responsible for Bhutan's communications and also her security. India has made major contribution to the development and modernization of Bhutan's economy. India is closely involved in the development of education and technical skills in Bhutan. Indian agencies have been executing major projects in the fields of tele-communications, roads and water resources development.

12. While Bhutan does not face any external security threat, its position along the Indo-Chinese border puts it in a very strategic position in so far as India is concerned. It was also a safe haven for the Bodo and United Liberation Front of Assam (ULFA) militants, they having set up regular camps inside Bhutan. Of late the military action by the Bhutanese Army has resulted in rout of the rebels leading to large scale surrender. India, as the big brother, needs to continue to maintain cordial relation with the kingdom, lest it comes under the Chinese influence. Towards that end, economic, industrial and military aid on a continuous basis should be the forerunner for our policy directed towards Bhutan.

## **India and Myanmar**

13. **Some fact about Myanmar.** Area - 676553 sq km, Population - 40.3 million. Language - Burmese and Tribal, Literacy 66%, Religion - Buddhism, Currency - Kyat.

14. Myanmar (Burma till 18 Jun 1989) became an independent country on January 4, 1948. The country is popularly known as the “Rice Bowl of the Far East”, Myanmar is our neighbour on the Eastern side. India and Myanmar have been maintaining close relations since time immemorial. Ties of traditions and culture bind both the countries in a harmonious relationship. Buddhism is the predominant religion of the majority in Myanmar,

15. Myanmar, though a resource rich country, suffers from dismal poverty with a bleak future. The economy, under the Army, has been suffering from serious imbalances. With the ceasing of international aid due to the suppression of the democratic movement and ignoring of a democratic election in 1990, the economy has been slipping further.

16. India, though opposed to military dictatorship, has been pursuing a pragmatic approach in its relations with Myanmar as the two countries share a common border and have common national security problems. Many NE insurgent groups have been taking refuge in the adjoining territory and operate from Myanmar. The porous border has also been a conduit for the supply of drugs into India. India is interested in maintaining a reasonable working relationship with Myanmar, as China is its main supplier of arms and military assistance. Both the countries have agreed to check drug-smuggling and other unlawful activities on their borders.

## **India and Bangladesh**

17. **Some Facts about Bangladesh.** Capital - Dhaka, Area 143,999 sq, km, Population- 109.6 million, Language-Bangla, Literacy - 33% Religion- Islam, Currency - Taka.

18. Bangladesh emerged as an independent nation in 1971. It was earlier a province of Pakistan and was called East Pakistan. Bangladesh is a founder member of the SAARC. Bangladesh is bounded in North by the Indian states of Assam and Meghalaya. In the East, it is surrounded by West Bengal (India). In the East, it is bounded by Indian states of Assam and Tripura and also Myanmar. In the South lies the Bay of Bengal. India played an important role in the independence of Bangladesh. Indian forces helped the people of Bangladesh in their struggle against oppression and domination by West Pakistan. Not only this, India offered considerable financial and technical assistance to Bangladesh in her development programmes. Both the countries had maintained friendly relations with each other initially.

19. However, the relations between Bangladesh and India have not been on the best of terms ever since the last elections in 2001. The sharing of the Ganga waters, illegal migration of Bangladeshis, provision of shelter to anti-Indian insurgent

groups of the North Eastern (NE) states, are some of the prickly issues that have precluded harmonious relations between the two countries.

20. Bangladesh with its internal problems and the porous border with India poses a very serious security threat to India. The country has been the recipient of sustained international aid to assist it improve its economy and demographic prospects, yet it continues to remain a poor, over-populated and ill-governed nation. Its geographical location has added to its miseries with natural disasters occurring at a regular frequency, thus acting as impediments to growth. Other major impediments include inefficient and ill-managed state enterprises, slow implementation of economic reforms, a high rate of unemployment that cannot be absorbed by the agriculture sector and prolonged delays in exploiting the natural resources.

21. Internally, Bangladesh faces a threat from fundamentalist Muslim groups. Due to political infighting, there has not been much control over the activities of such groups, leading to a continuous deterioration in the law and order situation. After the last elections, government control over such groups has further reduced, as some of the controlling fundamentalist parties are now a part of the coalition. Activities of the Al Qaeda and other Inter Service Intelligence (ISI) backed groups have increased in Bangladesh.

### **India and Sri Lanka**

22. **Some Facts about Sri Lanka.** Capital - Colombo, Area 65,610 sq km, Population- 16.9 million , Language- Sinhala, Tamil & English, Literacy - 87%, Religion - Buddhism, Christianity and Islam, Currency - Rupee.

23. Sri Lanka is an island country in the Indian Ocean. It is about 80 km East of the Southern tip of India. Sri Lanka became independent on 4<sup>th</sup> February 1948. It became a Republic on 22<sup>nd</sup> May 1972.

24. Like with other neighbours India's relations with Sri Lanka date back to the past. The name Sri Lanka figures in our history and mythology. Bonds of traditions and culture bring the two countries close to each other. Emperor Ashoka's son Mahendra and daughter Sanghamitra, went to Sri Lanka as Buddhist missionaries. Buddhism is today a predominant religion in Sri Lanka. Thousands of Buddhist pilgrims come to visit Buddhist holy places in India. Similarly, thousands of people of Indian origin live in Sri Lanka, India has been following a policy of peace, friendship and cooperation towards Sri Lanka. Both the countries have been co-operating with each other in cultural and economic spheres. However, our relations with Sri Lanka got somewhat strained due to the ethnic strife there in recent years. In fact, a large number of Tamilians (of Indian origin) have been living there for a long time. The citizenship laws in Sri Lanka were such that most of these people could not acquire citizenship of that country. The Tamils had also been agitating for a better treatment for themselves. The response of the Sri Lanka government was, however, lukewarm.

25. The militant sections among the Tamils took up arms and demanded a separate Tamil State (Elam) for themselves. This resulted in dreadful violence against Tamils in

Sri Lanka. The Tamils ran for safety to India. India showed her concern for the ethnic conflict in Sri Lanka. She sought a political solution to the problem. In July 1987 India and Sri Lanka signed an agreement to end the crisis. Under the terms of the agreement India sent the Indian Peace keeping Force (IPKF) to help the Government of Sri Lanka to curb violence. The IPKF returned after doing a good job in establishing peace in Sri Lanka. Though the ethnic problem has not yet been resolved India and Norway are doing their best to resolve the crisis.

26. Sri Lanka has no external threat. The ceasefire between the Government and the Liberation Tamil Tigers Elam (LTTE) main militant groups is holding after almost two decades of conflict. The stumbling block, if it may be called so, is the internal political situation in Sri Lanka. The situation has again become alarming due to violation of ceasefire agreement by LTTE.

27. As a close maritime neighbour, the country is of strategic importance to India. It is in India's interest to see that peace returns to Sri Lanka with political, economic and social stability. India has to continually involve itself in the affairs of Sri Lanka to ensure no third party, inimical to India's interest, steps in. The involvement need not be of the type of 1987, but can be in the form of diplomatic and military support and economic assistance.

### **India and Pakistan**

28. **Some Fact about Pakistan.** Capital - Islamabad, Area - 796.095 sq km, Population-103.2 million, Language-Urdu , Literacy - 26% , Religion - Islam, Currency - Rupees.

29. The Islamic Republic of Pakistan lies in the Northwest side of India. It came into existence on 14 August 1947 as a result of partition of India. Culturally, both the countries find themselves close to each other. However, the relations between the two countries are marked by tension and strains. Partition itself resulted in violence, hatred and a lot of ill-feeling between people of both the countries. It was this grim background that influenced the relations between the two countries. There have been many areas of tension and dispute between India and Pakistan, such as the border and sharing of river-water. We had to fight four wars with Pakistan in 1949, 1965, 1971 and Kargil war in 1999.

30. The Shimla Agreement between the two countries envisaged that the Kashmir problem will be solved through bilateral talks. India has voiced her displeasure over Pakistan raising the Kashmir issue in international forum. India maintains that Pakistan has always fomented trouble for India by earlier aiding the terrorists in Punjab and now in Kashmir.

31. Pakistan has been joining groups to suit its convenience. After joining the Mujahideen to oust the Soviets from Afganistan, it switched sides from the Taliban to the American alliance after 11 September 2001. This helped the Government to extricate itself from a precarious economic situation but it created political problems within the country. International pressure, mainly from the

USA, has resulted in President Musharraf giving a public undertaking at the SAARC Summit, not to allow the use of Pakistani territory for terrorism.

32. With the recent exposure of nuclear secrets being shared by the head of the Pakistan's nuclear programme with Iran, Libya and North Korea, Pakistan is once again in the limelight. International media is asking for details of the leaks and the involvement of the Pakistani military, which controls the nuclear weapons program.

33. There is a growing disenchantment in the general public with the Government over the continuing involvement with the USA. The internal politics with President Musharraf holding the additional portfolio of the Army Chief would, therefore, continue to be turbulent.

34. Our country has taken various measures to maintain political, economic and cultural contacts with Pakistan. The two countries have decided to promote the idea of people-to-people contact. Opening of Wagha and Uri border road links and Munabao-Gadara rail link between the two countries has further improved relations between its people. There have been encouraging developments in the field of sports and cultural contacts between the two countries.

35. India has been following a good neighbouring policy towards Pakistan. Time and again she has insisted that solutions to all the problems could be found through talks and negotiations.

## **SECTION -7**

### **CONTRIBUTION OF YOUTH IN NATION BUILDING**

#### **General**

1. The youth of a nation are the backbone and the most powerful force within the nation. They are the hope of the future and can shape the destiny of a country. History shows that countries subjected to alien rule have without exception sought the help of youth in times of crisis. The youth have also been instrumental in the change of governments, whenever need for such a change has been felt. They have always been in the forefront in the building of political, social and economic orders of a society. They play a positive role for the cause of a nation and national integration. Today's generation faces greater challenges in national building due to the force and pressure of internal politics and external conflicts.

#### **Role of Youth**

2. The youth have a leading role in bringing together the people of different states and religions with a view to integrating them socially, culturally and geographically.

### **National Integration**

3. The youth act as a catalyst in an already vibrant country aspiring to find its rightful place in the world politics and play a more effective role of a true leader. To help India realise its dreams the youth can and ought to play a leading role in bringing together the people of different states with diverse religions and integrate them emotionally, culturally and geographically, contribute in extricating society from age old stigmas of casteism, communalism, parochialism and regionalism, help preserve cultural heritage and infuse the spirit of patriotism, thus keep the country together and defeat all separatist attempts by unscrupulous elements.

### **Political Measures**

4. If a nation does not rejuvenate its political leadership profile it would become old in thought and slow in action. The youth are the future of a nation and its future leaders. The opportunity provided at educational level to contribute to politics should be encouraged and the youth should learn and follow clean and meaningful politics which can thereafter be translated into greater national aim.

5. It has been an unfortunate experience in recent times to see an alarming growth of certain tendencies which encourage splitting of the country. Sometimes it has been the language, sometimes region, sometimes religion and sometimes political might that have encouraged the different groups of people to agitate for a distinct existence. Such things can be avoided and national integration can be strengthened if the youth of different parts of India come together, understand one another and find that there is so much in the rich heritage of India that binds them together

### **Security**

6. The nation today faces grave security concerns both externally and internally. This intensifies when viewed with the fact that our country is a respected democratic country with a secular base. The terrorist, fundamentalists are a grave danger to our unity. The youth are the pulse and strength of the nation and with their alertness and their balanced approach can help in bringing stability to the nation and help in thwarting selfish designs of the enemy.

### **Social and Cultural**

7. The youth are the privileged persons in the society who can contribute to development. Therefore they have a special responsibility and should actively participate in the development plans of the nation. Youth should be acquainted with the major problems facing the country. Firstly, they should study the basic problem of health, AIDS, environment, nutrition, lack of education, economic backwardness, ignorance, dowry-deaths, casteism, and superstitions/false beliefs of the masses. Our society is experiencing a constant change and faces the conflicting ideologies of the past vis-a-vis the West. Our past with a shadow of casteism, superstition and religious over tones needs a balanced approach and the youth can play a very important role

in this regard and educate the general public about the misnomers relating to superstition. The need to do away with the caste system and encourage lateral, vertical and diagonal intermingling of people to mesh them into a true India n network. They can establish good rapport with the people so as to involve them in active participation in social work which will help to make society a better place to live in.

8. Further, the Government programmes such as 'Clean and Green' are very good opportunities for youth to join hands with their countrymen and give impetus in the process of nation building.

9. Young men and women are the reservoirs of unbounded energy and enthusiasm. Youth should accept all the challenges faced by the country. Let the youth be put to best use. For this, their energies, skills and talents have to be properly harnessed, channelised and put to right use for the common good of the country.

10. India has already started National Cadet Corps (NCC), National Social Service (NSS), National Service Volunteer Scheme (NSVS) and other similar organization, which are an assets to our Nation. Apart from these measures to channelise young energy into constructive channels, following few steps can be taken.

(a) Films with social upliftment and nation building as theme would make a fair contribution in instilling a healthy and progressive attitude in the youth. Non Government Organisation (NGO) should also engage youth in such programmes which strengthen nation building.

(b) There should be integration committees, composed of representatives of various communities at village, city, district, state and national level. Youth should be engaged in such committees to contribute in society. Youth to train themselves effectively both in institutional and adventure activities, as such activities imbibe self confidence, harmony and patriotism.

## **SECTION -8**

### **NATION STATE, NATIONAL INTEREST AND OBJECTIVE**

#### **Nation**

1. Nation is a large group of people sharing the same culture, language or history and inhabitating a particular state or area.

#### **State**

2. Its an organized political unit under one government.

## **Country**

3. Country is a nation with its own government, occupying a particular territory.
4. **Nation State** can be roughly defined as a country which has ‘essential elements’ as population, territory, sovereignty and Government.
5. The Constituent - Assembly, in the objective resolution adopted on 22 Jan 1947, declared the Assembly’s firm and solemn resolve to make India an Independent Sovereign Republic, where-in the state shall process and retain the state of autonomous units. In the constitution, India is proclaimed as a ‘Union of States’ rather than as a Federal State. The distribution of power between the Union and the States, makes states subordinate to the centre.
6. The constitution has formally divided the legislative, administrative and financial power between the centre and the states. The legislative powers are distributed in three lists namely, the Union, the State and Concurrent. The Union list gives the centre the authority to act in matters of national importance which include defence, foreign affairs, currency, communication, banking, services, income, taxation and customs duties. The State list entrusts matter to the state which include law and order, local government, public health, education, and agriculture and economic and social planning among others. Law passed by the parliament prevail over those matters which are passed by the state legislatures in the concurrent lists. The residual power lies with Union over the States. The administrative power also gives preference to the Union over the States.
7. Legislative powers are vested in the Union and the States, but the power of the Union government remain dominant over the States.
8. India has inherited the federal structure from the Government of India act, 1935 , which prescribed a federal type union of autonomous provinces, whose governments were to derive their powers directly from the crown. Such a decision was taken because, during the post independence era, India was divided into various segments and empowering them could hamper the democratic working of the country. It was also believed that the sound economic development of the country required centralized planning without any hindrance from the state.
9. As India is a multi-lingual, multi-religious and multi-racial country, we all Indians should rise above vested partisan interests and strive towards the welfare of the country.

## **National Interests**

10. Every nation, with whatever form of government has certain political, social and economic interests and objectives to achieve overall development, prosperity, progress, nationalism and international recognition. To attain such objectives certain national interests are pre-requisites which are as follows:-

(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.

### **National Objectives**

11. India is a developing country. It has made rapid progress in all the spheres after its independence, viz, agriculture, industrialisation, urbanization etc. To visualise what India would be in future in all spheres is not an easy task. While ultimate objectives and millennium goals of the nation lie ahead, the basic objectives are found in the Directive Principles of State Policy enshrined in the Constitution of India which took effect when India became Republic. Directive Principles of State Policy lays down a code of conduct for the administrators of India in the discharge of their responsibilities as agents of the sovereign nation. They guide the path which will lead the people of India to achieve the noble ideals which the preamble of the constitution proclaim justice, social, economic and political, liberty, equality and fraternity.

12. There are 16 articles of the constitution from 36-51 that deal with the Directive Principles of State Policy. Important ones of these are as follows:-

(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.

13. Apart from the above Directive Principles, current objectives of our nation are as follows:-

- (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**

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## **FOOT DRILL**

### **SECTION-1**

#### **GENERAL AND WORDS OF COMMAND**

##### **General**

1. **Aim** To inculcate a sense of discipline, improve bearing, smartness in appearance and turn out, create self confidence and to develop the quality of immediate and implicit obedience to orders.

##### **Words of Command**

2. Proper execution of any command depends on the tone and the pitch of voice in which it is given. A properly delivered Command is loud and distinct enough to be clearly understood by every person. It is given with an inflection, a cadence and a snap that inspire prompt, precise and simultaneous response and assists in producing effective results with the minimum of effort and strain.

##### **Loudness**

3. The loudness or volume of command is to be in direct proportion with the number of men for whom it is intended and the distance involved. The commander normally places himself centrally and faces his squad so that his voice reaches the maximum number of cadets with approximately equal force. Avoid undue physical exertion by forcing the normal flow of sound, project the voice with ease by adopting good posture, proper breathing and correct adjustment of muscles of the throat and mouth. The best posture is the position of attention.

##### **Distinctness**

4. Distinctness depends on the proper use of the tongue, lips and teeth to form separate sounds of words and on proper grouping of the sounds to form syllables. Indistinct commands cause confusion. Indistinctness may be caused by laziness, by the tenseness in the muscles of the mouth or by trying to give the command too rapidly.

##### **Inflection**

5. Inflection is the rise and fall of the voice. It is used to avoid monotony and gain emphasis. Start preparatory command near the natural pitch of the voice and the command of execution should be in a slightly higher pitch.

##### **Snap**

6. Snap is the extra quality in command that demands instantaneous response. It expresses confidence, alertness and decisiveness. Knowledge of the words of command

is essential. Loud but not hoarse, crisply clear, pitched relatively high, it should snap out at the expected instant with the effect of a whip or a starter's 'GO'.

### **Timing of Word of Command**

7. A word of command consists of two parts 'Cautionary' and the 'Executive'. An interval of about four paces in quick time should be left between the 'Cautionary' and the 'Executive'. As a guide and unless otherwise laid down, a cautionary word of command given on the march, should start as the left foot comes to the ground. It should be drawn out during four paces and should therefore end as the right foot comes to the ground.

## **SECTION - 2**

### **ATTENTION, STAND AT EASE AND STAND EASY TURNING AND INCLINING AT THE HALT**

#### **Position of Attention**

1. 'Squad Savdhan' (Squad Attention).
  - (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.



**Fig -1 Squad Savdhan**

**Fig -2 Vishram (Stand at Ease)**

(e) In assuming the position of Savdhan, 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.

(f) All drill movements commence after getting into Savdhan position also when speaking to or being addressed by a superior officer a cadet will stand in Savdhan.

(g) Adopting the position of ‘Savdhan’ is a basic movement of drill. Therefore, the term ‘place the foot flat and firm on the ground’ must not be mistaken for stamping.

#### **Vishram (Stand at Ease)**

2. ‘Vishram’ (Stand at Ease), Carry left foot 12 inches to the left ; place the weight of the body on both feet. While doing the movement raise the foot 6 inches from the ground. Simultaneously both the hands will be taken behind the back, through shortest route, the right hand over the left with open palms facing out-words, thumbs interlocked.

#### **Aram Se (Stand Easy)**

3. ‘Aram Se’ (Stand Easy). Without moving the feet, relax the limbs, body and head. Talking, turning the head, slouching and using a handkerchief is not permitted. On the cautionary word of command ‘Squad’, assume correct position of stand-at-ease by an upward snappy jerk of the body.

### **Turning**

4. ‘Dahine Mur’ (Right Turn). Turning both knees straight, turn 90 degrees right on the right heel and left toe, raising the right toe and left heel in doing so keep weight of the body on the right foot. Bring the left foot into the right by lifting the foot 6 inches clear of the ground. In all turns, keep the weight of the body on the forward foot.
5. ‘Pichhe Mur’ (About Turn). Turn 180 degrees, bracing the legs and maintaining the balance by locking the thighs together. The about turn is always made right about.

### **Inclining**

6. In inclining (adha dahine or adha baen mur), the movement is the same except that the individual or squad turns through 45 degrees only.

## **SECTION-3**

### **SIZING, FORMING UP IN THREE RANKS, NUMBERING AND CLOSE ORDER MARCH AND DRESSING**

#### **Sizing and Forming**

1. Well sized squad, gives good general impression to spectators and provides the best chance to drill together. Sizing is done by giving the word of command ‘Lamba Dahine, Chhota Baen, ek line men - qadvar’ (tallest on the right, shortest the left in single rank-size) the whole squad turns right, counts a pause and then sort themselves out by size remaining at attention facing the instructor in one single line. Instructor orders ‘Squad dahine se ginti kar’, the squad numbers from the right to left.
2. Visam Cadet ek qadam age, Sam cadet ek qadam pichhe chal. ‘Odd numbers one pace forward even numbers one pace step back march’: All act accordingly.
3. ‘Dahina cadet khara rahe. Visham cadet dahine, sam cadet baen, line dahine aur baen mur’. (stand fast the right hand man, odd numbers to the right, even numbers to the left, ranks right and left turn). All turn as ordered except the right hand man who remains facing the front. The squad then forms three ranks with even numbers following behind the odd number i.e. number 1 remains number 1 of the front rank, number 3 becomes number 1 of the centre rank, number 5 becomes number 1 of the rear rank, number 7 becomes number 2 of the front rank and so on. On halting in position, each man turns to his front, takes up his own dressing and remains at attention.
4. ‘Teen line banao, tez chal’ (Form up in three ranks quick march). The cadets position themselves in three ranks, front, centre and rear with 30 inches between ranks and an interval of one arm’s length between two cadets (Less than 8 cadets the squad will form up in 2 ranks. Less than 5 cadets the squad will, form up in a single rank). When forming in two ranks or single rank the arm interval does not apply in this case. Distance between the persons will be 24 inches.

## **Numbering**

5. In the early stages of training, the instructors not knowing the names of all cadets may wish to speak to an individual as number of the rank only. The front rank of the squad will number off sharply from right to left, the right hand cadet calling out 'one' the next 'two' and so on. Each cadet keeps head and eyes steady to the front. Cadets in the centre and rear ranks take the number of the front. Instructor must endeavor to get to know the names of the cadets in his squad as soon as possible.

## **Open and Close Order March and Dressing**

6. **General.** To inspect the squad and for squad drill it is necessary for the squad to be in 'Open Order' i.e. the front rank and rear rank take one and half paces forward and to the rear respectively while centre rank stands fast.

### **Open Order March**

7. 'Khuli line-chal' (Open Order March). The front rank shoot the right foot forward one full step and left foot one short step and lift right to bring the two feet together, arms to sides throughout. The rear rank conforms to similar movement to the rear.

### **Dressing**

8. (a) Be in line by the right or left and cover off from front to rear at the correct distance from the rank in front and at the correct interval from the man on the right or left.

(b) Whenever a squad or unit halts in line, dressing will be taken up by word of command.

(c) When a squad or unit gets on parade, dressing will be taken up automatically without the word of command.

(d) Dressing by word of command 'Dahine Saj' (Right dress) right hand man stands fast, squad takes a short sharp pace 15 inches forward with left foot, count regulation pause (40 movements to the minute), turn head and eyes to the right (Except the right hand man of each rank). Men in the front rank only will extend the right arm first clenched, back of the hand uppermost, knuckles touching the shoulder seam of the man on the right, count a regulation pause each individual then dresses by taking short quick steps until he can just see the lower part of the face of the man two places away from him. The right hand man of the centre and rear rank, places himself 30 inches from the rank in front, each individual of these ranks covering off correctly by glancing out of the corner of his eye. The turning of the head and eyes should be a deliberate movement and not casual glance.

## **SECTION-4**

### **SALUTING AT THE HALT, GETTING ON PARADE, FALLING OUT AND DISMISSING**

#### **Saluting at the Halt**

1. **General.** Saluting at the halt, to the front and to a flank is taught ‘by numbers’. To permit free movements, it is best practiced with the squad in open order and inclined diagonally.

#### **Salute to the Front**

2. ‘Ginti se salute, Samne salute ek’, ‘Saluting by number, salute to the front-one’. The right arm kept straight, raised sideways until it is horizontal, palm of the hand to the front, fingers extending, thumb close to the forefinger.

3. ‘Squad do’ (Squad two). Keeping the upper arm still, hand and wrist straight, bend elbow until the fore finger tip on the right hand is one inch above the right eye. Points to note are:-

(a) Upper arm horizontal and at the right angles to the side, forearm, wrist and fingers all in one straight line.

(b) Palm of the hand vertical.

4. ‘Squad teen’ (Squad three). Return to position of attention cut the shortest way to the side by dropping the elbow to the front, fingers curled up on the way down. When judging the time, the hand will remain at the position of the salute for a regulation pause. The word of command, will be ‘Samne Salute’ (Salute to the front). Avoid saluting movement before actual halt and avoid speaking before completing the final movement. (Fig 3)



**Fig-3 Salute to the Front**

**Salute to the Flank (Right and Left)**

5. ‘Dahine ko Salute’ (Salute to the right). Best taught from the position of the salute to the front. Cadet takes his position of the salute to the front. He turns his head eyes square off to the right and without upsetting position of the right arm, wrist or hand, shifts the head so that right eye can just look along the palm of the hand. The cadet either looks along his own height or into the eyes of the officer he is saluting (Fig 4). For ‘Baen ko Salute’, all action are same except that cadet turns his/her head to the left(Fig-5).



**Fig-4 Salute to the Right**



**Fig-5 Salute to the Left**

#### **Getting on Parade**

6. Squad forms up in three ranks, on the end of the parade ground facing in the direction, to be on parade. The right guide or right hand man acts as right maker.
7. On the command ‘Dahine’ (Right) come properly to ease, on the command ‘Darshak’ (Marker) the right marker comes to attention, marches in quick time 15 paces straight to his front (a lesser distance if space not enough) halts and stands at ease.
8. ‘Parade-Par’ (Get on Parade). Marker and squad come to attention. The squad marches forward to their front, halt on the 15<sup>th</sup> pace, dress automatically, look to the front and stand at ease, a regulation pause will be made between each movement.

### **Dismissing and Falling Out**

9. ‘Visarjan’ (Dismiss) Turn to the right, salute, (If an officer/JCO is present on parade) pause and then step off. (Ensure squad is in close order). When marching independently, keep in step until clear off the parade ground.

10. ‘Line Tor’, Falling out does not signify the end of the parade, but only a break in it. It is different from Visarjan in the following points:-

- (a) Salute is not given.
- (b) Cadets falling out, not to leave the vicinity of their place of parade or line of march.

11. On command ‘Line Tor’ (fall out) the squad turns right, breaks off in quick time (or in double time as ordered) counting a regulation pause between each movement.

12. The difference between dismiss and falling out are as follows:-

- (a) Falling out
  - (i) To leave the ranks temporarily.
  - (ii) A word of command to close drill temporarily given to a body of cadets required to fall in again after a stipulated period.
- (b) Dismiss
  - (i) A word of command for closing drill.
  - (ii) Denotes parade completely terminated.

## **SECTION - 5**

### **MARCHING: LENGTH OF PACE AND TIME OF MARCHING, MARCHING IN QUICK TIME AND HALT, SLOW MARCH AND HALT**

#### **Length of Pace and Time of Marching**

1. Mark distances on drill square for practicing correct time and length of pace. Details are as under:-

<u>Ser No</u>	<u>Movement</u>	<u>Length of pace in Inches</u>	<u>Paces in a minute</u>	<u>Equivalent distance in yards</u>	<u>Remarks</u>
(a)	Slow time	30	70		
(b)	Quick time	30	120	100	
	(i) Step out	33			
	(ii) Step short	21			
	(iii) Side step	12			
(c)	Double time	40	180	200	

2. Use of the pace stick to measure exactly the correct length of pace should be practiced.

#### **March in Quick Time**

3. 'Tez Chal' (Quick March). March from the position of attention. (applies to all occasions including 'Get on Parade') with the band give the word of command on successive beats of paces i.e. 'Quick' on the left foot, 'March' on the right foot. On the command 'chal' (March) step off a full pace with the left foot and swing the right arm.

4. In marching, maintain position of attention and remain well balanced. Swing naturally from the shoulder, hands reaching as high as shoulder level in front and/to the rear. Hand kept closed and fingers slightly clenched always to the front.

5. Legs sufficiently bent at the knee, swung forward freely and naturally from the hip joints. The foot should be carried to the front, placed on the ground with the knee straight.

### **Halt**

6. ‘Squad-tham’ (Squad halt) given when right foot passes the left. Check the forward movement as the right foot comes to the ground. Complete a short pace of 15 inches with the left foot, bend the right knee and bring the right foot in sharply to the left and assume the position of attention. Avoid tendency of swaying immediately after halt.

### **Slow March and Halt**

7. Slow march is required during important parades i.e. Pilots marching in front of VIP and firing parties marching ahead of corpse.

8. On the word of command ‘slow march age barah’, move your left leg forward balancing on the right foot. Move left leg till it reaches right foot, maintaining balance on right foot, move the left leg further ahead and place left foot on ground. The distance of one pace is 30 inch. Similarly put the right foot ahead and halt. Hands will remain by the side of the body as in attention position.

## **SECTION - 6**

### **TURNING ON THE MARCH AND WHEELING**

#### **Turning on the March**

1. ‘Ginti se murna-baen mur-ek’ (Turning by numbers, left turn one (given as the left foot passes the right). The cadet will freeze with the left foot forward flat on the ground, the right foot 30 inches to the rear, heel raised; both legs braced, body balanced evenly between them, right arm swung forward and left arm swung back.

2. ‘Squad Do’ (Squad two). Bring both arms to the side, bend the right knee, foot raised with the toe at least six inches clear of the ground.

3. ‘Squad Teen’ (Squad three). Straighten the right knee towards new direction. As the foot comes to the ground, shoot the left foot forward 15 inches, hand still on the sides, body in attention position shoulder back.

4. ‘Squad age barh’ (Squad forward). Lead on in quick time with the left foot, swinging the arms.

5. ‘Qadam tolkar murna, baen mur’ (Turning by balance step, left turn). Check the pace with the left foot, cut the hands to the sides, bend the right knee, force the body round to the new direction and as the right foot comes to the ground, shoot the left forward, ‘Squad forward’, lead on in quick time with the left foot, swinging the arms.

6. ‘Ginti se pichhe murna, pichhe mur ek’ (Turning about by numbers, about turn one) (given as the left foot passes the right). Complete the pace with the left foot, take

half pace with the right foot and freeze with the left arm forward, right arm back and left heel off the ground.

7. ‘Squad Do’ (Squad two). Cut the arms to the sides, turn right, bend the left knee to adopt position of attention.

8. ‘Squad Teen’ (Squad three). Again turn right parading on the left foot and bend the right knee to adopt the attention position.

9. ‘Squad Char’ (Squad four). Mark time, once pace with the left foot and resume position of attention.

10. ‘Squad age barh’ (Squad forward) Step off with the right foot and continue marching.

### **Wheeling**

11. Used when marching in single file or in threes, the inner man wheels on the circumference of a circle four feet in diameter and changes direction through 90 degrees, speed governed by the ability of the outside man to keep pace by stepping out. The inner man adjusts and shortens his pace accordingly. The word of command is ‘Dahine/ Baen Ghoom’ (Right/ left wheel).

## **SECTION-7**

### **SALUTING ON THE MARCH**

#### **Saluting on the March**

##### **1. Saluting to the Flank**

(a) ‘Ginti se Salute- dahine salute ek’ (Saluting by numbers salute to the right-one) (given as left foot touches the ground). Complete next pace with the right foot forward heel on the ground, toe raised, arms at the maximum extent of the swing, shoot the left foot forward, complete the next pace with left foot, heel on the ground, toe raised bring the right arm smartly to the position of the salute, turn the head and eyes to the right, cut the left hand to the side. As the left foot comes to the ground, the squad shouts ‘UP’

(b) ‘Squad Do’ (Squad two). Keep left arm still to the side maintain correct position of salute without swinging the shoulder, complete the next pace with the right foot and shout ‘two’. The order ‘two’ ‘hree’ ‘four’ and ‘five’ may be given in quick succession, one pace being taken on each, and the appropriate number shouted each time.

(c) ‘Squad Chhe’ (Squad six). Complete the pace with the right foot. As the heel touches the ground, turn the head and eyes to the front, cut the right hand away to the side and shout ‘Down’.

(d) ‘Squad Saat’ (Squad seven) Continue marching in quick time, swing the arms and shout ‘Swing’ on the first pace.

(e) Judging the time-the word of command will be ‘Saluting Dahine-ko salute-Salute’ (Salute to the right-salute) given as the left foot comes to the ground. Come up to the salute the next time the left foot touches the ground and cut the hand away on the sixth pace (right foot) (Cadets will continue to call out each time).

### **When Passing an Officer**

2. When passing an officer, salute on the third pace before reaching him and lower the hand on the third pace after passing him. During the salute look at the Officer full in the face.

### **Saluting to the Front**

3. The word of command given as the right foot passes the left, is as for the halt. Halt, salute to the front wait for regulation pause, salute to the front again, pause, turn about, pause and lead off in quick time.

### **Eyes Right and Left**

4. A formed body requiring to pay a compliment to a flank will receive the order to march by the desired flank and will then get, ‘Dahine Dekh’ (eyes right). The guide will look to his front in order to keep direction. All officers, in command will salute, the remainder will turn their heads. The word of command given as the left foot touches the ground in quick time and every one looks right when the left foot next comes to the ground, ‘Samne Dekh’ (eyes front) is given in a similar manner.

## **SECTION -8**

### **SIDE PACE, PACE FORWARD AND TO THE REAR**

#### **Side Pace**

1. ‘Dahine Ya Baen Bazu Chal’, ‘Ya Qadam Dahine Ya Baen Bazu Chal’ (Right or left close march). The sides pace (12 inches) is used to move the squad not more than 12 paces to a flank (if greater distance is to be covered the squad should be ‘turned’ and moved in threes).

2. Specify the exact number of paces (up to four only) the squad continues moving until halted. For procedure carry right foot to a distance of 12 inches, close left foot to it

by bending left knee and completing the pace in double time. Shoulders square, direction straight to the flank and uniform pause after each pace. ‘Squad tham’ (Squad halt) is given when number of paces not specified.

### **Pace Forward and to the Rear**

3. ‘Pace forward’ and to the rear are always taken in quick time. The fundamentals are as follows :-

- (a) Left foot shot forward or rear to the required distance.
- (b) If more than one pace, adopt normal marching, stepping a full pace of 30 inches.
- (c) Maximum number of paces ordered to step forward or rear will be three.

## **SECTION - 9**

### **MARKING TIME, FORWARD MARCH AND HALT IN QUICK TIME AND CHANGING STEP**

#### **Mark time**

1. Marking time is done in the same cadence as marching. Maintain position of attention.

#### **To Quick Mark Time from Halt**

2. ‘Tez qadam Tal’ (Quick mark time). Raise the left knee and top of the thigh parallel with the ground, lower leg perpendicular, foot at natural angle, straighten leg again directly, and resume the position of attention, bend and straighten the right knee in a similar manner, body erect, shoulders square to the front and arms to the sides.

#### **Halt**

3. On the command ‘Tham’ (halt) bring the right foot down sharply and firmly to resume the position of attention.

#### **To Mark Time from Quick Marching**

4. ‘Qadam Tal’ (Mark time) given with cautionary word well drawn out and executed as the left passes the right. Take short pace of 15 inches with right foot and begin the marking time with the left foot.

5. To move forward when quick marking time, the word of command will be ‘Age barh’ (forward). This being given as the left foot is being raised. Right foot comes to ground, shoot left foot forward and resume marching.

### **Changing Step**

6. (a) Changing step in quick time by numbers. ‘Qadam badalna ek’ (Changing step-one) given as the right foot reaches the ground) complete pace with left foot so that the left foot is flat on the ground and 30 inches in front of the right foot. The right arm is raised in front, and the left arm in rear of the body.
- (b) ‘Squad Do’ (Squad two). Bend the left foot forward placing flat on the ground with the hollow in the heel of the left foot and the arms are cut to the sides.
- (c) ‘Squad Teen’ (Squad three). Shoot the left foot forward placing the heel of the left foot on the ground 30 inches in front of the right foot.
- (d) Changing step will only be taught with the left foot leading.

## **FORMATION OF SQUAD AND SQUAD DRILL**

### **SECTION-11**

#### **General**

1. Forming of squad is done to change the formation of the squad or to conserve space.

#### **Making of Squad While Standing**

2. When squad is standing in threes. On word of command ‘halt, make left to left squad’. The cadet on the right side will stand still. Rest of the squad will move left. This will be followed by word of command ‘attention’. After this action, word of command will be ‘No 1- file slow march from the front’. The cadet on right side will take 3-step ahead and halt and the two cadets behind him will also cover-up behind the first cadet counting out one-two, one-two. This will be followed by word of command ‘No 1 file slow march from the front’ followed by ‘No 2 file slow march from the front’, on this command next cadet will take 5 steps followed by No 3 file who will take 7 steps, No -4 file will –take 9 step and so on, till the entire squad is formed . After this the squad will march in threes.

#### **Making Squad Without Halting**

3. On word of command ‘form up to the left’, the guide will keep standing and rest will turn half left. On word of command ‘form up in squad to the left, slow march from right’ . The squad, according to the file, will do marching on the spot starting on the left foot and squad will halt on word of command ‘tham’.

## **CHAPTER-III (A)**

### **DRILL WITH ARMS**

## **INDEX**

### **CHAPTER-III (A) DRILL WITH ARMS, CEREMONIAL DRILL (ONLY FOR SD/SW)**

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## **ARMS DRILL**

### **SECTION-1**

#### **ATTENTION, STAND AT EASE AND STAND EASY**

##### **Savdhan (Attention)**

1. The normal position of attention is maintained except that the right hand will hold the rifle at the right side, thumb on the left of the rifle and touching the left fingers together slanting towards the ground, back of the hand to the right and wrist well behind the rifle, butt of the rifle flat on the ground, toe of the butt in the line with the toe cap of the boot and magazine to the front (Fig.1).

##### **Visharam (Stand-at-Ease)**

2. Bend the left knee and carry the left leg to the left so that the feet are about 12 inches apart, keep the left arm to the side, force the rifle straight out to the front by keeping the right arm straight, shoot the right hand forward to its fullest extent but without moving the hand on the rifle or the toe of the butt/or allowing the right shoulder to drop. The weight of the body is transferred slightly to the left so as to be balanced. (Fig 2)

##### **Aram Se (Stand Easy)**

3. Force the right hand to the nose cap of the rifle, the fingers and the thumb curling round the rifle, bend the right arm so that the angle of the rifle is not altered.

##### **Vishram from Aram Se**

4. On word of command ‘Squad’, force the right hand down the rifle to the correct position of stand-at-ease and brace the body.

##### **Savdhan from Vishram**

5. On word of Command ‘Squad Savdhan’ (Squad attention), pull the rifle into the side, keeping the butt on the ground, resume position of savdhan keeping the left arm to the side.



**Fig.1 Savdhan**



**Fig.2 Vishram**

## **SECTION-2**

### **GETTING ON PARADE WITH RIFLE AND DRESSING AT THE ORDER**

#### **Getting on Parade**

1. When getting on parade with rifle, the rifle is carried out at 'Tol Shastra' (short trail). As soon as the squad halts, the butt is placed noiselessly on the ground in the correct position of attention.

#### **Sajna (Dressing)**

2. In dressing, the front rank raises the left arm instead of the right arm and the rifle is again raised to the position of short trail when moving.

## **SECTION-3**

### **DISMISSING AND FALLING OUT**

1. The procedure will be as for Foot Drill, but rifles will be shouldered before the squad is dismissed.

## **SECTION-4**

### **GROUND AND TAKE UP ARMS**

#### **Ground Arms**

1. ‘Bhumi Shastr (r)-ek’ (Ground arms one). Keep the body straight but inclined forward and bend down by bending and opening the knees keeping the heels together, lay the rifle gently on the ground at the right side, magazine to the right, muzzle pointing straight to the front, right hand in line with the toe of the boot. On ‘Squad Do’(Squad two) release the rifle with the right hand and resume the position of attention.

#### **Take Up Arms**

2. ‘Uthao Shastr (r) –ek’ (Take up arms one). Bend down as in the first movement of the ground arms, seize the rifle with the right hand in the original position by the right toe, raise the muzzle sufficiently to put the thumb and fingers between the rifle and the ground. On ‘Squad Do’. Resume the position of attention and bring the rifle to its correct position at order.

## **SECTION-5**

### **SHOULDER FROM THE ORDER AND VICE VERSA**

#### **Shoulder Arms (Bagal Shast)**

1. ‘Bagal Shast (r) – ek’ (Shoulder arms one). Throw the rifle perpendicularly up the right side in the first movement, the left arm comes across the body to seize the rifle in line with the waist belt on the hand guard and right hand on the pistol grip simultaneously with forefinger from outside and thumb from inside. Barrel resting in the hollow of the right shoulder. On ‘Squad two’ cut the left hand to the side in attention position.

#### **Order Arms (Baju Shastr)**

2. ‘Bazu Shast (r) –ek’ (Order arms one). Hold the barrel below the bayonet stand with left hand. On ‘Squad do’ drop the rifle with help of left hand till the butt is one inch from the ground and with the right hand, hold the rifle on the hand guard simultaneously.

On ‘Squad teen’ cut left hand in attention position and drop butt of the rifle on ground.  
(Fig -3)



**Fig.3 Present Arms**

## **SECTION-6**

### **PRESENT FROM THE ORDER AND VICE VERSA**

#### **Present Arms**

1. ‘Salami Shastr (r) –ek’. Throw the rifle upwards with the right hand, catching it with the left hand at the point of balance, thumb of the left hand in the hollow of the right shoulder and the right hand at the small of the butt, thumb to the left, elbow to the rear  
(Fig -4)



**Fig.4 Present Arms**

2. On ‘Squad Do’ bring the rifle to a perpendicular position in front of the centre of the body. Striking left hand on the side of rifle and hold small of the butt with right hand simultaneously.
3. ‘Squad Teen’ Tilting the rifle with the left hand, bring the rifle down, perpendicularly in front of and about three inches from the centre of the body. Right hand to hit the magazine. Holding the rifle at the full extent of the right arm, fingers together, slanting downwards meet it smartly with the left hand immediately behind the back sight in the line with waist belt, outside the selling thumb pointing upwards to the muzzle and on the left of the rifle at the same time place the hollow of the right foot against the left heel both knees straight. The weight of the rifle to be supported by the left hand.

#### **Order from the Present**

4. On ‘Baju shastr-ek’ hold pistol grip with right hand and simultaneously left right foot and place it with left foot as in attention position. On ‘Squad do’ carry the rifle to right side and seize it with right hand at the pistol grip. On ‘Squad teen’ cut left hand to attention position.

## **SECTION-7**

### **SALUTING AT THE SHOULDER AT THE HALT AND ON THE MARCH**

#### **At the Halt**

1. The salute with rifle is carried out at the shoulder. The action of the hand is the same whether the salute is to the front or to the flank. The head and eyes are turned if the salute is to a flank. For saluting with the rifle at the shoulder take the left hand across the body, forearm parallel to the ground. Strike the hand guard with palm of the hand so that the knuckle of the thumb is parallel to the outer edge of the handguard, fingers and thumb together and extended, back of the hand to the front and elbow forced into the body. After a regulation pause the left hand will be cut to the side.
2. The salute will be carried out in the manner already explained. Simultaneously turning the head and the eyes towards the officer, looking him fully in the face. The salute will be given on the third pace before reaching the officer and hand cut away and head turned to the front on the third pace after passing him.

## **SECTION-8**

### **SHORT/LONG TRAIL FROM THE ORDER AND VICE VERSA**

#### **Short trail**

1. Slightly bend the right arm to raise the butt of the rifle about one inch from the ground. The short trail is normally carried out when getting on parade with rifle and when stepping forward and to the flanks and during dressing. The butt is placed noiselessly on the ground in the correct position of attention as soon as the movement is completed.

#### **Trail from the Order**

2. 'Tol shastr(r)' (Trail arms). With the flick of the wrist throw the nozzle forward and down wards, catching rifle at the point of balance, back of the hand to the right, arm straight so that the rifle is horizontal, muzzle pointing to the front and magazine underneath.

#### **Order from the Trail**

3. 'Bazu Shastr(r)', (Order arms). With the right hand, force the butt to the ground and raise the muzzle to assume the correct position of the order.

## **SECTION-9**

### **EXAMINE ARMS**

#### **Examine from the Order**

1. ‘Janch Shastr(r)’ (Examine arms). Bend the left knee, placing the front of the foot on the ground about 16 inches to the left front and force the muzzle downwards with the left hand keeping the arm slightly bent so that the rifle is in front of the right thigh. Cocking the rifle and applying holding opening catch with left hand place the right thumb in the charge guide with the nail upper-most and at an angle to reflect and light up the barrel, fingers together on the right of the rifle and extending towards the ground. On ‘Chal-wale purze aage kar’. Pull back and release the cocking handle and on order. Press the trigger and bring back the weapon as in attention position.

#### **The Order from the Examine**

2. ‘Bazu Shast(r)-ek’ (Order arms one). Strike the rifle with the right hand in the same place as that held at the order, finger and thumb curled round the rifle, fore arm and elbow on the stock, bend the left knee to close the heels. ‘Squad Do’ (Squad two). Pull the rifle down to the right side striking it with the left hand just below the nose cap as for the second movement of the order from the slope. ‘Squad teen’ (Squad three). Cut the left hand away as in the third movement of the order from the slope.

## **SECTION-10**

### **CEREMONIAL DRILL**

#### **General**

1. In the NCC the Ceremonial Parade are the culmination of the cadet’s training. The Ceremonial Parade may be arranged for the various dignitaries given in NCC orders from time to time.

#### **Compliments**

2. (a) Nationals salute is given to the President of India and the Governors of the various states within their own jurisdiction.  
(b) General salute is given to dignitaries of the rank of Major General and above.  
(c) All other dignitaries are only given present arms ‘Salami Shast(r)’.

## **Procedure**

3. The procedure for the Ceremonial Parade is given below:-
  - (a) The VIP on arrival will be received by the Senior Officer serving with the NCC present and taken to the saluting base.
  - (b) The parade Commander on seeing the VIP Alighting from the car will order 'Parade Savdhan'.
  - (c) After VIP has come to the dais and is ready to take the salute , the parade Commander will give the following words of command:-
    - (i) Parade General Salute Degi  
General Salami Shast(r).

Or

Parade Rashtriya Salute Degi  
Rashtriya Salute Salami Shast(r).

Or

Parade Salami Degi-Salami Shast(r).

  - (ii) Parade Bazu Shast(r)
- (d) The parade commander marches up smartly to the saluting base and reports to the VIP 'No. 1 Bn Parade ap Ke Nirikshan Ke Lie Hazir Hai Sriman/Srimati Ji'.
- (e) After the VIPs permission has been obtained to let the parade stand-at-ease and prior to commencement of the inspection, Parade Commander gives the word of command 'Number one company Khara rahe, Baqui Vishram'. After the inspection is finished and the VIP has turned to the saluting dais, the following words of command will be given for the march past:-
  - (i) Parade Savdhan.
  - (ii) Parade Nikat Line Chal.
  - (iii) Bagal shast(r).
  - (iv) Parade kooch kalam men manch se guzregi No ---- Age.
  - (v) Parade tin - o - tin kalam men dehine mur.

(f) Word of command by respective company Commander in their own turn for the march past. ‘Number one Company Baen se tez chal’.

(g) At the first flag (6 paces of the saluting base) each company commander will give the following words of command, ‘Comapany Dahine Dekh’. After the company has gone past the saluting base (indicated by the next flag) his word of command will be ‘Company Samne Dekh’.

(h) When the parade returns to the inspection line, each company will be give word of Command ‘Company Tham’.

(i) ‘Number one company age barhegi- baen mur’ , and will then remain at Savdhan.

(ii) The entire parade will be made to stand – at-ease by the Parade commander by giving command ‘Parade Vishram’.

(j) In case the parade is to advance in view order, the following word of command will be given by the Parade Commander:-

(i) Parade Savdhan

(ii) Parade Madhya Se-saj.

(iii) Parade Samne Dekh.

(iv) Parade samiksha karan men Madhya se tez chal

(k) The parade will automatically halt after taking 15 paces. The halt must coincide with stopping of music in case the band is in attendance.

(l) Compliment will be paid again accordingly to the status of the VIP. After this stage, stand-at-ease (Vishram).

(m) In case the parade is not required to advance in review order, the parade commander will give the words of command ‘Vishram’ when the entire parade has reached the inspection line and has been turned to the front.

4. The Parade Commander shall then await further instructions. When the VIP leaves the Parade ground, the Parade Commander marches off the cadets.

## **SECTION-11**

### **GUARD MOUNTING**

#### **General**

1. Personnel detailed will be turned out by guard mounting NCO on the previous evening for guard practice, (requirement 2+6). The Guard Commander will fall in the Guard 15 minutes before the appointment time for Guard and complete the adjustments before the guard mounting NCO falls in the Guard in two ranks. The Guard commander will be on the right and assistant guard commander on the left of the front rank.
2. The Guard mounting NCO will be twelve paces away from the guard. He will fall in the Guard and inspect as under:-
  - (a) ‘Guard-Parade Par’ (Guard get on parade) the guard will come to attention, step off and fall in the open order, twelve paces away from the guard mounting NCO and stand at ease in succession from the right.
  - (b) ‘Guard Savdhan’. Guard will come to attention.
  - (c) ‘Guard Dahine Saj’. The Guard commander will turn to his right and march out five paces, halt, turn about, dress the front rank. He will then dress the rear rank and give command ‘SAMNE-DEKH’ and return to his original position.
  - (d) ‘Guard-Bagal Shast(r)’, Guard will do shoulder arms.
  - (e) The Guard Mounting NCO will then report to the orderly officer (who would have taken position 6 paces behind the guard mounting NCO).
  - (f) ‘Guard nirikshan ke lie hazir hai’. The guard mounting NCO will then fall in on the right of the guard six paces away from the guard coammander.

#### **Orderly Officer**

3. The Orderly Officer will take over, inspect and mount the guard as under:-
  - (a) ‘Guard-bazu-Shast(r)’ (Guard will order arms). The orderly officer will inspect the guard and come back to his orginal position.
  - (b) ‘Guard Nirikshan Ke lie Janch Shast(r)’ (Word of command by orderly officer). The guard will take the position of Examine arms. The orderly officer then inspects the arms commencing from the Guard Commander. After he completes the first person and moves to the second, the guard commander will fall out and accompany the orderly

officer. After inspection the orderly officer will return to his original position and the guard commander to his position.

(c) ‘Guard-Bolt Chalao’. Guard will Ease spring and close the bolt. (Word of command by orderly officer).

(d) ‘Guard-Bazu Shast(r)’. Guard will order arms (Word of Command by orderly officer).

(e) ‘Number---Samne Ki line-stick orderly-stic orderly Line Tor’. The stick orderly called out by the orderly officer will take a step forward, shoulder arms, turn to the right, quick march and fall in on right of the guard mounting NCO.

(f) ‘Guard-Bagal Shast(r)’. Guard will shoulder arms.

(g) ‘Guard -Apne Duty ke Lie Dahine Se-Tez Chal’. The Guard marches off. The Guard Commander gives ‘Dahine Dekh’ to the orderly officer and then moves to take over from the old guard.

### **Procedure at the Guard Room**

4. As soon as the sentry sees the new guard approaching him he will turn out the old guard. The new guard halts at the appointed place. The old guard commander will ‘fall in’ his guard fifteen paces in front of the new guard. The old guard will present arms and the new guard will return the compliment. Both guards will in succession order arms and stand at ease. The first relief of the new guard will then take over duties from the old guard sentry. The assistant guard commander of the old guard will post the new sentry. He will bring the relieved sentry and fall in with the rest of the guard. The old guard will move off for dismissal. The new guard will give present arms and then old guard will return the compliment with ‘Dahine Dekh’ (Eyes right).

### **Posting and Relieving Sentries**

5. The guard commander will march the sentry upto the post. The new sentry will place himself on to left of the old sentry and face the road without any word of command. The guard commander will face the road without any word of command . The guard commander will place himself three paces in front of the sentries. The guard commander will then read and explain all orders pertaining to the post of new sentry and will then order transfer of ammunition (not normally held by NCC cadets). He will then give word of command ‘Sentries Badli Karo’. The old sentry will take two steps to the front and the new sentry two steps to his right. The new sentry from now on assumes post. The guard commander will then give the word of command ‘Old - Sentry Tez Chal’ and marches with him into the guard room. The sentry on duty will, do shoulder arm. He will halt at the appointed place, face the road and properly stand at ease.

## **SECTION-12**

### **GUARD OF HONOUR**

#### **General**

1. Guard of Honour will be provided by National Cadet Corps Units only to the dignitaries mentioned in the succeeding paragraphs. The other dignitaries specially invited as guests of honour to the NCC functions or to visit NCC Units in camps may on special occasion be given guard of honour, provided the prior concurrence of the Dy DG National Cadet Corps of the States concerned has been obtained.

2. 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.

### **Procedure**

3.
  - (a) Guard will form up in two ranks with a distance of 4 paces between the front and the rear ranks. The officers of the Guard and the JCO carrying the colour will be two paces in front of the front ranks. The guard commander will be 8 paces in front of the centre of the front rank. The distance between cadets will be 24 inches.
  - (b) The band will form up on the right flank in line with the guard and 7 paces from the right guard of the guard.
  - (c) There will always be two AsDC who will stand on either side of the dais, 2 paces on the right and left of its front edge.
  - (d) The conducting officer who receives the VIP and conducts him to the saluting base will, after conducting the VIP to the dais, positions himself in the centre and rear of the dais and 3 paces, from it.

### **Composition and Strength**

4. 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).

### **Compliments**

5.
  - (a) **Rashtriya Salute.** The President and the Governors within their own states.
  - (b) **General Salute.** Other dignitaries of the rank of Major general and above.
  - (c) Salami Shast(r) given to all other VIPs.

### **Inspection**

6. The following procedure for the inspection will be observed:-
  - (a) The guard commander will march forward and report to the VIP. He will do so in suitably loud voice. The report will be in Hindi ‘Guard (Name of Unit) Samman Guard Nirikshan ke Lie Hazir Hai Sriman (Srimati Ji)’.

- (b) The VIP will come down from the dais and the Guard Commander will conduct him/ her moving on the VIP's left. On reaching the right hand man of the band, Right Guide of the Guard of Honour, the Guard Commander will move to the VIP's right and in line with him.
- (c) The AsDC will not march in front of the VIP except in the case of the President of India.
- (d) The band will not turn their heads and eyes toward the VIP during the inspection of the band but will look straight to the front.
- (e) During inspection all ranks of the Guard will turn their heads and eyes towards the VIP and will look at him, taking time from the first beat of the drum. As the VIP moves on, all ranks of the Guard will also move their heads and eyes looking at him all the time. The band will stop playing as soon as the VIP has finished the inspection and the Guard taking the time from the last note of the music will turn their heads and eyes to the front.
- (f) The band will stop playing as soon as the VIP has finished the inspection.
- (g) Only the front rank of the Guard will be inspected.
- (h) The VIP will be conducted by the Guard Commander towards the conducting officer. The Guard Commander will then salute the VIP. The Guard Commander must be prepared to shake hands with the VIP, should the latter offer to do so.

### **Dismiss**

- 7. The Guard Commander will return to his post and after the VIP has proceeded some distance away from the Guard of Honour, he may then stand the Guard of Honour, at ease (Vishram). The Guard will however, not march off or 'Stand Easy' (Aarams Se) till the VIP for whom it is mounted, has left the place of the Guard.

## **CHAPTER-IV**

### **WEAPON TRAINING**

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## **SECTION-1**

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

#### **Introduction**

1. Learning to shoot has been the man's basic instinct from the early ages. Then men went out into jungle with bows, arrows and weapons for hunting. The shooting at the ranges helps an individual to master this as a sport and also to learn handling of a weapon for self protection.
2. The fine art of shooting, teaches a person precision, accuracy, co-ordination of body movements, patience and confidence which all help to make him a better man in the public life.

#### **Characteristics**

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

<b><u>Ser No</u></b>	<b><u>Details</u></b>	<b><u>Rifle .22 No II MK IV BA</u></b>	<b><u>Rifle .22 Deluxe BA</u></b>
(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



**Fig- 1, Rifle .22 No 2 MK IV**



**Fig -2, Rifle .22 Deluxe**

### **Safety Precautions**

4. These entail.
  - (a) Pushing forward the safety catch, raising and drawing back the bolt knob and then, examining the chamber and the magazine. When satisfied that both are clear, push the bolt knob forward and then down, press the trigger and apply the safety catch.
  - (b) Inspect the drill cartridges and ensure that there is no live ammunition.

### **Stripping**

5. Before stripping, check that the number on the left side of the body corresponds with the number on the back side of the lever of the bolt (fig 1). The removal is done in the following sequence:-

- (a) Removal of the bolt is done by raising the leaf back sight and pushing forward the safety catch. Keep the left hand under the magazine with the middle finger on the restraining catch. Withdraw the bolt to the rear, turning the bolt head upwards and fold back the back sight.
- (b) Press the magazine catch upwards and take out the magazine.

### **Assembling**

6. The assembling of the rifle is always done in the reverse order. Check the magazine and ensure that the magazine number is the same as that of the rifle. Insert the magazine at its place and press it. Ensure that the magazine is fixed in its place.

7. While assembling the bolt of Deluxe .22 rifle the following points will be borne in mind :-

- (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.

8. Insert the bolt by holding bolt lever with right hand and rifle with the left. Push forward the bolt until it touches in the charger guide and turn the bolt head towards right till the click sound is heard. Now push forward, and press the trigger and apply the safety catch.

### **Sight Setting**

9. Set the sight by pressing the thumb spring (Range increasing towards the muzzle side-adjust the thumb spring accordingly).

### **Care and Cleaning**

10. The efficiency of the rifle depends on two factors. The care given to the rifle and the skill of the firer. The rifle is designed to stand upto active service conditions but performance will be considerably affected if it is subjected to unduly harsh conditions. Strip the Rifle, open the butt trap and remove the pull through and the oil bottle for cleaning. The pull through has three loops, nearest the weight is for the gauze, the centre for cleaning the barrel with flannelette and the end one for oiling the barrel and for use of the armourer.

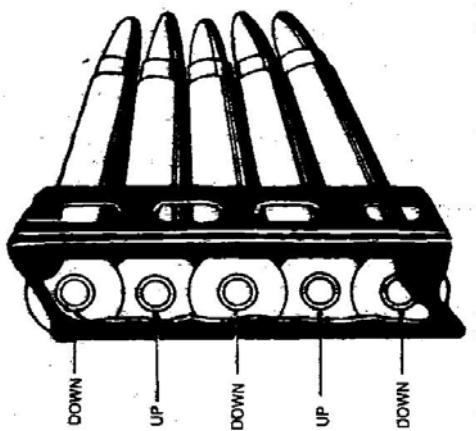
## **SECTION-2**

### **LOADING, COCKING AND UNLOADING**

1. In action the soldiers life may depend as much upon the rapid loading of rifle as upon the accuracy of his shooting. This underlines the importance of swiftness in bolt manipulation. The bolt ought to be properly lubricated.

#### **Ammunition and Charger**

2. No charger is provided for Deluxe rifle. The ammunition is loaded one by one in the magazine. Ensure that the ammunition is cleaned before firing.



**Fig-1 Correctly Filled Charger**

#### **Loading and Unloading**

3. Loading must be carried out on orders and no action will be taken without proper orders. It must be carried out clearly and in a set sequence. Fumbling and lack of determination would lead to jamming and delay.

#### **Loading and Unloading in the Lying Position**

4. For this action in lying position carry out the following drill:-

(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**

#### **General**

5. Lying position is the most comfortable position from which to fire. The three basic essential of good shooting are:-

- (a) Position must be comfortable and hold so firm that the rifle 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.

#### **Position and Hold**

6. To get a stable position, the firer should get a feeling if rooted to the ground with:-

- (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)



**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)



**Fig-2**

### **The Right Hand**

7. Bedded in as per the built of the firer, a firm grip providing steadiness and should be well forward to allow the forefinger between the first and second point to be actually on the trigger. The right hand must pull back the rifle very firmly in the shoulder and lock it there. The forefinger must take the first pressure on the trigger, whenever the butt is brought in to the shoulder.

### **The Left Hand**

8. Acts as support to the forward part of the rifle thereby helping to steady the rifle into the shoulder. The rifle should be held as far forward as possible, well clear of the magazine. No attempt to force the left wrist under the rifle should be made. The large pad of the muscle at the base of the left thumb protrudes and will automatically be pressing against the left side of the rifle and that is balanced by a similar pressure by the left forefinger on the other side of the rifle. Left hand must never pull the rifle into the shoulder.



**Fig-3**

### **The Shoulder**

9. The butt plate should be bedded into the shoulder. Improper bedding in will result in sore shoulder and possible flinching. The butt plate should meet the shoulder on the interior pad of the shoulder muscle joint and not in the 'Hallow' of it.

### **Position of the Head**

10. The weight of the head should press the chin downwards and to the right against the butt. The head should be at such a distance that neither the cocking piece nor the finger, knock the face during firing.

### **Breathing**

11. Aim correctly and then hold breath while pressing the trigger.

## **SECTION 4**

### **AIMING I - RANGE AND TARGETS**

#### **General**

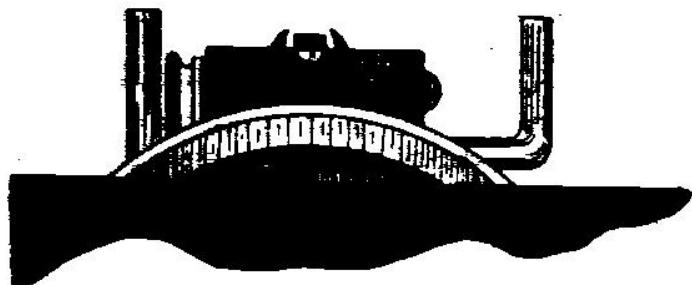
1. Accuracy of the aim is essential for the successful shot. This is by far the most difficult operation, as the eye has certain limitations and there are influences affecting what it does. Nevertheless good shooting can only be obtained with consistency of aim. Normally 25 yds range is used for Deluxe .22 rifle.

#### **Aiming**

2. The laws of aiming are:-

- (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.



**Fig-1 Correct Aim**

3. Elevation is given to counter the force of gravity, while the bullet is in flight. The elevation depends upon the range of the target. This elevation is given automatically by adjusting the backsight.

### **Targets**

4. The following targets are generally used by girl Cadets:-

- (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.



**Fig -2**



**Fig -3**

## **SECTION-5**

### **TRIGGER CONTROL AND FIRING A SHOT**

#### **Trigger Control**

1. The third essential for accurate shooting is trigger operation without disturbing the aim. To achieve this, perfect co-ordination between eye, brain and operation of the forefinger on the trigger is required. To develop this co-ordination the following exercises have been designated.

#### **Trigger Operation Ex No 1**

2. **Object.** To practice independent action of the index finger.
3. **Method.** With the exception of the index finger, the right hand grips the left wrist as firmly as possible until the white is visible under the nail tips. The right index finger then press slightly on the wrist, on which action there must not be any increase in pressure from any part of the hand. Avoid wearing wrist watches during the exercise.

#### **Trigger Operation No 2**

4. **Object.** To practice further muscular control of the hand.
5. **Method.** For this hold the right knee clinched with the right hand less the index finger, held away in a hooked position as through round trigger. The index finger is made to move through an arc as if pressing the trigger. The only movement should be from the middle joint of the index finger to its tip.

#### **Exercise No 3**

6. **Object.** To develop co-ordination between the right eye, brain and right hand index finger and practice muscular control of the hand.
7. **Method.** For this assume lying position and cock the rifle. The left hand leaves the rifle and supports the head. The left hand leaves the rifle and supports the head. The left eye is closed. (If the firer cannot close her left eye, she blankets it out with the left hand). The right eye takes a line of vision, eye-foresight-any object on the ground in front of the line of vision when the brain impulse 'on aim' is transmitted by the eye, the index finger instantaneously presses the trigger.

#### **Exercise No 4**

8. **Object.** To introduce an element of 'holding' and the co-ordination between right eye, brain and right index finger.

9. **Method.** The exercise is the same as No 2 with slight differences. Hold the rifle with both the hands and take the aim on the target. Now the important thing is restraining the breathing. (This has been already dealt with under 'Holding'). During this exercise there should not be any round in the chamber.

### **Exercise No 5**

10. **Object.** To introduce an element of 'holding' and the co-ordination between right eye, brain and right hand index finger.

11. **Method.** As for exercise 3, with the important addition of right hand holding. Hold rifle steady and no quiver whatsoever being allowed. (When the firer attempts this exercise he must bring in the important item of restraining the breathing. This has already been dealt with under 'holding'). During its performance no discernible movement of the rifle whatsoever is to take place. Magazines must be removed to practice this exercise. When the young firer performs this exercise by getting two or three totally correct performances quickly, he is a potential marksman.

### **Firing a Shot**

12. **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.

13. **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.

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

### **Sequence of Firing a Shot**

15. **Aiming Position.** On coming into the aim, the firer must take the first pressure.

16. **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.

17. **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.

18. **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.

19. **Declaration.** The firer declares if the aim at the time of firing is not correct e.g. left, right, high or low. A correct shot should not be declared.

20. **Re-loading in the Shoulder.** Immediately after follow through or declaration, reloading at the shoulder should be carried out.

21. **Re-alignment.** Having reloaded the firer should realign his sights approximately on the target.

22. **Limber-Up.** Before firing any practice, it is advisable to carry out trigger operation exercise No 5 and sequence of action for firing a shot. This is termed as 'Limber-Up' and its aim is to assist in coordination and tuning up of muscles, eye and brain.

## **SECTION-6**

### **RANGE PROCEDURE AND SAFETY PRECAUTIONS**

#### **Use of Red Flags**

1. No firing will take place until all the red flags are hoisted and look-out men posted as per the range standing orders. One flag will always be on the top of the butt. Flags are a warning that the range is in use. A red flag displayed on the butt indicates that no firing should take place.

#### **Suspension of Firing**

2. If firing is suspected during the practice, owing to some unforeseen happening, weapons will be placed on the ground and the firer will stand clear.

#### **Inspection of Weapons**

3. The officer in charge of the firing point is responsible to ensure that all weapons are cleared and inspected before leaving the firing point. A further inspection will be carried out at the conclusion of firing.

4. During inspection, loading, and unloading, all the rifles must point towards the target. On the command '**Nirikshan ke lie Janch Shastra'** (Examine Arms) rifles will be held parallel to the ground and pointing in the direction of the target.

5. No one will go to the targets until all weapons have been unloaded, inspected and permission to go has been given by the officer in charge. Only the target papers will be brought back to see the results.

6. Only firers, coaches, the firing point officer and his assistants are allowed on the firing point. Waiting details must be at least 10yds from the firing point or in the shelter provided.

7. The following is the normal procedure on the firing points :-
  - (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.

### **Miniature Ranges**

8. Only .22 ammunition will be used on miniature ranges. Scoring will be similar to that as laid down for classification ranges.

## **SECTION -7**

### **AIMING II - ALTERATION OF SIGHT**

#### **Necessity**

1. If during firing it is found that the elevation of the barrel is not correct i.e when the rifle is fired correctly with correct aim, the shot goes high or low instead of hitting at the point of aim. It will be necessary , provided the time allows, to readjust the setting of back sight.

#### **Mean Point of Impact (MPI)**

2. 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.

#### **Elevation**

3. 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.

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

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

#### **Figure Target**

5. If while firing at figure targets the shots are observed to miss, either high or low, the firer should raise or lower his sights by one hundred yards, re-aim and fire. If the shot is still observed to miss the target, alter the sight by a further 100 yards.

## **SECTION-8**

### **THEORY OF GROUP AND SNAP SHOOTING**

#### **The Group and its MPI**

1. In approaching a method for firing, the first essential to understand is that when firing a series of shots with a supposedly constant aim and under the same conditions, they will not all hit the same spot, however perfect the weapon and its ammunition. A pattern is always formed. The divergence of shots is due to a variety of reasons.
2. For the purpose of training the group will imply five consecutive well-fired shots, fired with consistent aim at the same aiming mark. The central point of impact is the Mean Point of Impact (MPI) of the group.

#### **Grouping Capacity**

3. 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.
4. For the purpose of coaching and scoring, firers are classified into certain grouping capacities and measured at a range of 100 yards. These capacities are represented by the diameter of the circles e.g. 2 inches, 4 inches and so on.
5. A man's grouping capacity, while remaining fairly constant at any given range, varies in proportion to the range at which firing is taking place. Thus once a man's grouping capacity at 100 yards/ 25 yards has been ascertained, his capacity at any other range can be calculated by simple arithmetic. Hence should the group be centrally placed the scores expected on target can also be predicted.

#### **Declaration**

6. It must be appreciated that a group is representative of a man's capacity, only when a correct aim has been taken for every shot. Should a man accidentally fire when aim is not correct, he must note very carefully where the sights were pointing at the moment of firing and declare the fact. If on checking it is found that a bullet has gone astray and not at the place declared by the firer, it should be ignored for judging his grouping capacity. For instance if a firer was making a 4 inches group and because of one stray bullet he makes a 12 inches group, his grouping capacity will be considered as 4 inches.

#### **Application of the Grouping**

7. Grouping is of immense value to the firer and to his coach and does in fact form the basis of application practices in which the centre of the firer's group is applied to the centre of the target to note very carefully the group of the MPI, making alterations to

sighting or to the point of aim where necessary. In the early stages a coach will help the firer for this purpose. The example is given below:-

If the position of the first shot is reasonably good and no error is declared, the second shot should be fired with the same aim. If the second shot is within the grouping capacity of the firer the probable MPI is the middle of the two shots. If MPI is too far out it should be adjusted for elevation and deflection; the correction should not be made boldly but with caution. The third shot will give the clear picture. If this MPI is again not central a further cautious change should be made. After the forth shot MPI position should be known and the fifth shot should be a good one fired with the correctly ascertained elevation and deflection.

### **Improving Capacity**

8. Once the grouping capacity of the firer is assessed , it will be her duty not only to maintain this capacity, but to improve on it eradicating any faults she might have had in early shoots.

### **Miniature Range Snap Shooting**

9. After grouping and application fire has been done , the snap shooting should be fired. This is to defeat the time factor. Initially it should be done on miniature range to make the firer realize that the exposure of target is enough to get a deliberate round fired and she must be perfectly calm and collected throughout. In fact before she is made to fire she should be given enough practice on the following things:-

- (a) To concentrate.
  - (b) To speed up co-ordination between eye and hand.
  - (c) Practice in dominating impulse.
10. The practice is given in the following stages:-

(a) **Stage-1 Automatic Alignment.** The aiming mark is given at the instructors eye when the squad is lying in semi circle with instructor in the centre. The alignment is checked with the help of aiming disc when the individual on the command 'up' aims at the eye of the instructor.

(b) **Stage-2 Automatic Alignment with Correct Hold and Trigger Operation.** On the command 'up' the firer brings up the rifle, aims, holds the rifle correctly and takes the shot. He reloads when the rounds would have left the barrel for certain (It is best to emphasise this by a distinct pause), comes down and declares his shot- if incorrect, to the instructor. There is no time limit initially, only 'accuracy before speed' is insisted. Later in this stage, indication with a finger is given and thus raising of the finger is the signal for the firer to fire his round. Sight impulse thus replaces sound impulse.

(c) **Stage 3,4 & 5.** Practice firing is done at figure targets 11, 12 and snap shooting at ranges 100, 200 and 300 yards.

11. For firing on miniature range representative figure targets are used and the time progressively reduced from 7 to 4 seconds. The size of the targets is also reduced. Not more than two practices should be fired in a day. Here again accuracy before speed will be insisted upon. Good holding is essential.

### **In stage 7**

12. The practice is given at range sighting at figure 11 & 12 targets and in stage 8, the range snap shooting practice is carried out.

### **Continuous Snap Shooting**

13. It is to take on the targets as they appear. The time will come in battle when the rifleman is confronted with a number of enemy within killing range. His task will be to account for as many as possible, before they escape to cover or alternatively get to close quarters. The guiding principle is, always ‘Shoot to Kill’. In this case, having killed one enemy, he must at once engage another, firing continuously and methodically as long as target remains.

### **The Points to be Observed**

14. The main points to be observed are :-

- (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 9**

### **SHORT RANGE FIRING (.22 RIFLE)**

<u>Practice No</u>	<u>Practice</u>	<u>Target</u>	<u>Range in Yards</u>	<u>Round</u>	<u>Instructions</u>	<u>Scoring</u>
1.	Deliberate	1Ft	25	1	(a) Position lying supported  (b) One practice of 5 rounds	Bull & Inner - 3 points Magpie - 2 points Outer - 1 points  HPS - 15 Points

### **LONG/SHORT RANGE 7.62MM RIFLE COURSE** **(FIRING BY CADETS OF SD/SW NCC)**

<u>Practice No</u>	<u>Practice</u>	<u>Target</u>	<u>Range in Yards</u>	<u>Round</u>	<u>Instructions</u>	<u>Scoring</u>
1.	Deliberate	4'x 4'/1'x 1'	100/25	5	(a) Position lying supported  (b) Position lying unsupported	Bull & Inner - 3 points Magpie - 2 points Outer - 1 points HPS - 15 points  Bull & Inner - 3 points Magpie - 2 points Outer - 1 points HPS - 15 points

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

## **SECTION-10**

### **CHARACTERSTICS OF 7.62 MM SLR AND 5.56 MM INSAS**

#### **Characterstics: 7.62mm SLR**

1. Calibre - 7.62 mm.
2. **Length**
  - (a) With short butt - 1126.50mm (44.35in).
  - (b) With normal butt - 1139.20mm (44.85 in).
  - (c) With long butt - 1151.90mm (45.35in).
  - (d) Length of rifle with bayonet - 1397.00mm (55 in).
3. **Weight**
  - (a) Rifle only - 4.4 kg.
  - (b) Rifle with full mag - 5.1 kg.
  - (c) Rifle with full mag and bayonet - 5.392 kg.
  - (d) Bayonet - 0.283 kg.
  - (e) Empty Mag - 0.255 kg.
  - (f) Full mag - 0.709 kg.
4. **Rate of Fire**
  - (a) Normal - 5 rds per min.
  - (b) Rapid - 20 rds per min.
  - (c) Faster than rapid - 60 rds per min.
5. **Range**
  - (a) Effective range - 275 m (300 yds).
  - (b) Sight range - 200 yds to 600 yds.

6.	<u>Sight Radius</u>	-	533.40 mm (21.77in).
7.	<u>No of Grooves</u>	-	06 (Six).
8.	<u>Pitch</u>	-	1 turn in 304.8mm (12 in).
9.	<u>Twist of Rifling</u>	-	Right Hand.

#### **Amn (Cart SA Ball 7.62mm)**

10.	(a) Calibre	-	7.62mm.
	(b) Weight of cart	-	23.07gm ± 0.65 gm
	(c) Length of cart	-	71.16mm ± .76mm (2.80-0.03 in).
	(d) Weight of bullet	-	9.33 ± 0.13 gm (144 ± 2 gm).
	(e) Powder charge	-	NC Powder.
	(f) Muzzle velocity	-	815m/2700ft ± 30 ft/S (at 27.43m(90 ft) from muzzle)
	(g) Wt of cart case	-	10.89 gm.
	(h) Wt of propellant charge	-	2.85 gm.
11.	System of operation	-	Gas operation.
12.	Mag capacity	-	20 rds.

#### **Characterstics : 5.56mm INSAS Rif**

1.	Calibre	-	5.56mm.
2.	Length of Rifle without bayonet	-	960mm.
3.	Length of Rifle with bayonet	-	1110mm.
4.	Length of Barrel	-	464mm.
5.	<u>Weight</u>		
	(a) Fixed butt with empty mag	-	3.6 kg.
	(b) Fixed butt with loaded mag	-	3.69 kg.

(c)	Empty mag	-	90 gms.
(d)	Full mag	-	340gm.
(e)	Bayonet	-	305 gm.
6.	Effective Range	-	400 mtr.
7.	Sight Radius	-	470mm.
8.	Muzzle velocity	-	900m/s.
9.	Principle of operation	-	Gas Op.
10.	Penetration	-	3mm at 700m.
11.	Mode of fire	-	Single shot & three round burst (TRB).

**12. Rate of Fire**

(a)	Normal	-	60 rds/min.
(b)	TRB	-	90 rds/min.
(c)	Intense	-	150 rds /min.
(d)	Cyclic	-	600 to 650 rds/min.

**Type of Amn**

13. (a) Ball Rd.  
 (b) Tracer Rd.  
 (c) Blank Rd.  
 (d) HD Cart.

**CHAPTER-V**  
**LEADERSHIP**

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## **SECTION-1**

### **MOTIVATION**

#### **Definition and Scope**

1. Motivation is the process by which one is inspired to act in the desired manner with the help of catalytic persuasion. It is the application of will power. Motivation is expressed commonly as a desire, wish, need, preference, want or striving. Motivation causes individuals and groups to achieve a goal or to take actions under given circumstances. Reliable and sustained performance can be obtained from individuals and units in peace and war.
2. The factors which affect motivation are many and varying in nature from physical to physiological. At the higher level are the national characteristic of the nation, his confidence in his nation, government, commanders and orders. At the personal level it will be his attitude to the basic biological needs and urges, personal relationship, the type and extent and importance the person attaches to political and religious ideologies of his own and his attitude towards that of others. It will also depend on his prejudices, the rational and irrational standards of living and educational standards which he may have gone through. His home background and emotional stability also effects his motivation. In the military sphere it will also depend on the duration of a war, leave and rotation policy, casualty rates, welfare arrangements for loved ones and a feeling of satisfaction over service employment and so on.

#### **Different Schools of Thought**

3. Today, there are two widely opposed schools of thought regarding human motivation. One is based on biological wants whereby men and other animals are motivated to act primarily by the instincts of hunger, thirst, need for shelter, warmth and sex. This school of thought tends to ignore the ideological content in human make up. We all know that when moral is high we are prepared to forego our biological wants for as long as is physically possible without undue complaint or sense of frustration.
4. The other school recognises that men cannot live by bread alone. However, in the present state of medical, psychiatric and psychological knowledge, the human brain and its functioning is understood very imperfect, if at all. The only definite conclusion made so far is that motivation is an important determinant of human behaviour.
5. Normal human beings prefer to be in a group (tribe, family, ship, squadron, regiment and so on) rather than to be completely alone and prefer to be engaged in what they think is a useful occupation in accordance with their ability rather than be idle or doing something they cannot cope with. People like to be liked and like to know that they are liked (special acceptance). The relation of these preferences in all normal human beings is of prime importance to the leader.

6. In general, a person who drives, or thinks he drives satisfaction in his various activities, will be better motivated and will give better general performance, be more alert and perceptive, will give better output, will remain at his or her post more willingly and will face danger with more determination.

7. Motives are often conflicting e.g., the human instinct to run away from danger vis-a-vis the willingness of a serviceman to face and fight the enemy, which is developed through training and by sound leadership and high moral.

8. Instincts are the basic motives common to all human beings but these are controlled, modified and conditioned by social motives acquired in childhood at school, during recruit training and subsequently while in service. Thus, religion, political ideology and culture are major factors of motivation.

### **Motivating Performance**

9. Motivation is an act of inspiring men to want to do their jobs. An individual's proficiency reaches a maximum when his willingness to perform has been brought to its maximum. However, in the long run, motivation by force can be less effective, as it may lead to undesirable tendencies like avoiding 'getting caught' rather than striving for satisfactory results. A leader can best motivate his group by establishing a favourable leadership climate. Other possible means of motivation, a leader can resort to are:-

(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**

#### **Introduction**

**"To obey God's order as delivered by conscience - duty".**

**"To obey man's order as issued by rightful authority - discipline".**

1. The foundation of both alike is denial of self for a higher good. Unless the lesson of duty be first well learned, the lesson of discipline can be but imperfectly understood.

2. As a child grows up in age and starts understanding his surroundings, he becomes a member of the society. Through this membership, he starts to learn some of his obligations and responsibilities. He is expected to behave in a particular manner and is required to obey certain laws, written and un-written. It is human nature to strive for higher and higher status in the society. We, therefore, continuously compete against each other and try to be a better man than other. However, we should ensure that we achieve our aims by following the right path i.e. by being a good citizen.

### **Duties**

3. Duty may be defined as a moral/legal obligation and a binding force of what is right and behaviour towards superior colleagues and subordinates.

4. Each citizen of India has certain rights and duties to perform. He should not only worry about his rights but should also devote equal if not more attention towards obligation of his duties.

5. To understand these duties and follow them relentlessly, it requires hard work and perseverance. It may cost pleasure and comfort in the beginning, but if the path of doing duties is followed with full determination, the success will be sure. While carrying out duties, do not bother about what others say or think.

6. A person can command respect of others only if he knows his duty and does it sincerely. That is how he starts influencing the mind and actions of others.

### **Discipline**

7. Discipline welds together the other qualities of courage, endurance, alertness and comradeship. Discipline teaches self control and correct behaviour at all times. Courage, endurance and even loyalty will not suffice in the real crisis; only discipline will pull subordinates through.

#### **Individual Discipline**

8. Discipline in subordinates is based on confidence; confidence in his leaders, in his comrades and in himself. The greater the confidence the higher the morale. Discipline implies aiming at perfection, not just now and then, but all the times. Such a counsel of perfection may seem to be beyond all reason and common sense. There will, of course, be failures unless the willing co-operation of the subordinates is obtained. Particularly during the early stages of one's life when discipline can be inculcated. The firm basis of discipline is seldom really established because a high enough standard is not enforced. Nothing but best must be accepted.

#### **Corporate Discipline**

9. Drill is the basic foundation of corporate discipline. Men work in a controlled body under a leader and giving immediate and implicit obedience.

### **Definition of a Citizen**

10. 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.
11. A partial citizen owes allegiance to the State, but has no political rights.
12. An alien owes no allegiance to the State and has no political right but enjoys only civil rights.

### **Acquisition of Citizenship**

13. Citizenship can be acquired in either of the following ways :-
  - (a) **By Birth.** Person born in India are Indian Citizen.
  - (b) **By Descent.** Children born of Indian citizens living in foreign countries automatically acquire Indian citizenship.
  - (c) **By Registration.**
  - (d) **By Nationalization.** A person who applies for citizenship by fulfilling certain conditions like residence, appointment in service of the State, purchase of land or marriage with an Indian citizen may become an Indian citizen if the Government of India gives a certificate to that effect.
14. One can be a citizen of more than one State at a time.

### **Duties of a Good Citizen**

15. A good citizen is one who knows his rights and duties. However, these days, we tend to know our right and fight for them. We either do not know our duties or tend to forget and ignore them. Some of the important duties of a good citizen are given below:-

- (a) Primary duty is to be **loyal** and owe **allegiance to the State**.
- (b) **Patriotism, Preservation of Independence of the Country.** A good citizen is a patriot. He lives and dies for the sake of his country.
- (c) **Service before Self.** A good citizen is selfless. He keeps service before self. 'Service First' is the motto of his life.
- (d) **Sense of Duty.** A good citizen has sense of duty. He does his duties honestly . He obeys the rules and regulations of the country and pays tax to the Government.
- (e) Care and protection of the government property.

(f) **High Character.** A citizen should have a high character. The black marketeers, hoarders, smugglers and adulterators are the enemies of the country. A thief, dacoit and pick pocket is also not a good citizen. It is the duty of every citizen to expose them if he comes to know about it.

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

### **Conclusion**

16. The younger generation of today is the leaders of future India. The younger generation and specially NCC Cadets should endeavour to be a good citizen and expose others who indulge in anti-social activities.

## **SECTION-3**

### **LEADERSHIP TRAITS**

#### **General**

1. The distinguishing qualities which if demonstrated in daily activities, help the commander to earn the respect, confidence, willing obedience and loyal co-operation of his subordinates. These are given in the succeeding paragraphs.

#### **Alertness**

2. Every one is offered fleeting opportunities in their life and if seized and exploited, can bring happiness, promotion and victory. Alertness of mind is what helps a person to pick up the opportunities at the right time and exploit the situation to his own advantage.

#### **Bearing**

3. Implies creation of favourable impression, upright carriage and appearance, condition of clothing and equipment, alertness and energy in actions and movements, and high personal conduct at all times. Appearance and manner must depict competence and confidence.

4. Language is another important outward mark by which you will be judged and through which you influence subordinates. Speak plainly and clearly. Make sentences short, simple, positive, direct, refrain from "talking down" to subordinates, avoid immoderate language and sarcasm, avoid criticism or condemnation of an entire group.

#### **Courage**

5. A mental quality recognizing fear of danger or criticism, enables a man to accept responsibility and act correctly in a threatening situation with calmness and firmness; requires moral and physical courage.

### **Decisiveness**

6. The ability to make decision promptly and announce them in a clear and forceful manner . The wise leader gets all the facts, weighs one against the other and then calmly and quickly arrives at sound decisions; a matter of practice and experience.

### **Dependability**

7. Proper performance of duty. Reliance in carrying out actively, intelligently and willingly the orders of superiors. Your Commander's decision despite your suggestions, once made, must be given complete and energetic support.

### **Endurance**

8. The mental and physical stamina measured by the ability to withstand pain, fatigue, stress and hardship; akin to courage, implies to ability to stick to a job and see it through.

### **Enthusiasm**

9. Display of sincere interest and zeal in performance of duties, work with a cheerful and optimistic attitude, determination to do a good job, example to be emulated by others.

### **Initiative**

10. To do what is to be done even in the absence of orders. Avoid inactivity or passive acceptance of an unsatisfactory situation. Men unite quickly behind a commander who meets new unexpected situations with prompt action.

### **Integrity**

11. The uprightness of character, soundness of moral principles, quality of absolute truthfulness, honesty and personal integrity.

### **Judgement**

12. Quality of logically weighing facts and possible solutions on which to base sound decisions.

### **Justice**

13. Quality of being impartial; consistent in exercising command, involves rendering of reward; meting out punishment in accordance with the merits of the case; avoid anger and other emotions in a tense situation; avoid prejudice of race or creed; good professional knowledge and an understanding of subordinate; a broad knowledge of national and international events gives a more rounded personality.

### **Knowledge**

14. A leader must know more than the men he commands. Until he does, he has no business to be called their leader. The process of acquiring knowledge never ends. There is always something new to learn even from a re-reading or rethinking of the same material or problem.

### **Loyalty**

15. Quality of faithfulness to country, your seniors, subordinates and colleagues; quality to earn confidence and respect of others.

### **Sense of Humour**

16. The ability to appreciate the many amusing or lighter moments in every day life, especially those which pertain to the leader himself. It is also the ability to remain cheerful under stress.

### **Tact**

17. Ability to deal with others without creating offence involves understanding of human nature and consideration for the feelings of others. Criticism must be clear, yet constructive. Avoid discouragement in dealing with seniors , colleagues or subordinates.

### **Unselfishness**

18. Refrain from providing for own comfort and personal advancement at the expense of others; place comfort, pleasure and recreation of subordinates before your own; pass the credit to the subordinates who made possible outstanding work; share the same dangers, hardship, discomforts as your subordinates.

19 Some other traits though not described, are important and are listed below :-

- (a) Truthfulness.
- (b) Esprit-de-corps.
- (c) Humility and sympathy
- (d) Patience and a sense of urgency as appropriate.
- (e) Self confidence.
- (f) Maturity.
- (g) Mental including emotional stability.

## **SECTION-4**

### **PERSONALITY/ CHARACTER DEVELOPMENT**

#### **Introduction**

1. It is a well recognized fact that the future of any nation is largely related to the quality of its human beings. In this context, development of the youth into confident leaders with requisite character qualities and personal attributes, so that they can take their place as responsible citizens of the country, assumes great importance. In order to achieve this objective the youth needs to be exposed to such activities which can help them in developing their personality and character.

#### **Personality**

2. Total personality factors are extremely important in day-to-day life. Often the wrong kind of personality proves disastrous and causes undesirable situations or in the least tensions and worries in organisations. Some people arouse hostility and aggression in their associates while others invoke sympathy and supportive responses because of their personality features. Some people tolerate severely stressful situations, while tensions and similar circumstances swamp others.

3. Everyday in conversation we hear such statements as 'he has no personality at all.' If we analyze such utterances we discover that the phrase, at number of the times, not only refers to the physical appearance of the individual, especially on initial contact but also refers to the other personality factors, at other times.

#### **Character**

4. A man's character is made in the formative years of his life. The young can be compared to clay, which can be moulded in the desired way. In ancient India young boys stayed with great saints and pundits to learn and specialise in various branches of knowledge. It is the qualities of character that make someone popular among the people. Popularity does not depend upon a pretty face or upon being handsome, but upon inner qualities of a true character. These qualities are loved by others. They may be a gentle voice, friendliness or the position of others. A person of a good character excels over others in certain qualities. A good character comprise virtues of having certain qualities of character more pronounced than others. The qualities of a good character bring magnetism in one's personality which comes from a proper adjustment of the many qualities of head and heart such as knowledge, tact, friendship and co-operation. A character of person would have some characteristics inborn as well as developed by experience and judgement such as integrity, moral courage, confidence, justice and highly developed sense of responsibility.

## **Determinants of Personality and Character Development**

5. The major determinants of personality and character of an individual are:-

(a) **Biological**. Biological factors may be studied under the following heads.

(i) **Heredity**. Certain characteristics, primarily physical in nature, are inherited from one's parents, transmitted by genes in the chromosomes contributed by each parent.

(ii) **Brain**. Another biological factor that influences personality is the role of the brain of an individual.

(iii) **Physical features**. Perhaps the most outstanding contribution to personality is the physical stature of an individual. An individual's external appearance makes tremendous effect in his personality.

(b) **Cultural**. Culture largely determines what a person is and what a person will learn. The culture within which a person is brought up is a very important determinant.

(c) **Family And Social Factors**. The contribution of the family and social group in combination with the culture is known as socialisation. Socialisation initially starts with the contact with mother and later on with other members of the family. The social group plays an influential role in shaping an individual's personality.

(d) **Situation**. The home environment influences the personality of an individual. There is substantial evidence to indicate that the overall environment at home created by parents is critical to personality development.

6. Therefore, personality represents the whole person. It includes perception, learning, physique and lot more essentials.

## **Measures to Develop the Personality**

7. Some times we see people at work and in our daily life who always appear to be self confident and on top of the world. Everything seems to go right for these people. These people are not born with such qualities but there are lots of inputs and efforts behind their personality. Some of the important qualities which help an individual to develop the personality are as follows:-

(a) **Judgement**. By putting oneself in the others shoes and understand the situation from their point of view, setting aside your personal interests and your opinion would help in taking appropriate action that would be beneficial to all.

- (b) **Mirroring.** Understanding the body language of ideal people and making it a part of your attitude, observing how they act, how they speak and think. This is called mirroring.
- (c) **Be Cheerful and Nice.** Make sincere efforts to raise others spirits. Little things like these go a long way in breaking the ice and setting the relationship to a good start. A good relationship brings good cheer which contributes to a good personality.
- (d) **Be Sincere and Trust Worthy.** Make others feel that whenever they need your help you will always be there to lend a hand. People tend to be more respectful to those they trust.
- (e) **Provide Compelling Ideas.** Explain how your ideas and suggestions could be the most effective techniques to implement. Just make sure that all your claims are true and verifiable. This will help always maintain a good reputation.
- (f) **Conviction.** Generally, this is a very important thing to remember when persuading anyone. People are self-centered and they always put their own ideas and well - being before others. No matter how close you are to becoming like them or how overwhelming your evidence is, if it does not satisfy you, the efforts will not produce satisfactory results. Therefore, your own conviction in convincing others is important.
- (g) **Positive Attitude.** Positive attitude leads to the confidence of the individuals. So whatever the situation may be, one should always try to be positive in thinking and attitude.
- (h) **Leadership Skills.** Leadership is the process of influencing the activities of an individual or a group towards the achievement of a goal in a given situation. Leadership arouses the qualities of philosophy, skill and attitudes.
- (j) **Communication Skills.** This is also one of the important features of personality development. An effective communication skill is an asset to achieve success. We need the support and co-operation of other people to help us in reaching our goals. Successful people know that good communication is an essential ability to influence others.

### **Measures to Improve Character**

8. A character can be improved with practice. A few of the leadership traits if followed religiously can help to improve character. These are listed as belows:-

- (a) **Courage.**
- (b) **Decisiveness.**
- (c) **Initiative.**

(d) **Enthusiasm.**

(e) **Loyalty.**

(f) **Justice.**

(g) **Morality.**

(h) **Sense of Duty.**

(j) **Patriotism.**

### **Role of NCC in Personality/ Character Development**

9. NCC plays a major role in personality/ character development of the cadets. NCC helps in developing the overall personality of cadets through various activities as listed below:-

(a) **Drill.** Personality refers to the physical appearance of a person especially on initial contact. Active participation in drill of the important qualities which help an individual the posture of cadets in a keeps correct position. They will walk more confidently than others. A good physique is an integral part of personality development.

(b) **Interaction of Cadets in Camps.** Being an NCC cadet one can get many good opportunities to interact with cadets from different parts of the country. These camps groom their personality. Here cadets from different states exchange information of each others' culture and tradition. Thus they learn about the diverse culture of the nation. They become friends resulting in the development of comradeship and personality.

(c) **Competitions.** The various competitions held in camps, like preparation of flag area, drill and performing cultural programmes, develop sportsmanship and team spirit among the cadets.

(d) **Sports Adventure Activities.** Sports and are important for youth as they teach them a number of useful lessons on comradeship, healthy competition, courage to face challenges art of leadership, team work, grit and determination, all of which will stand them in good stead in their later life.

## **SECTION-5**

### **TYPES OF LEADERSHIP**

#### **General**

1. Leadership is an extremely complex social phenomenon. However, every society and every organization always had and will always have leaders. Leadership is found not only in human beings but even among animals and birds. There are always some leaders and other followers in every group and organization.
2. To lead means to show the way, to exercise control, to wield authority and excel others in respect of certain qualities. A leader is one who by virtue of his having certain characteristics, more pronounced than others, adopts the role of guiding the group engaged in a certain task. A leader is a person who excels the average members of his group in intelligence, scholarship, dependability in exercising responsibility, activity and social participation. Successful leaders have some inborn characteristic as well as developed by their experience, such as integrity, moral courage, confidence, correct judgment and a highly developed sense of responsibility.

#### **Leadership Styles**

3. There are three ideal leadership styles:-
  - (a) **Autocratic Leadership Style**. In this all policies and procedures are determined by leader. The leader should take considerable responsibility for assigning the activity task and companions of each group members.
  - (b) **Democratic Leadership Style**. Wherever possible, policies should be matter of a group decision and discussion with active encouragement and assistance by the leaders. Wherever, technical advice is needed the leader should try to suggest two or more alternative procedures from which choice can be made by the group members.
  - (c) **Laissez Faire Leadership Style**. In this leader should play a rather passive role in social participation and leave complete freedom for group or individual decisions in relation to activity and group procedure.

#### **Brief Explanation**

4. **Autocratic**. An autocratic leader is authoritative, task oriented and bossy. He determines policy and makes decision on his own. In this style of leadership a leader holds an appointed position in a formal organization. As such, the responsibility for decisions and subsequently actions within his unit or command always rests with him, regardless of how the decision is reached. It follows, then, that the organization is the source of authority in making decision for which he is responsible. This authority for making decision, he may or may not delegate to his

subordinates according to the degree he has decentralized his tasks into subordinates tasks. Leaders who make all the decisions for tasks within their organization are using a highly centralized or autocratic type of leadership and recognised by the dogmatic use of authority or power. These leaders may seldom consult subordinates in arriving at decisions. Instead they rely primarily on their own ability and experience.

5. **Democratic**. This is a permissive group oriented style leadership where the leader invites suggestions from subordinates and delegates decision making to them. In this type of leadership, there are certain leaders who use a democratic style and conduct a highly decentralized operation, delegating much of their authority for decision making to subordinates. The leader characterised by this type of behaviour invariably consults subordinates on their views before making key decisions. To a large extent, the persuasive leader bases his skill in leadership upon his personal example and ability, with his standards of discipline and efficiency for himself as well as his followers.

6. **Laissez-Faire**. In this style of leadership, the leader plays down his own role in group activities, provides facilities to achieve objectives and exercises minimum control.

7. **Variable**. In this style of leadership, the leader has the ability to vary his style as the situation demands.

### **Comparison**

8. In a study between autocratic and democratic leadership, the study reacted favourably towards democratic leadership by displaying enjoyment and constructive work and by continuing to function effectively, even in the leader's absence. The autocratically led group on the other hand, displayed more hostility, aggression, lower moral and tended to fall apart during the leader's absence.

9. However, the quality and quantity of work under the autocratic leader was better, while its leader was present, than it was under the democratic leader while he was present.

## **SECTION-6**

### **VALUES/CODE OF ETHICS**

#### **General**

1. It is a well accepted fact that the future of any nation is largely related to the quality of its human beings. In this context, development of the youth into confident leaders with requisite character qualities and personal attributes, so that they can take their place as responsible citizens of the country, assumes great

importance. In order to achieve this objective the youth needs to be exposed, beside the academics, to such activities which help them in developing their personality and character and in-turn making them a good leader. Leadership is an important feature of every sphere of human activity, whether at play, work or at war. Infact, wherever there are two or more people functioning together, there is a need for a leader. To develop into a good leader, a person needs certain values in him or one can say he must possess distinctive ethics in his life.

### **Meaning of Value/Ethics**

2. 'Value' means a standard of behaviour and 'Ethics' in turn means a set of moral principles that govern a persons behaviour. In ancient India young boys and girls learnt the fundamentals of correct behaviour and moral principles under the tutelage and guidance of saints and gurus in their gurukuls and at a later stage specialized in various fields of knowledge. A person of values excels others in all fields. The values and ethics which drive a person may be inherited from the society they live in, i.e. from the people around them and to a large extent the family they hail from.

3. Human being is a complex creature, a mixture of good and evil. The evil tendencies in him are of negative nature which ultimately lead to destruction. On the other hand goodness is manifested in brotherhood, unity, co-operation. This goodness can only overcome negative tendencies, if a person either has certain values inherent in him, or he inculcates them.

4. A leader may be intelligent , knowledgeable and hard-working, but unless he is driven by a set of values which are morally acceptable, he cannot be a good leader. The importance of good behaviour by a leader on all occasions cannot be too strongly emphasised. Behaviour must be beyond reproach. Generally a group in particular and its work and achievements as a whole are judged by the values and the behaviour and good manners of the leader.

### **A Few Important Values**

5. A person's behaviour is reflected in his conduct. How a person behaves in a particular situation will be an indicator of his potential for leadership. As the old saying goes 'Practice what you preach', as a leader is the person who guides the group, the saying is more applicable to him. Only those values can be preached which a leader himself possesses. Certain values which impress everybody are - Honesty, Truthfulness, Sense of duty, Loyalty, Consideration for the people, giving others their due and to stand by one's own principles. A person who practices good human values and follows a principled code of ethics will essentially stand out as a good leader. A few important values in day to day life are as follows:-

- (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.

6. The negative attributes to be guarded against would largely be such as ignorance, ego, i.e attachment to self or the prominence of 'I' temptations, envy, hate or jealousy, lack of confidence. These have deleterious effects and affects the individual in his thoughts and actions. An individual has to evolve his own mechanism to counter these to become a successful and ideal leader.

## **SECTION-7**

### **PERCEPTION**

#### **Significance of Perception**

1. Perceptual process is of utmost significance in understanding human behaviour. It is a unique interpretation instead of a precise recording of the situation. The individual, while perceiving the world, sees a picture which expresses his own individual view of reality. This picture is quite unique and may largely differ from the reality.
2. In an interview for the selection of a candidate, the interviewer's judgement about the suitability or otherwise of a candidate depends on candidate's behaviour perceived by interviewers. A rejected applicant might feel that he was wronged by the interviewer though he deserved selection. But the fact is that interviewers generally form an early

impression that becomes quickly entrenched. If the inadequacies of the candidates are exposed early, they weigh against him in the final selection.

### **Definition**

3. The perceptual process can be defined as ‘a complicated interaction of selection, organization, and interpretation of stimuli’. Although perception depends largely upon the senses for raw data, the cognitive process may filter, modify or completely change the data. A few more definitions of perception are given below:-

- (a) It is the process of receiving, selecting, organising, interpreting, checking, and reacting to sensory stimuli or data.
- (b) Perception is a process by which individuals organize and interpret their sensory impressions in order to give meaning to their environments.
- (c) Perception includes all those processes by which an individual receives information about his environment i.e. seeing, hearing, feeling, testing and smelling.
- (d) It is also defined as the ‘selection and organization of material which stems from the outside environment at one time or the other to provide the meaningful entity we experience’.

4. There are two basic elements in this definition:-

- (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. The individual tends to recognise the information, assemble it as well as compare it with earlier experience. This involves the entire history of events, which have taken place with him over his life span. It is the organisation of inputs through a dynamic inner process, which shapes what comes in from the outside environment.

### **Mechanism**

5. Perception involves five sub-processes. They are stimulus, registration, interpretation, feedback and consequence.

- (a) **Stimulation.** Perception initiates with the presence of a stimulus situation. In organisational setting the superior forms the stimulus situation for the subordinate’s perceptual process.

(b) **Registration.** Involves the physiological mechanism including both sensory and neutral. Obviously an individual's physiological ability to hear and see influences his perception.

(c) **Interpretation.** Is a high crucial sub-process. Other psychological processes assist in perceptual interpretation. For instance, in work settings, his motivation, personality and learning process determines an individual's interpretation of a stimulus situation.

(d) **Feed Back.** It is important for interpreting the perceptual event data. In work settings, the psychological feed back that is likely to affect a subordinate's perception may be in the form of a variation in the behaviour of superior.

(e) **Consequence.** Perception ends in reaction or response, which may be in the overt or covert form. As a consequence of perception, an individual responds to work demands. These sub-processes indicate the complexity of perception.

### **Principles of Perceptual Selection**

6. There are many stimuli demanding attention of the individual at the same time and that individual can sense only a limited amount of stimuli at a time. Human beings are characteristically selective. They select from among those physical stimuli, which they can register at a point of time. They set themselves to respond to a particular stimulus or a group of stimuli. Yet, certain events may characteristically creep into an individual's perceptual life and distract his attention. For instance, the sound of a gun, other things being equal, is more likely to attract attention than the sound of a gas burner. While dealing with selective phenomenon two items are involved, 'Attention' and 'Set'. 'Attention' incorporates all aspects of the selective process whereas 'Set' refers to specific factors or processes within the individual himself that has a bearing on what he attends to.

7. Thus some of the factors that attract attention lie in the situations and some are within the individual. The factors that are in the situations are called 'External attention factors' and those factors that are within an individual are called 'Internal set factors'.

8. **External Attention Factors.** The external attention factors are:-

(a) **Intensity.** The intensity of stimulus implies that the more intense the stimulus, audio or visual, the more is the likelihood it will be perceived.

(b) **Size.** As regards the size of the stimulus, any odd size attracts attention. A Great Dane dog which is tall attracts the attention because of his size.

(c) **Contrast.** The contrast principle states that external stimuli, which stand out against the background, or which are not what the people expect will receive attention. Signs boards, which have black lettering on a yellow background or white lettering on a red background, are attention getting.

(d) **Repetition.** It implies that repeated external stimulus attracts more attention than the one that occurs at one time alone. It is because of this that supervisors tend to repeat directions regarding job instructions several times for even simple tasks to hold the attention of their workers.

(e) **Motion.** The factor of motion implies that the individual attends to changing objects in their field of vision than to static objects. It is because of this advantage that advertisers involve signs which include moving objects in their campaigns.

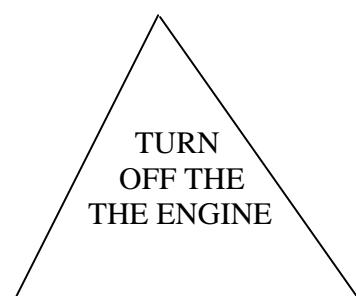
(f) **Novelty and Familiarity.** A novel object in the familiar situation or a familiar object in novel situation tends to attract attention. Thus a white person or a black person in India catches attention faster.

9. **Internal Set Factors.** The internal set factors are as under:-

(a) **Habit.** A Hindu will bow and do Namaskar when he sees a temple while walking on road, because of his well established habit. The motor set may cause the likelihood of inappropriate responses. There are several instances in life settings where individuals tend to react with the right response to the wrong signals. Thus a retired soldier may throw himself on the ground when he hears a sudden burst of car tyre.

(b) **Motivation and Interest.** Two examples of motivational factors are hunger and thirst. Motivational factors increase the individuals sensitivity to those stimuli which he considers as relevant to the satisfaction of his needs in view of his past experience with them.

(c) **Learning and Perception.** The process of learning plays a crucial role even in primitive organisation. However, it should be recognized that the role of learning is more pronounced in respect of complex forms of perception where the symbolic content creeps into the process. Although interrelated with motivation and personality, learning may play the single biggest role in developing perceptual set. Read the sentence in the triangle below:-



It may take several seconds to realize there is something wrong. Because of the familiarity with the sentence from prior learning, the person is perceptually set to read "Turn off the engine". This illustration shows that learning affects 'set' by creating an expectancy to perceive in a certain manner.

10. **Organisational Role or the Specification.** The modern organisations value specialisation. Consequently the speciality of a person that casts him in a particular organisational role predisposes him to select the certain stimuli and to disregard others. Thus in a lengthy report a departmental head will first notice the text relating to his department.

## **SECTION - 8**

### **COMMUNICATION INCLUDING INTER-PERSONAL COMMUNICATION**

#### **General**

1. “Communication is the art of transmitting information, ideas and attitudes from one person to another”. The word, ‘Communication’ has been made up from Latin word “Communis”. Communis means to make common. Communication is a wide concept.

2. It is very necessary to study the following definition of Communication in order to know perfect meaning of Communication:-

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

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

3. Communication is essential in any group of human beings. It is required every where. Communication is essential in a family, church, group, class of students, organization etc. Communication transfers through from one person to another. Communication is the task of imparting information.

4. **Process of Communication.** It involves the following steps:-

(a) The ideas are formed in the mind of communicator.

(b) Formed ideas are encoded by the communicator.

(c) Encoded ideas take the shape of message.

(d) The message is transmitted through proper media to communicatee.

(e) Message is received, interpreted and analysed by the communicatee.

(f) The communicatee sends the reply to the communicator. It is called feed-back. Here, cycle of communication process is completed.

5. **Elements of Communication.** All communications consist of a few elements. Although the process of communication is more than the total of these elements, understanding them can help explain what happens when one person tries to express an idea to others.

6. **Sender.** The communication process begins with a sender, the person who transmits a message, e.g. a computer programmer explaining a new programme to a co-worker, or an after dinner speaker introducing a guest.

7. **Message.** A message is any signal that triggers the response of a receiver. Some messages are deliberate, while others (such as sighs and yawns) are unintentional.

8. **Encoding.** The sender must choose certain words or non-verbal methods to send an intentional message. This activity is called encoding.

9. **Channel.** The Channel (medium) is the method used to deliver a message. You can deliver it by hand or send it via regular mail or use an overnight delivery service. You can send it electronically via fax or electronic mail. Or you can communicate it orally, either over the phone or in person.

10. **Receiver.** The receiver is any person who notices and attaches some meaning to a message. In the best of circumstances, a message reaches its intended receiver with no problem.

11. **Decoding.** Even if message does get its intended receiver intact, there is no guarantee that it will be understood as the sender intended it to be. The receiver must still decode it, attaching meaning to the words or symbols. Decoding is not always accurate.

12. **Feedback.** Receivers don't just absorb message like sponges, they respond to them. The discernible response of a receiver to sender's message is called feedback. Some feedback is nonverbal-smiles, sighs, and so on. Sometimes it is oral, as when you react to a colleague's ideas with questions or comments. Feedback can also be in written form.

13. **Noise.** One of the greatest sources of communication failure is **Noise**- the term used for factors that interfere with the exchange of message. **Physical noise**- external sounds that distract communicator. **Physiological noise**- hearing disorders fall into this category, as do illnesses and disabilities that make it difficult to send or receive messages. **Psychological noise** - consisting of force within sender or receiver, e.g. egotism, defensiveness, hostility, preoccupation and fear etc.

14. **Context.** Communication is influenced by the context in which it occurs. There are several dimensions of context, including physical, social, chronological and cultural. Communication always takes place in some setting. This physical context can influence the content and quality of interaction.

## **Principal of Effective Communication**

15. Communication is a process of transmitting the ideas. It is a two-way process. Transmitted message should be completely understood by the person who is at destination. As far as possible message should be kept brief. The knowledge level of the communicatee has to be taken into consideration. Able communicator doesn't waste his time in unwarranted communication. Need and objective of the communication should be analysed in advance. Following principles are kept in mind by the person:-

- (a) **Clarity of Objective.** The communicator should be known to the communicatee. Why communication is necessary? He should be completely able to answer this question.
- (b) **Proper Messenger.** The communicator should construct the message in meaningful manner. Encoding of thought is an intellectual task and it has to be done with proper care and thinking.
- (c) **Knowledge of Communicatee.** The message sent by the Communicator should be understood by the communicatee. He should be competent enough to analyse and to respond.
- (d) **Selection of Media / Method.** In order to have effectiveness in terms of cost and benefit, proper selection of method is essential. Again, it depends upon the nature of communication and urgency.
- (e) **Removal of Barriers:** Sometime misinterpretation of message may cause confusion. All possible hurdles are to be removed. Curtailment of message is the barrier of communication. All such factors should be taken into account.
- (f) **Feedback.** There should be inbuilt capacity in the communication to motivate the communicatee to respond. Respond reply is a core part of communication, Communicatee is expected to react to the message. Feedback helps to complete the communication cycle.

## **Barriers to Effective Communication**

16. The communication between two persons fail for a number of reasons. A barrier to communication is known as noise. In communication failure, there is generally a human failure, also. There is no perfect communication free of all the barriers. Man has paid attention to improvement of communication skills but he has failed to improve interpersonal communication. The prejudice of either communicators or communicatee may hamper the process of communication. Barriers to communication may be broadly classified as below:-

(a) **Physical barriers.** Following are the physical barriers:-

- (i) **Competing Stimulus.** It becomes very difficult to pass on the message orally, if another conversation giving information simultaneously within hearing distance is on i.e. sometimes loud music or traffic noise creates barrier in the communication process.
- (ii) **Environment Stress.** A strong glare puts hindrance in case of visual communication. A high temperature, humidity, bad ventilation etc, contribute in distortions in the sending and receiving of message.
- (iii) **Subjective Stress.** Due to sleeplessness, ill health, consumption of drugs, mental strain etc, communicator can not interpret the message in desired manner.
- (iv) **Ignorance of Media.** User should be well conversant with media that is adopted for conveying the message. For example, the use of visual media like maps and charts to instruct workers, who have not been familiar with the maps and charts would switch off their attention for lack of knowledge of the media.

(b) **Psychological Barrier.** Every person has his own way to look at the world, at people at events and situation. A way of thinking of a person many times takes a shape of strong base of communication. No two persons possess accurately similar frames of reference. Following are some psychological barriers:-

- (i) **Unjust Assumptions.** The unjust assumption is a common barrier to communication. It creates lot of misunderstanding. A manager, for example, incorrectly assumes that the subordinates understand the technical terms he adopts to give instructions.
- (ii) **Barrier of Allness.** Allness is the attitude of people with closed minds. They think that they know everything about a subject. Usually they are not prepared to accept that they could be mistaken. Many make the generalized statements. For example:-
  - (aa) Globalization is dangerous to India.
  - (ab) Women can not become superior to men.
- (iii) **Snap Reactions.** Snap reactions are a serious barrier in communication process. Some listeners tend to pass remarks or criticise the communicator even though his communication is not completed.
- (iv) **Apathetic Listener.** The apathetic receiver is psychologically dead to the communication. He is indifferent to speaker.

(v) **Sophisticated Role.** The receiver is not willing to learn from the communicator. That means he is unteachable.

(vi) **Defensiveness.** Man always tries to justify himself. He thinks that admitting the mistake means a loss of face. Therefore he tends to rationalize the mistake that he commits.

(vii) **Fear.** Fear is clearly destructive to communication. A fear gives rise to slow and narrow thinking. The candidate's fear, during the interview affects his performance. Due to tension and anxiety, he misinterprets the questions asked by the interviewer.

(c) **Linguistic and Cultural Barriers.** A language is the expression of the thoughts and experiences of a people in terms of their cultural condition. The languages used in different cultures takes different colour and meaning. It comes under the influence of the accent of the local language. Language is perhaps the greatest barrier in communication area. The words possess objective and subjective meaning. It should be kept in mind that the words carry numerous association depending upon the political and cultural situation.

(d) **Mechanical barriers.** In group communication whistling microphone and incorrect placement of loudspeakers are disturbances. Mechanical barriers include any disturbances which interfere with the physical transmission of the message.

### **Types of Formal Communication in Organizations**

17. Following types of communication occurs:-

(a) **Downward Communication.** Downward Communication occurs whenever superiors intimate messages to their subordinate.

(b) **Upward Communication.** Messages following from subordinates to superiors are labeled upward communication.

(c) **Horizontal Communication.** It consists of messages between members of an organization with equal power. The most obvious type of horizontal communication goes on between members of the same division of an organization, i.e. office workers in the same department, co-worker on a construction project and so on.

### **Inter Personal Communication**

18. **Face-to-Face Communication.** Face to face communication comes in many forms. Some are one-to-one meetings, either scheduled or at the spur of the moment. Others involve small groups of people, gathering spontaneously or in informed meeting. Still other face-to-face communication occurs in large group, where one or more speakers make presentation to an audience.

### **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 communicators are 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.
19. **Teleconferencing**. Face-to-face meeting may be desirable, but distance often makes them impractical. Teleconferencing is billed as the next best thing to meeting in person.
20. **Documentation of Computer Conferencing**. It is another form of teleconferencing. This technology replaces face-to-face meetings by allowing individuals to work on documents that are "shared" via computer.
21. **Telephone and Voice Mail**. Telephones can be a useful tool for group communication as well as one to one contacts. **Audio conferencing** allows a group of geographically separated people to speak via telephones.
22. **Written Communication**. Written Communication comes in a variety of forms. Letters, memos, bulletins and reports are familiar fixtures in almost everybody's career. Written messages have a different set of advantages and drawbacks than their spoken counterparts have. Unlike speech, written communication is permanent. Once your words are down on paper, they are saved for future reference- either to your delight or to your undying embarrassment and chagrin .

23. **Types of Verbal Communication.** Following are the types of verbal communication:-

- (a) Voice
- (b) Appearance
- (c) The Face and Eyes
- (d) Posture and Movement

24. **Talking.** Talking is the oral expression of knowledge, viewpoint, and emotions through words. It is supplemented by various body movements, gestures, facial expressions, body positions, and such.

### **Element of Good Talking**

25. **Voice Quality.** A good voice is central to good talking. Good voice quality means vocal expressions that vary in pitch, change in delivery speed and alternate in volume. Concentrate on words and their pronunciation. Note the range of your voice in speaking. And vary the volume from loud to soft. Like good actors, good speakers can select from a number of alternatives in their attempts to express orally their thoughts and feeling to others.

26. **Talking Style.** Talking style refers to how the three parts of voice quality i.e. pitch, speed and volume blend together. Style refers to a set of behaviors of an individual that give uniqueness to that persons.

27. **Word Choice and Vocabulary.** Still another quality of effective talking is word choice. By selecting the right words that create clear pictures in a listener's mind, good talkers are able to communicate better and more quickly. Vocabulary is a critical factor for good talking. The larger the vocabulary, the more selections that are available for creating picture in the listener's mind.

28. **Adaptation.** Adaptation in effect sums up the previous three qualities of voice i.e. quality, style and word choice. Adaptation means fitting a message to specific receiver. That is to select the right words and use the right voice pitch, speed volume and style for the one intended listener.

### **Principles of Good Listening**

29. The human relations are built strongly when there is a good listening. Listening is a positive function. Listening includes listening with understanding whatever you listen. Listening involves employing the body and mind. It is not only physical process but it requires psychological involvement of the listener. There is a basic difference between hearing and listening. Hearing is a passive and effortless activity whereas listening is an activity which requires deliberate effort, attention and concentration. It is a conscious, positive act requiring will power. The effort is thus both physical and mental. Following are the principles of good listening.

- (a) **Psychological Process.** Listening is the concept which includes psychological factors. Psychological efforts are required to understand and retain the verbal materials presented in spoken form.
- (b) **Attention.** Listening is a tuning-on to another. It is tuning into the wavelength of the person trying to communicate. It is much more than a mechanical switching on and switching off.
- (c) **Active Process.** Listening is an active process. Listening means alertness and interest visible in the posture and expressions. It is also seen in the questions raised and comments made by the listener.
- (d) **Understanding.** Listening is not only making sense out of sound but also understanding what the speaker is saying. This is not as easy as it sounds, because words have many meanings and people understand the same words differently.
- (e) **Fact and Fancy.** Listening means being able to distinguish between fact and fancy. It includes developing the ability of evaluating or judging statement objectively, without being affected by one's own bias or the persuasive power of the speaker.
- (f) **Lack of Selective Listening.** Paying attention only to what re-enforces our point of view or our own attitudes and distorted interpretations of the speaker's words can not be termed as good listening. There should not be selective listening.
- (g) **Tiring Process.** Listening is an active, physically and mentally tiring process. Listening efficiency is at its highest during the first 10-15 minutes and lowest during the last 10 minutes, during which stage the listening is mechanical.
- (h) **Sensitive to Physical Signs.** Listening involves the skill to mark out the signals. The listener should be sensitive to all physical signs. The nervous habits and the gestures communicate the message which is non-verbal.
- (j) **Presence of Barriers.** There are common barriers to listening. It includes prior hearing ability, distracting, burden, prejudice, snap reactions, premature evaluation etc.
- (k) **Training and Guidance.** Listening efficiency can be improved by thorough proper training and guidance. In the true sense, listening is a human skill that has to be deliberately cultivated. The guidance by the expert goes a long way in improving listening efficiency.
- (l) **Fast Process.** Listening is a fast process. The rate at which we listen is faster than the rate at which we speak. The listeners find time during which they analyse and evaluate the arguments.

(m) **Complexity.** Listening is a difficult function. It involves many psychological and physical barriers. It is not easy to bring total perfection in the listening especially in the meetings and conferences.

### **Guidelines for Effective Listening**

30. The following are few guidelines for effective listening:-

- (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 speakers 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.

31. **Advantage of Good Listening**

- (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-9**

### **EFFECTS OF LEADERSHIP WITH HISTORICAL EXAMPLES**

#### **Introduction**

1. The mahakavya on leadership has been articulated in just four words

TO BE : TO DO : TO SEE : TO TELL

TO BE - Character and knowledge, in balance, are the source of leadership.

TO DO - Is the style of leadership by personal example ; a reflection of TO BE.

TO SEE and TO TELL – are the functions, tools and techniques of leadership.

2. When we study and analyse outstanding leaders in history, who have done some lasting good to mankind, a nation, a community, an organisation or a cause, we find that they are not similar. They come in all shapes and hues- the flamboyant; the scholarly; the artistic; the ascetic; the gregarious and the recluse. And yet, when we look deeper into their make up, with commonsense, we find something interesting. Their TO BE component, in one way or the other, is very strong. They have two things in common:-

(a) They are all persons of character, propelled by an ideal, or a vision. They also have character.

(b) They have an inner structure, which is composed of certain universal qualities.

3. The effect of leadership will be best understood by the various examples available in history. Some of the examples are given out in the succeeding paras.

#### **Courage and Endurance (Saving Ladakh : 1947-48 War.)**

4. Courage is the most admired human virtue in all societies; to be a man means to be courageous. The most important act of courage for a leader is to make decisions. No action can start unless a decision is made. To make a decision means being accountable for success or failure.

5. The tragedy to save Ladakh was to hold on to Skardu at all cost so that Pakistan led force may be prevented from reaching Kargil and Leh. Fortunately we had the right man in Skardu to fulfill the mission. No words can describe the gallantry and leadership of Lieutenant Colonel Sher Jung Thapa, who held on to Skardu, with hardly 250 men, for six long months. It is one of the longest sieges in the annals of modern war. While ordering him to defend Skardu to the last Man and last round, he was promised reinforcements and supplies. Unfortunately, neither could reach Skardu. Efforts were also made to air drop supplies and ammunition, but much of it fell outside his defences. Lieutenant Colonel Thapa then asked for discontinuing airdrop, as these were merely helping the enemy surrounding him. They held on even when they were on half and quarter day rations. At the end of six months when he completely ran out of rations and ammunition, he was ordered to surrender. Thapa's response was "I know that I cannot hold out without rations and ammunition. I know the fate, I and my troops will meet after surrendering to the enemy. I cannot do anything now against the enemy, but I will certainly take revenge in my next life". It is officers of this stamp who make great armies and great nations.

### **Practise What You Preach (1971 War)**

6. In another example, we shall see what happens when we do not practise what we preach. This example is from the 1971 War between India and Pakistan.

7. Brigadier Mohamed Latif of the Indian Army launched an attack to capture an enemy held hill top, nicknamed 'Baldy'. The hilly terrain surrounding the objective, was covered with dense pine forest. Brigadier Latif selected the Guards battalion for this tough task.

8. Hardly had the Commanding Officer of the Guards battalion finished reporting his success on the radio, a counter attack was launched by the enemy. The Guards were hardly organized to face a major counter attack. They had fought the whole day, suffered casualties, were short of ammunition and had eaten just one meal. Brigadier Latif warned The Guards to get ready and soon artillery shelling started from both sides. Brigadier Latif was mentally prepared to lose 'Baldy', because it would be a very unequal fight. When the counter attacking forces were about four hundred yards from 'Baldy', the Guards opened up with their machine guns. To the utter surprise and relief of Brigadier Latif, within minutes the entire counter attack petered away.

9. He could not believe his eyes, but congratulated the Guards for their performance. A little while later, the Guards reported that they had captured two unwounded prisoners.

10. The prisoners arrived at the command post almost at midnight. Towards the end of his interrogation, the Brigadier enquired from the Corporal "you seem to be a seasoned soldier. How come, you gave yourself up even when you were not wounded; not a very honourable action by a good soldier". The corporal was more than willing to explain and gave out his story, "Our commander was right in front when the counter attack started. Holding his sten in his one hand, he was encouraging us to wipe out your troops and recapture 'Baldy'. He was inspiring us by loud talk. His booming voice could be heard

all over. He was a towering personality. We were determined and enthusiastic to finish the task. We kept on advancing, even when your shelling started. When your troops opened fire with machine guns, our commander immediately took cover behind the trunk of a huge pine tree. Standing in that sheltered position, he waved his sten gun and ordered us to rush forward. But very soon we also started taking shelter behind the pine trees. I was unlucky to be captured by your patrol before I could slip away like others, down the slope and return to our base.”

11. Here was a sure victory, on the plate, for the counter attacking force, but the commander was unable to set the right example. Good or bad personal example by a leader is most infectious. It is because of this that a Persian saying conveys a very stark truth:

“If the king plucks one apple from the public Garden,  
the public will take away even the roots”.

### **Endurance (Alexander's Leadership)**

12. Alexander, at the head of 30,000 foot-soldiers, with cavalry in the rear, was crossing the dreaded Gedrosian Desert in Asia Minor. It was mid summer and the yellow sands stretched to the horizon, with a few rocks jutting out here and there. It was hot like a furnace. They had completely run out of water. Arian, the most reliable historian of Alexander's conquests, records the incident in the following words:-

“Alexander, like everyone else, was tormented by thirst, yet he kept on marching on foot, leading his men. It was all he could do to keep going, but he did so, and the result as always was that the men were better able to endure their misery, when they saw it was equally shared. As they toiled on, a party of light infantry, which had gone off looking for water found some, just a wretched little trickle collected in a shallow gully. They scooped up with difficulty what they could and hurried back, with their priceless treasure, to Alexander, then, just before they reached him, they tipped the water into a helmet and gave it to him. Alexander, with a word of thanks for the gift, took the helmet and, in full view of his troops, poured the water on the ground. So extraordinary was the effect of this action that the water wasted was as good as a drink for every man in the army. I cannot praise this act too highly; it was a proof, if anything was, not only of his power of endurance, but also of his genius for leadership”.

### **Character (World War-II)**

13. Before we have a look at the universal qualities common to all good leaders, we have to be quite clear in our mind about the frequently used word 'Character'. Character is the most important factor which makes effective leaders. However, we have to describe a person of character with some clarity, so that there is a well articulated model, based on historical experience.

14. Descriptions of a person of character by a seasoned and highly respected war leader, General Mathew B Ridgeway of the US Army should provide the necessary clarity. A veteran of World War II, and a highly decorated officer, he rose to become the

Supreme Commander of the UN Forces in Korea, and later was also the Chairman of the Joint Chiefs of Staff. He says:-

“Character stands for self discipline, loyalty, readiness to accept responsibility, and willingness to admit mistakes. It stands for selflessness, modesty, humility and willingness to sacrifice when necessary and, in my opinion, faith in God. Let me illustrate”. “During a critical phase of the ‘Battle of the Bulge’ in World War II, the Germans launched a counter offensive and nearly broke through the Allied lines in France. While I commanded the 18<sup>th</sup> Airborne Corps, another Corps Commander just entering the fight next to me remarked, ‘I am glad to have you on my flank. It is character that counts’. I had long known him and knew what he meant. I replied ‘That goes for me too’. There was no amplification, none was necessary. Each knew that the other would stick, how ever great the pressure; would extend help before it was asked, if he could; and would tell the truth; seek no self glory, and ever lastingly keep his word. Such men breed confidence and success.”

### **Decision Making (Operation Overlord)**

15. The dilemma of the most momentous decision of military history is worth noting. During World War II, Operation Overlord , the Allied amphibious and airborne assault for the bridgehead in Europe was planned for 6 Jun 1944. It was the most complex operation ever attempted in history. The movement of troops, tanks and guns had already started and they were boarding their ships. Suddenly the weather report indicated a severe storm on 6 June. There was a huge cry for postponement of the D Day; to go on would be a disaster, particularly for the air borne operations. Opinion of the experts was divided. Eisenhower, the supreme Commander, faced the biggest dilemma of his life.

16. Time was running out . He went away for a while to contemplate in silence. He decided to go on as planned, despite the warnings of a disaster, Before the invasion fleet set out, he wrote the following press release, to be issued if necessary:-

“Our landings have failed and I have withdrawn  
the troops . My decision to attack at time and place  
was based on the best information available. The  
troops, the Air and Navy did all that bravely  
and devotion to duty could do. If any blame or  
fault is attached to the attempt it is mine.”

17. Needless to add that the operation achieved complete surprise and was a success . The another example is from the 1984 operation to secure the Siachen Glacier.

### **Decision Making: Operation Meghdoot (Siachen Glacier)**

18. Northern Command was ordered to prevent Pakistan troops from occupying the Siachen Glacier , to which they laid a claim. They were preparing to move in during the summer of 1984. After detailed discussions and war gaming, a plan was evolved. It had to be heli-borne operation to neutralize the time and space advantage of Pakistani troops.

The tentative D Day was fixed for May 84, a month before the area is normally approachable.

19. After a more deliberate thought, the Army Commander held a final discussion about the exact D Day. He felt that it should be as long before June as possible, to give the troops enough time to get properly organised before any reaction from the Pakistan side . The Brigade Commander responsible for mounting the operation suggested 13 April. The Army Commander approved the D Day and the plan was sent to Delhi .

20. Their reaction was that sending troops during the month of April, the month known for blizzards, would be plain murder. Here was typical dilemma. Should the advice of Army Headquarters be accepted or should Army Commander stick to his own judgement. D Day was not changed.

21. In the event, the first phase troops were ferried by helicopters to their objective on 13 April, without a hitch. However, by midday the weather packed up and second phase had to be called off. The blizzard that broke out raged for 72 hours . During this period the troops of first phase were completely out of communications. At 18,000 feet above the sea level, with the temperature at minus 60 degrees centigrade , their batteries froze . Morning and evening “ we-told- you-so” calls to Northern Command from Army Headquarters were a nuisance and were totally ignored , because the troops had been properly prepared and equipped to face such an eventuality . No one in Northern Command had any fear about their survival.

22. On 17 April, the day was spotlessly clear, the first phase troops opened up their radio. The second phase troops were flown in and it was almost a week before the Pakistani troops, still training around Skardu, could reach. They launched a hurried attack, a week later, which was beaten back . The Indian troops are still holding on to the position they occupied in April 84, despite numerous attempts by Pakistani forces to dislodge them.

### **Will Power (Sir Winston Churchill)**

23. ‘Try, try again’ is an age old advice based on the famous poem about Robert Bruce. The value of dogged perseverance was once articulated in a most dramatic manner by Sir Winston Churchill, who was the Prime Minister of the U K during World War II. He came out of the war as one of the tallest leaders in the world. He was invited by his school to be the guest of honour for the celebration of the 150<sup>th</sup> Anniversary of the school. He was also requested to deliver the keynote address to inspire the students to follow his example and become outstanding leaders in their lives. Churchill accepted the invitation. There was great expectation among all sections of society to listen to the views of Churchill on leadership.

24. On the appointed day, the hall where the function was being held, was overflowing with people .The media and the scholars had turned up in strength . Every one was looking forward to Sir Winston revealing the secrets of his leadership.

25. After the usual courtesies, Churchill was invited to deliver his keynote address. He got up from his chair, walked slowly to the podium took out his small rectangular glasses and wore them. He then took out a small piece of paper, placed it in the podium and peered over his glasses at the audience. There was pin drop silence. He then delivered his address;

“NEVER  
NEVER  
NEVER  
NEVER  
GIVE UP”

26. Having roared these five words, he ambled back to his seat. There was a bewildered hush for a long time. However, his great message soon sank home. People stood up and gave him a long and thunderous ovation. In just five words. Churchill distilled the great secret of his leadership and success.

## **SECTION-10**

### **CUSTOMS OF SERVICES**

#### **Introduction**

1. The Services have their own customs some of which have been handed down from the distant past while some others are of more recent origin. A custom is an established usage and consist of positive actions which are reasonably and universally accepted. Customs make for a more orderly life and when continued for a long period, they become “Unwritten Law”.

2. The customs of the Armed Forces are traditional and belong to the noblest of professions viz., the profession of arms. Chivalry and comradeship in arms count above every thing else. The maintenance of tradition is a tremendous unifying and driving force. It develops esprit-de-corps.

3. To a novice the customs and traditions of the Armed Forces may seem peculiar but once their origin is analysed and the meaning understood, it would be found that they are of immense value in developing the ‘esprit-de-corps’ and the pride in one’s service.

4. In the subsequent paras, some of the customs and traditions of the Services have been explained.

#### **Saluting**

5. It is customary in the services that a junior salutes his senior. This is done by bringing the open palm to one’s cap. The origin of the custom is traced to antiquity but it is said that the custom started when one person intending to establish his good intentions, opened his palm to show that he held no offensive weapon. Later, during the days of the

Knights, one would disarm himself by lifting his open hand to his head to throw back his visor and thereby reveal his features. He thus indicated his recognition to the other person as a friend. The outcome of these ceremonies is the present day salute.

6. The present day hand salute in the Army and the Air Force consists of bringing the open palm to the side of the head including the cap. In the Navy, however, the hand is raised to the cap with the palm downwards. It is said that this is done so as not to show “grubby” hands of the sailors working on the deck.

7. The salute with the sword is a relic of the days when the crusaders kissed the cross on their sword before engaging in combat. To indicate friendliness to somebody, he would lower the sword and lay open his defence to show his trust, in the other person.

8. The “present arms” with the rifle is symbolic of disarming oneself. The rifle is held in such a position as to suggest that is being offered as a mark of trust and friendship.

9. The dipping of the tank gun, or the ensign on a ship and wings of the aircrafts over the saluting base are all symbolic of a gesture of friendship and trust in the person being saluted. It would, therefore, be seen that there is nothing subservient in saluting another person. It is mark of trust, friendliness and respect for the person. The custom should be followed scrupulously and one must take pride in it. At the same time, it is the duty of the person being saluted to respond to the salute with equal pride.

### **Paying of Compliments**

10. Whether on or off parade, whether in uniform or mufti, officers are expected to pay normal compliments to their seniors in rank. This is not only a matter of discipline but also of common courtesy, and must be observed scrupulously at all times. Never ‘acknowledge’ a salute from an other rank, as though it was your right, but return it smartly and with pride:-

(a) **When in Uniform.** In civil life, when one meets a lady or gentleman out of doors, it is normal to take off one’s hat to her or him. The military equivalent of this is to salute when in uniform. The correct way to wish a lady or gentleman when in uniform and not wearing head dress is to come to attention and bow slightly, say the appropriate words of greeting and shaking hands if the person greeted offers her or his hand.

(b) **When in Mufti.** As officers are permitted to wear plain clothes to put them at ease and to save them the formalities connected with uniform, they should pay the same courtesies that a civilian would pay when meeting a lady or a superior or an elderly person. Thus it would be proper to raise the hat, or rise if seated or bow slightly and greet the person concerned appropriately, ie. “good morning” or “good evening”.

(c) If other ranks recognize you and salute, never fail to return it in the proper manner. Do not salute if without head dress , but just say “Ram Ram” or “Sat Sri

Akal” according to the class of the other rank. Raise your hat if you are wearing one.

### **Saluting National Flag**

11. It is customary to salute the National Flag when it is being hoisted or hauled down at ‘Reveille and Retreat’. Officers will face the flag staff, stand to attention and salute. NCC Cadets and other ranks only stand to attention. The same custom is observed in case of the Regimental Flag. When Reveille or Retreat is being sounded all ranks will come to attention if they are within hearing distance of the bugle and remain at ‘Attention’ till the bugle ends. It is not followed while under a roof.

### **National Anthem**

12. If played during a ceremonial parade, all officers in uniform stand at attention and salute. In mufti, all officers stand at attention and remove their hats. NCC Cadets only stand at attention and do not salute.

### **Courtesy on Warship**

13. On boarding or leaving a ship of the Indian Navy, an officer must salute the quarter-deck. If the ‘Officer on the watch’ is present at the quarter-deck, he will salute a senior officer on the occasion or return the salute of the junior officers.

### **On Other Occasions**

14. When riding bicycle/horse or riding a mechanical vehicle, the soldier will not salute because of the danger in taking off his eyes from the road. But when stationery, eyes right or left will be given without removing the hands from the wheel or bar as the case may be. When a group of soldiers are standing in vishram they will come to attention and senior most soldier among them alone will salute. When two or more officers are together senior most officer among them will return the salute.

### **Decoration and Medals**

15. The decorations and medals a serviceman is permitted to wear are visible evidence of the recognition and reward he had earned for outstanding acts of personal bravery and distinguished service in theatres of war or during a national emergency. Decorations and medals are potential incentives to greater efforts and are instrumental in building and maintaining good morale.

### **Dress**

16. It is a custom, as well as requirement that serviceman and NCC Cadets present a good appearance at all time. In old days servicemen’s uniforms were very colourful and won admiration of the general public. Today, the uniforms have been changed to suit modern requirement of camouflage, utility, hygiene and economy. They still earn the nations admiration. Therefore, it is imperative that the serviceman and NCC Cadets take pride in their uniforms and always present a good turn-out.

## **Battle Honours**

17. Battle honours are given to Unit / Regiments by the Government for the heroic act done by Units / Regiments as a whole. The winners of battle honours rightly take a lot of pride in them.

## **Colours**

18. Colours are symbolic of the spirit of a Regiment. The sight of the colours creates a feeling of pride in soldiers and from ancient history have served as an inspiration for heroic acts of self-sacrifice. The origin of the colours can be traced back to the early battles when they marked the commander's position on the battlefield. It also served as rallying point in battle. Till late in the 19<sup>th</sup> century, colours were taken into battle and were always kept in the front so that the soldiers could see them and draw inspiration. It was a matter of honour that the Regiment would not let their colours fall.

19. Later, owing to the altered form of attack and the increased range of musketry, the colours were not carried into battle. The colours, however, retain their pride of place in the Regiments. Now-a-days the colours are laid in place of honour, usually the officers' mess or quarter guard.

20. The colours are awarded to a regiment by the President for their honourable service and all the battle honours of the Regiment are emblazoned on the colours.

21. All infantry regiments, with the exception of rifle regiments, carry colours. Armoured Corps regiments carry standard and guidons with the exception of the Lancers.

## **Officer Mess**

22. **General.** An Officer's mess is an institution which influences all aspects of an officer's life. It moulds his character and his way of life to a great extent. Mess customs and traditions instill in officers particularly the younger ones, a strong sense of loyalty and co-operation, and an even stronger sense of esprit-de-corps. The mess is a common home of all officers of a unit.

23. **Dress** Officers take pride in their turnout, whether in uniform or in plain clothes. Do not enter the mess with a cap or hat on. A brush is provided outside the ante-room so that officers can brush their shoes before they enter the mess. Officers should ensure that the guests they invite do conform to their mess rules in regard to dress in the mess. If they are not properly dressed, they should not be taken into the ante-room, but entertained in some other room, verandah or in the garden.

24. **Conduct in the Mess.** The following general points govern an officers conduct in the mess:-

(a) If there is an officer of field rank in the mess when you enter, bow slightly to him with an appropriate greeting, ie. "good morning" or "good evening". Similarly, when an officer of field rank enters the room, you must stand up and

greet him. Officers must stand up and greet the senior dining member when he enters the mess.

(b) When a visitor, Service or civilian, regardless of rank, enters mess, one must stand up and greet him courteously and offer him a drink or a smoke. Make him feel at home but never force drinks on anybody.

(c) Be punctual on all occasions.

(d) Do not visit the mess during working hours unless you are on the sick list or on leave or have to go there in connection with some work. In nine cases out of ten you are neglecting your duty elsewhere and everybody knows it.

(e) Do not discuss controversial or forbidden subjects, ie. religion or politics. Avoid talking "shop" as far as possible. Never indulge in loose gossip about women.

(f) Before you turn on the radio/TV ask others present if they have any objection.

(g) Dogs or other pets should not be taken in-side the mess.

(h) You must treat the mess property as your own. Do not remove anything from the mess without the permission of the president of the mess committee.

(j) The mess "suggestions book" if one exists, is not meant for entering complaints. It is meant for constructive suggestions for improvement of the mess. In marking suggestions avoid sarcasm or attempts at humour.

(k) If you are reading a newspaper or magazine and a senior officer of your unit comes in, getup and offer the paper to him if it is the only copy in the mess. Similarly, if you are sitting comfortably under a fan or in front of a fire, getup offer your seat to a senior officer when he arrives, if no other such seat is available.

(l) Bridge and some other games, at very small stakes, are the only "gambling" games permitted in a mess.

(m) You may read a newspaper or a periodical during breakfast and lunch but not at dinner. It is "not done" to read a book in the dining room.

25. **Visitors and Guests.** Do not invite all and sundry to your mess. Select your guests. You must obtain the permission from the president of the mess committee before you invite a guest to a regimental function. On regimental guest nights and other regimental social functions in the mess, every member is a host. It is the duty of members to see that no guest is left unattended.

26. **Dinner Nights.** A dinner night in the mess is a parade. Officers who have not signed out or not had permission to dine out, must be present at least five minutes before the scheduled time at which dinner commences.

27. **Table Manners.** Use the napkin and use correct knives and forks. Never pile your plate. If you want to have more have a second helping. Eat with your mouth closed and without making any sound. Do not talk when there is food in your mouth. Do not lean over the table for a any dish which is out of your reach instead ask your neighbour.

### **Smoking**

28. It is improper for an officer/cadet to be seen smoking whilst in uniform on the following occasions:-

- (a) Whilst saluting.
- (b) Whilst marching with troops except during halts with the permission of senior.
- (c) Whilst on parade or at range, at sports meet, obstacles course and such like functions.

### **Introductions**

29. Introductions sometimes present difficulties. The normal rule is that a gentleman is introduced to a lady, a single women to a married woman, a younger to an older and a junior to a senior. Whilst introducing the names of both parties should be given clearly, e.g, "Major KALIA, may I introduce Mr KAPOOR" or "Mrs DEV, may I introduce Lieutenant Colonel KUMAR".

### **Paying Compliments to Ladies**

30. All officers will pay compliments to ladies on meeting them, even if a General meets wife of a Lt and recognizes her, he pays compliments to that lady. In uniform, compliment is paid by saluting and in civil dress, the ladies are greeted in the normal way.

### **Conclusion**

31. In conclusion, it must be emphasised that the customs and traditions in the Army and the other services are "Unwritten Laws" which every member of the service should observe thoroughly. The observance of the custom and traditions is a tremendous unifying force and facilitates admission into the clan of the "Men at arms". The customs and traditions are of immense value in developing the esprit-de-corps and the pride in one's service.

## **SECTION-11**

### **IMPORTANCE OF GROUP/TEAM WORK**

#### **Definition of Group**

1. A group can be defined as any number of people who share goals, often communicate with one another over a period of time, and are few enough so that each individual may communicate with all the others, person-to-person. Two or more people interacting to achieve a common objective is also called a group.

#### **Classification / Types of Groups**

2. Classification of group according to evolutions of primary goals is as 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.

### **Importance of Group**

3. In a group people come together to achieve some common objectives for which they work in a structured fashion and utilise resources to reach pre-determined goals and targets.

4. A group carries a lots of power in it. One work which seems impossible, can be done by a group strength very easily. We have a number of examples of group work around us. India is itself a great example of group work. India is probably the only country in the world where people belong to different languages, having different cultures, modes of living, clothing, feeding habits and even different Gods and deities. Inspite of all these differences, they live together in harmony and even believe to be the children of one mother called “Mother India”.

5. We are one large nation with one central authority. In India we have unity in diversity and we work together to make our country a developed country. It is because of the strength of the nation as a group only that India could achieve freedom in 1947.

### **Characteristics of a Mature Group**

6. (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.

### **Definition of Team**

7. When two or more people who are interdependent, who share responsibility for outcomes, who see themselves and are seen by others as an intact social entity in a larger social system are called as “Teams”. When teams are formed, its member must have (or quickly develop) the right mix of complementary competencies to achieve the team’s goals. Also its members need to be able to influence how they will work together to accomplish those goals.

### **Importance of Team**

8. A team is a small number of employees with complementary competencies (abilities, skills and knowledge) who are committed to common performance, goals and working relationship for which they hold themselves mutually accountable.

9. A key aim of teamwork is group synergy, namely the achievement of high quality as a result of combined individual contributions . Synergy can help you solve complex problems because you will be working with people who have a wide range of skills and perspective. Students working in teams benefit particularly from brainstorming and bouncing ideas of each other, learning from each other, discussing work in teams outside contact times and checking results.

10. In a team we can establish an agreed set of team guidelines. We know team members, their strengths, and preferred ways of working and preferred roles. We can discuss the task problems to arrive at a shared understanding and summarise this shared understanding of any project.

### **Types of Teams**

11. (a) **Functional Teams**. They usually represent individuals who work together daily on a cluster of ongoing and independent tasks. Functional teams often exist within functional departments, marketing, production, finance, auditing, human resources and the like.

(b) **Problem Solving Teams**. They focus on specific issues in their areas of responsibility, develop potential solutions and are often empowered to take actions within defined limits.

(c) **Cross - Functional Teams**. They bring together the knowledge and skills of people from various work areas to identify and solve mutual problems.

(d) **Self - Managed Teams**. They normally consist of employees who must work together effectively daily to manufacture entire product (or major identifiable component) or service.

### **Characteristics of a Team**

12.     (a)    Illusion of invulnerability.
- (b)    Collective rationalization.
- (c)    Unquestioned belief.
- (d)    Stereotypical views.
- (e)    Direct pressure.
- (f)    Self censorship.
- (g)    Shared illusion of unanimity.

## **CHAPTER-VI**

### **CIVIL AFFAIRS/DISASTER MANAGEMENT**

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## **SECTION-1**

### **CIVIL DEFENCE ORGANISATION AND ITS DUTIES**

#### **Introduction**

1. The aim of war is to force the ‘National will’ on the enemy. This is achieved by crippling his capacity to withstand war, by demoralising the population, destruction of production potential and rupturing of communication. To minimise the suffering caused by the war, it is necessary to take civil defence measures.

#### **Civil Defence (CD)**

2. 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. In short, it is the defence of the citizen by the citizen.

3. Civil defence is the much misunderstood subject because it is often confused with the air raid precautions taken during the war. There are many other measures necessary to deal with effects of direct and indirect raids and such measures can not be disassociated from the civil defence measures. Civil defence measures consist of the following:-

(a) **Protective Preventive Measures.** Measures which may be taken before an air raid, such as dispersal of population and industries, camouflage, preparation of shelter, warning and training etc.

(b) **Control Measures.** The measures taken immediately after the raid, such as reconnaissance, reporting of damage and unexploded bombs, rescue of casualties, control of services, clearance of debris and extinguishing of fires.

(c) **Restorative Measures.** The measures which become necessary after an air raid include feeding, providing shelter and clothing, salvage of property, disposal of dead, disposal of unexploded bombs, control of infection and contamination, repair of damages caused to utility services etc.

#### **Organisation at District Level**

4. In a district the District Magistrate is the ultimate authority on CD. He is designated as the controller of Civil Defence. He is responsible for implementation of all CD measures by the district departmental heads such as Civil Surgeon, Superintendent of Police, PWD Engineer, Publicity Officers etc. They are appointed by him as in-charge of various civil defence services. He also constitutes an Advisory Committee out of the people possessing qualities of leadership and discipline who can arouse and sustain public interest in the Civil Defence Services.

## **Civil Defence Service**

5. At local level the various existing agencies will be responsible for organising suitable CD services on the subject entrusted to the agency in normal times, e.g. Civil Surgeon in charge of Casualty Services, Civil Defence officer in charge of Supply Services and so on. The various civil defence services are as under:-

- (a) **Headquarters Service.** This service works under control of CD.
- (b) **Warden's Service.** It is a link between the public and the authorities. This service is responsible for organizing self help parties, fire parties and to check light restrictions, report damages and guide homeless to the Rest Centres.
- (c) **Fire Fighting Service.** They detect small fires and put out the same.
- (d) **Casualty Services.** The functions of this service are:-
  - (i) Rendering first aid on the spot.
  - (ii) Providing transport to casualties for short distances.
  - (iii) To send various causalities for further treatment.
- (e) **Communication Services.** This service is responsible for:-
  - (i) Receipt and dissemination of air raid warning.
  - (ii) Provision of co-ordination and control facilities.
  - (iii) Provision of communication between warden posts, control centres through messengers or telephone etc.
- (f) **Training Services.** This service is responsible to train the necessary staff in the Civil Defence duties.
- (g) **Rescue Services.** Their duty is to rescue the injured and personnel trapped under the debris.
- (h) **Welfare Services.** It is responsible to supply information about missing and dead etc. to provide shelter, food and clothing and to arrange evacuation from vulnerable areas.
- (j) **Depot and Transport Services.** It is this service which is responsible to send various services to the scene of incident and provide necessary transport required from time to time.
- (k) **Salvage Service.** It is responsible to salvage the damaged property and keep it in safe custody.

- (l) **Corpse Disposal Service.** This service is responsible for collection, identification and disposal of dead bodies.
- (m) **Supply Service.** This service is responsible for planning, organising and procuring necessary equipment for CD Services and proper storage and quick distribution of equipment at the time of need.
- (n) Besides the above noted services the CD organisation will be required to set up Repair and Demolition Parties and make arrangements for the care of animals through appropriate existing agencies operating in the town.
6. Working of all the above noted services will be co-ordinated by the Headquarters Services working under the direct control of CD Controller. NCC can help the Civil Defence by helping them in Welfare Services and Message Services.

## **SECTION-2**

### **TYPES OF EMERGENCIES /NATURALS DISASTERS**

#### **Introduction**

1. Since the dawn of civilization, human society, natural environment and disasters have been closely interlinked. Natural disasters and the increasing environment degradation world-wide are serious threats to development. Natural disasters threaten all three dimensions of development to include economic, social and environmental. In the past twenty years, earthquakes, volcanic eruptions, landslide, floods, tropical storms, droughts and other natural calamities have killed over three million people, inflicted injury, disease, homelessness and misery on one billion others, and caused billions of dollars of material damage. Currently annual global economic costs related to disaster events average US\$1200 billion per year and it is likely to double by the Year 2025. 80 percent of the world's population resides in developing countries and it has been estimated that upto 60 percent of these people are highly vulnerable to floods, severe storms and earthquakes. Besides 90 percent of the natural disasters and 95 percent of the total disaster-related deaths world-wide, occur in the developing countries. Since the 1960s, economic losses due to disasters have increased at least fivefold. These losses are growing largely due to the increasing concentration of population and investments in vulnerable locations as well as inadequate measures to reduce risk.

2. The term disaster is commonly used to denote any odd event natural or man made which brings about immense misery to a region and it becomes difficult to cope with the situation through local resources.

#### **Classification of Disasters**

3. Disasters can be classified based on nature of onset (rapid/ slow), natural and manmade disasters as under:-

(a) **Natural Disaster.**

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

(b) **Man Made Disasters.**

- (i) **Accidents.** Road, Rail, Air, Sea and Building collapse.
- (ii) **Industrial Mishaps.** Gas Leak, explosion, sabotage and safety breach.
- (iii) **Fire.** Building, Coal and Oil.
- (iv) **Forest Fire.** In tropical countries forest fires are often manmade.
- (v) **Contamination/Poisoning.** Food, water, illicit-liquor and epidemics.
- (vi) **Terrorists Activities.**
- (vii) **Ecological.** Pollution (air, water, noise), soil degradation, loss of biodiversity, global warming, sea level rise, toxic wastes and nuclear accidents.
- (viii) **Warfare.** Conventional, chemical and nuclear.

4. A few important ones are described below:-

(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) **Volcanoes**. Volcano is like a vent or chimney to the earth's surface from a reservoir of molten rock, called magma, deep in the crust of the earth. The eruption occurs when slabs of rock forming the Earth's surface, called plates, begin to move. When old plates collide, and one is ground down beneath the next, the plates melt and produce very violent volcanoes. Other types of volcanoes also exist, such as those that form as new plates grow. The molten material wells from the mantle, spurting up as quiet volcanoes. Some volcanoes lie away from the plate edges, above a very active spot in the Earth's mantle. A study shows that approximately 600 volcanoes are active or have erupted. On an average, about 50 volcanoes erupt every year. At present, about 10 percent of the world's population lives on or near potentially dangerous volcanoes.

(d) **Landslides**. Landslides generally occur as secondary effects of heavy rains storms, earthquakes and volcanic eruptions. It occurs as a result of changes, either sudden or global or gradual in the composition and structure of rocks or hydrology or vegetation on a slope. It covers a wide variety of landforms and processes involving the movement of soil under the influence of gravity.

(e) **Hurricanes**. Sometimes called Tropical Cyclones, typhoons, or willy-willies, hurricanes can rip up trees, destroy crops, and flatten buildings. Torrential rain causes flooding and coastal regions may be swamped by huge waves whipped up by winds that blow as fast as 300 km/h (185 mp). Hurricanes start to form when the Sun's heat stirs up moist air over the oceans, where the temperature at the centre of the storm, called the eye, can be more than 300 km (185 miles) across and the winds only gale force. But as the eye narrows to about 50 km (30 miles) across, the winds begin to swirl around it at hurricane force. Every year, violent storms with torrential rains and very strong winds bring widespread devastation to coastlines and islands lying in their paths. Cyclones pose a major threat to lives and property in many parts of the world.

(f) **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.

(g) **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.

## **SECTION-3**

### **FIRE FIGHTING**

1. During the war, enemy is likely to cause maximum damage by bombing. Fire being the major cause of destruction during war, it is imperative that a country should be prepared to fight this evil.

#### **What is Fire**

2. When we light, flame is produced during combustion, which is called 'Fire'. To produce fire a combustible substance must be heated to a certain temperature before it can burn.

#### **Constituents**

3. The following three elements are essential for combustion and its continuation :-

- (a) Oxygen.
- (b) Sufficient heat to raise the temperature of fuel to its burning point or ignition temperature.
- (c) Combustible or burnable material (Solid, Liquid or Gas).

4. It should, therefore, be remembered that three things or conditions are necessary to start a fire and to sustain it. Fuel (Combustible material), Oxygen (Air) and sufficient Heat to raise the temperature of the fuel to its burning point, must be present at the same place and time.

#### **Modes of Spread**

5. The fire spreads by the transmission of heat in one or any combination of the following four ways:-

(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.

### **Fire Fighting**

6. Fire can be extinguished if any one or more of the three main constituents are removed from the scene of fire. The fire can thus be extinguished by:-

(a) **Starvation**. Starvation means removal of fuel combustible material and it can be achieved by either segregation of fire and un-burnt fuel by removing either of them e.g. removing un-burnt combustible materials from a room on fire with the help of hook or otherwise or division of a large fire into several smaller ones to prevent the radiated heat from setting alight combustible material at some distance.

(b) **Cooling**. Cooling implies the removal of heat to lower the temperature of burning material to a point below its ignition point. This is usually achieved by water. When water is poured over a burning material, it absorbs heat, becomes hot and flows away or is converted into steam. The burning substance loses heat to the water and its temperature comes down to below its ignition temperature and so the fire is extinguished.

(c) **Smothering**. Smothering means ‘Choking’ or restricting the supply of Oxygen (Air) to the burning material. This is also called ‘blanketing’ and is achieved by sealing all the burning material from Oxygen (Air) by covering it with sand/dry earth/ foam or by creating an atmosphere over the fire of heavier than air inert gas.

7. To effect the above noted methods, the fire services and fire parties are organised.

### **House Fire Parties**

8. It consists of four persons who carry stirrup pumps and water buckets. They act as fire watchers and work under the orders of the wardens. They carry one stirrup pump, two buckets, one torch and one hand axe. One steel helmet and one whistle per member is envisaged as personal equipment.

### **Auxiliary Fire Services**

9. This consists of eight persons with Trailer pump which can throw water at the fire from a distance. The members of this Service are drawn from the Home Guards.

## **Fire Fighting Equipment**

10. These appliances could be divided into the following four categories:-

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

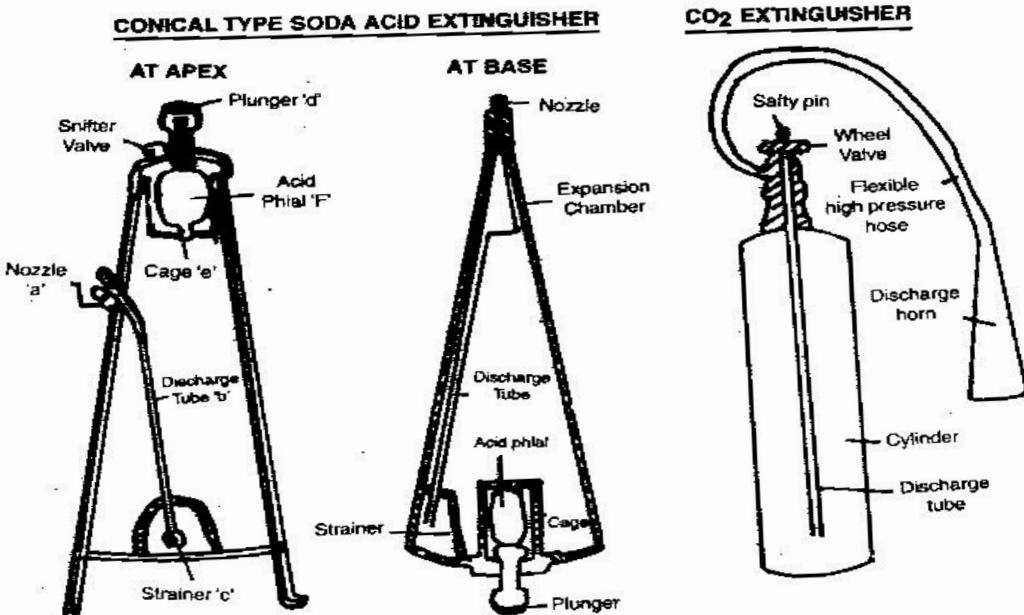


Fig. 1 (a)

Fig. 1 (b)

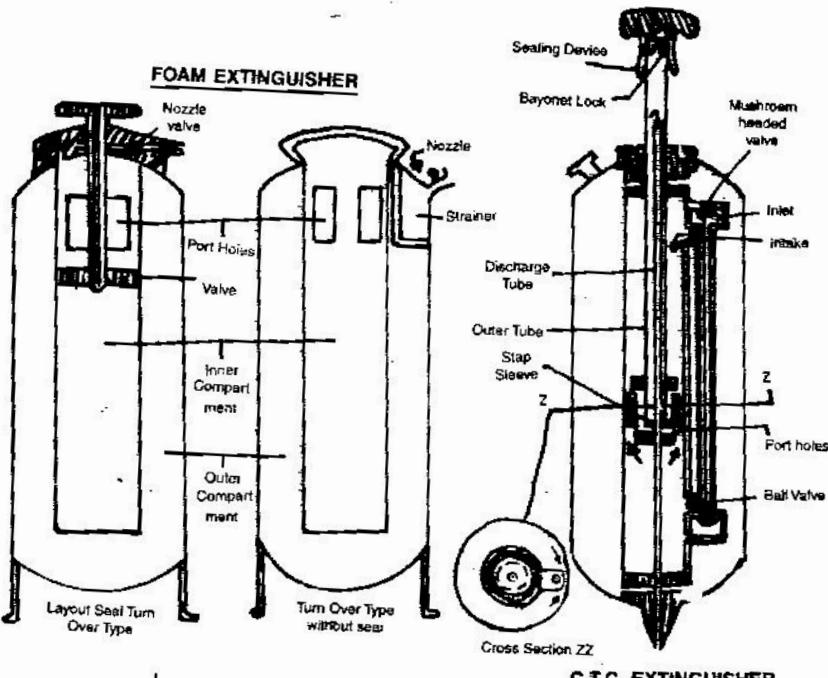


Fig. 1 (a)

Fig. 1 (b)

### Fire Extinguishers

11. For the convenience of study, these could be grouped as under:-

- (a) Fire extinguishers for extinguishing fires involving ordinary combustible material, where the cooling effect is achieved by water or solution containing large percentage of water. Under this group comes 'Soda Acid Extinguishers'. Such extinguishers are conical /cylindrical in shape.
- (b) Fire Extinguishers with chemicals, solution or dry, exclusively meant for extinguishing fires involving inflammable liquids such as oils, fats, grease, etc. where blanketing the fire to isolate it from Oxygen (Air) is required. Under this group comes 'Foam Type Extinguishers' and ' Dry Chemical Powder Extinguishers'.
- (c) Fire extinguishers with chemicals either liquid, gas or dry, mainly to fight fires involving 'Live' electrical equipment etc. where the use of an electrically non-conductive extinguishing agent is of foremost importance. Under this group comes CTC Carbon dioxide and Dry Chemical Extinguishers.

12. The main advantages of these extinguishers are:-

- (a) They are easy to operate.

- (b) They need only one man to operate and carriage to another place.
  - (c) They are very useful in the initial stage of fire.
13. The disadvantages of these extinguishers are:-
- (a) The use is limited as the duration of the working of the extinguishers is approximately one to two minutes.
  - (b) The cost of these extinguishers is prohibitive.
  - (c) These extinguishers require constant care and careful maintenance.

### **Stirrup Pumps**

14. The stirrup pump is an excellent piece of first aid fire fighting equipment designed for use on small fire. It is very useful in localising and controlling fires with limited water supplies. Water spray from this equipment may be used on small fires for cooling the combustible material or the surrounding of scene of fire.

15. It is generally operated by a team of four members but in an emergency a team of two members can also operate it effectively. The water jet produced by this pump can hit the ground at a distance not less than 9 meters from the nozzle. The consumption of water is about 1 to 1-1/2 gallons per minute. The spray produced by this pump can reach 15 to 20 feet away from the nozzle with water consumption  $\frac{3}{4}$  gallons per minute.

### **Bucket/Ghee Tins**

16. Buckets/Ghee Tins are ideal for storing water and sand for fighting small fires. They could be easily carried by one person from one place to another.

### **Fire Beaters/Hooks**

17. Beaters made of wire net in a rectangular shape and hooks made of iron fitted on bamboo poles are ideal for separating the burning and unburnt combustible material and extinguishing by beating the small fires.

## **SECTION-4**

### **ESSENTIAL SERVICES AND THEIR MAINTENANCE**

#### **Introduction**

1. The term ‘Essential Services’ means any public utility services, public safety or the maintenance of infrastructure and services necessary for the life of

the community, non-availability of which would result in the infliction of grave hardship to the country as such.

### **Essential Services**

2. Essential services primarily comprise:-

- (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.

### **Maintenance of Essential Services**

3. These services are maintained by Govt at all cost and there are very rigid acts and provisions to ensure continuity of these services since without them life in country will go out of gear. Very strict provisions in law exist against personnel going on strike, refusing to work overtime or any other conduct which is likely to result in cessation or substantial retardation of work in maintaining these services. At district level, each district is required to prepare in advance, contingency plans to tackle the likely disturbances in continuity of these services. The relief measures to be catered in the contingency plans are discussed in succeeding paras.

4. **Medical**

- (a) Medical facilities including first aid and hospitalisation.
- (b) Plans to subdue likely sources of infection.
- (c) Immunisation of population in relief camps to prevent spread of epidemics.
- (d) Rescue of trapped persons.
- (e) Disposal of dead bodies and carcasses.

5. **Communication**

- (a) Maintenance of uninterrupted telecommunication through telephone /tele fax, mobile phones, VHF transmitters etc.
- (b) Dissemination of information, monitoring media coverage and quelling rumours.

## **6. Transport**

- (a) Maintenance of rail/road communications with special attention to:-
  - (i) Damaged rail/ road network as it directly relates to the delivering of relief supplies by vehicles.
  - (ii) Possibility of bypassing damaged sections of the roads.
- (b) Extent of containers that can be moved inland.
- (c) Availability of maintenance facilities and spare parts.
- (d) Measures for security of cargo in transit.

## **7. Infrastructure**

- (a) Infrastructure of roads and bridges, communications, water and electricity supply, sewerage and essential buildings such as schools/ colleges and health centres may be required to be rebuilt/ repaired .
- (b) Housing and rehabilitation.
- (c) For economic rehabilitation, funding and various new opportunities to be created, in addition to getting the destroyed stocks replenished, for restoration of livelihood.

## **8. Miscellaneous**

- (a) Provision of Military, Para Military assistance.
- (b) Speedy establishment of Control Room and deployment of human and material resources in a short time.

## **Role of Cadets**

9. Being qualified in First aid, Home Nursing, Signals and having developed leadership traits and learnt about Social Services and Civil Defence, the cadets of NCC could assist in maintaining the following essential services and important tasks in any and every part of the country:-

- (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**

#### **Warning**

1. Timely warning of approaching enemy aeroplanes affords time for the people to take shelter and to enforce various civil defence measures including crash black out. Also warning about the withdrawal of threat are required for the people to come out of shelters and resume their work. Hence an efficient warning system will ensure sufficient warning time to take effective civil defence measures.

#### **External Warning System**

2. The collection and transmission of messages are included in the external warning system. Under this system the messages regarding the approaching and departing enemy aircrafts are passed by Air Force to the Regional CD Control Centres and from them to the Divisional Control Centres and from them to the Sub Divisional Control Centres.

#### **Internal Warning System**

3. Dissemination of the messages in an area under the jurisdiction of a CD Town Control Centre constitutes Internal Warning System. An air raid warning by the town control centre will be communicated to the CD units through telephones, radio link or messenger, who will in turn inform the general public by sounding sirens.

#### **Type of Air Raid Messages**

4. (a) **Preliminary Caution.** It is received by a limited number of officials on the special warning list such as Headquarters of Civil Defence Organisation, Police Fire brigade etc. This is called as `Air Raid Message-Yellow'.

(b) **Action Warning.** This warning is given when certain aircrafts are sighted towards a particular town for attack which may be attacked within five minute. This warning is called 'Air Raid Warning-Red'. On receipt of this message, the sirens (hooters) are sounded for two minutes (a short blast followed by a long blast repeated at intervals of 3 seconds).

(c) **Raider Passed.** This means that raiding aircrafts have left the towns warned, or no longer appear to threaten these towns. This message is also called 'Air Message- Green'. A continuous siren for two minutes is sounded.

(d) **Cancel Caution.** This means that the threat is over. This is called the 'Air Message -White' This message is passed on to only those who received the preliminary caution.

## **Protection Against Air Attack**

5. The effects of bombing by the enemy aircraft can be reduced by training the public in taking the protective measures in the face of enemy threat. The risk of casualty could be reduced by taking adequate cover such as :-

- (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 cots 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.

## **Protection Against Aircraft Bombing**

6. The protection against aircraft bombing is necessary for maintenance of morale of the people and saving the important installations. The important principle of protection is to interpose between the place of explosion and the object to be protected, anything which can neutralize the object to be protected, any thing which can neutralize the destructive effects of the bomb.

## **Methods of Protection**

- 7. (a) **Dispersion.** Dispersion means reduction of congestion in the area of likely targets. No habitation should be allowed within a radius of 500 to 1000 yards of Ammunition Factories, Aerodromes and so on.
- (b) **Camouflage and Concealment.** It means denial of identity of the likely targets by camouflaging them artificially. This may be achieved by painting, by creating smoke screens, by black out or creating false targets.

(c) **Shelters for the Public.** The shelters for the people could be of two types- one to shelter large number of people called public shelters and the other to shelter families. Both of these could be either especially constructed or selected from the existing building.

### **Anti Splinter Measures**

8. Unprotected glass is a potential source of danger as it is smashed by the blast and the splinters fly at great speed. These splinters may be cause of injury to human being and damage to property and machinery. As a protectional measure all the glasses should be removed and replaced by wooden paneling. Where it is not possible to remove the glass, anti splinter measures should be taken by fixing  $\frac{1}{2}$ " wire netting or plywood screen very close to the glass. This could also be achieved by taking anti-splinter measures by pasting fabric/paper to the glass with the help of adhesive.

### **Sand Bagging**

9. The splinters might travel through the opening like door and windows causing injury to persons and property. To prevent this, opening could be closed by erecting baffle walls. The thickness of these walls may depend upon the materials used. Width of brick walls should not be less than 13-1/2" and that of sand bags wall should be 30" to give standard protection.

### **Rescue Party**

10. As a result of enemy air raids, many buildings will be damaged. A large number of people will be buried under debris and a large number may find themselves trapped on upper floors of high buildings. Rescue parties are required to rescue the trapped persons from damaged buildings. Rescue parties are formed by earmarking suitable Home Guard personnel and giving them requisite training for being able to perform the task of rescuing people in emergencies.

### **Composition**

11. A Rescue Party will consist of eight persons which includes leader, six rescuers and one driver-cum-store-keeper. They are provided with a vehicle having sufficient capacity to carry the personnel and the equipment required for rescue operations.

### **Location**

12. They are located at the Civil Defence Depots.

### **Training**

13. Training in rescue techniques and rescue operations will be imparted by the instructors, who are trained specially for this purpose.

### **Operation Procedure**

14. On receipt of report of damage during an air raid the officer-in-charge, control/sub-control centre orders for the despatch of the required number of Rescue Parties from Depot to the place of incident. On arrival at the site, the Rescue Party Leader reports to the Warden and collects necessary information regarding the number and the whereabouts of the causalities trapped. He carries out the receive based on information and observation and formulates his line of action and starts rescue operations.

### **Debris Clearance**

15. Debris clearance may be necessary where no information is available as to the approximate position of the trapped persons. Some times debris may have to be removed to clear a road block at the site of damage. Whenever there is a reasonable chance of recovering causalities, the debris clearance should be carried out by Rescue Party. The debris should, if possible be removed clear of the damaged building and not merely from one part of the site to another. The general clearance of debris for making roads/paths for vehicular traffic should be carried out simultaneously.

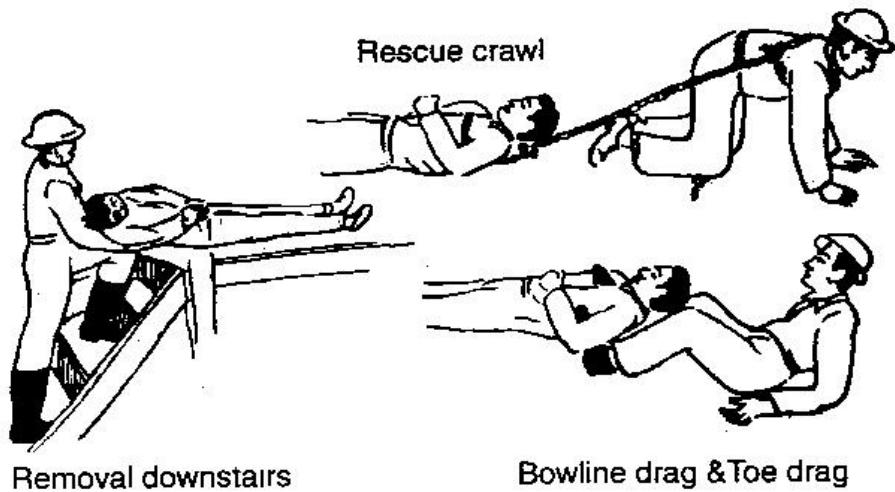
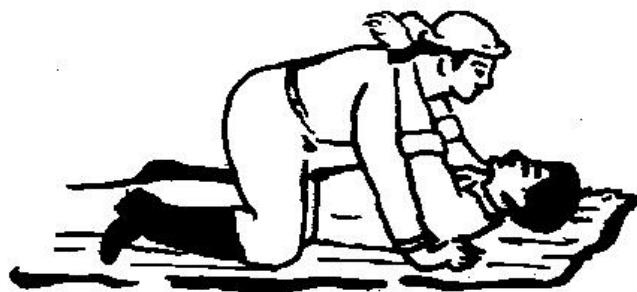
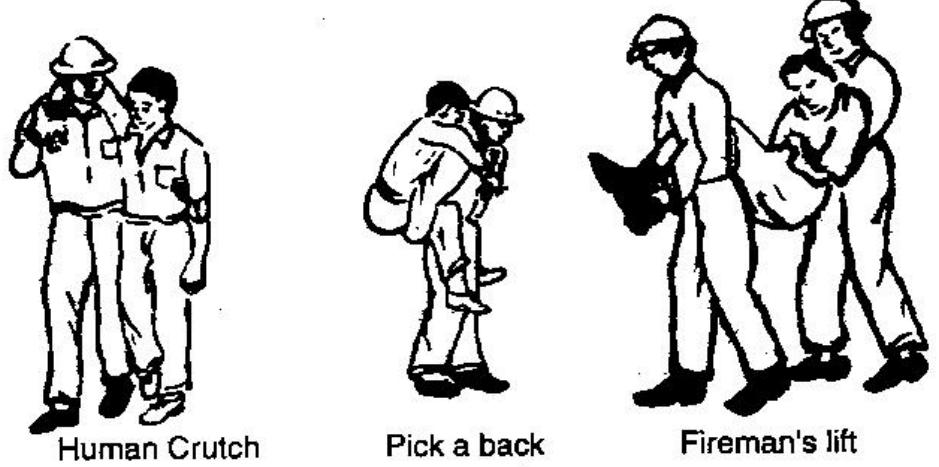
### **Methods of Rescue**

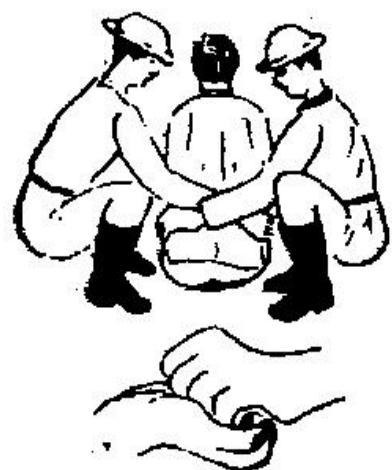
16. There might be occasions when a stretcher is not available. Therefore, some other means must be employed to rescue the casualties. Such means are known as emergency methods of rescue, they are:-

(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.

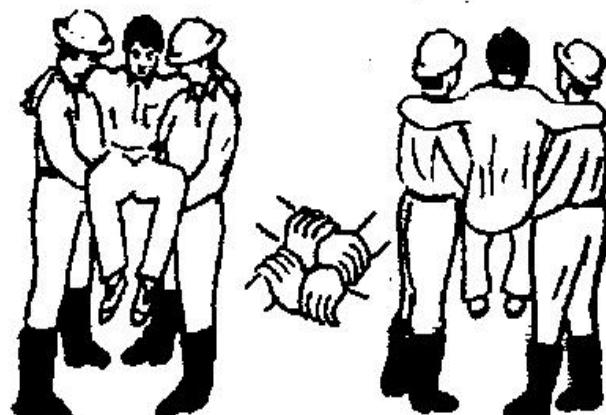




Two hand seat



Three handed seat



Four handed seat



Clothes lift



Blanket lift

(d) **Rescue from High Buildings.** Rescue from high buildings would be necessitated when certain persons may find themselves trapped on the upper floors of high buildings. The methods used for this purpose are, Leaning ladder method, Ladder hinge method, Sliding stretcher on two parallel ropes, Sliding stretcher on one or two ladders and Two point and Four point suspension method.

### **Evacuation of Casualties**

17. All casualties after being rescued are given immediate first aid by the First Aid Party and those requiring the attention of the doctor are transferred to the First Aid Post. Here the injured are seen by the doctor, who may dispose them off in one of the following three ways:-

- (a) If the injury is trivial, it is attended to and patient is allowed to go home.
- (b) If the injury is moderate but does not require admission to hospital, it is treated and patient is allowed to go home and directed to report again as needed.
- (c) If the injury is severe and requires immediate treatment, the patient is transported in the First Aid Post ambulance to the nearest hospital.

### **CD Patrol Lookouts**

18. Warden selects volunteers from the localities under him to work as CD patrols / lookouts. They are made responsible to ensure lighting restrictions and also to collect information about unexploded bombs, fires and damage to the buildings and keep the warden posted.

### **Messenger Service**

19. Messenger service works under the orders of officer-in-charge communication service. Their duty is to carry messages from warden posts to control/sub control centres and vice versa. They are authorized on the scale of one per post.

### **Routes and Location**

20. Each warden will keep the map of the area showing the boundaries of various posts, areas with its streets, roads, houses and important places. The map should also show the shelters, fire stations, CD Depots, First Aid Post and Hospitals.

## **SECTION-6**

### **ROLE OF NCC DURING NATURAL HAZARDS**

#### **Introduction**

1. NCC can play a significant role in the management of the after effects of natural calamities and disasters. With its organisational capability, strength and quality of its cadres, involvement of NCC in disaster relief will provide able assistance to the nation as well as an avenue to the youth in showing its commitment to the society, play a significant role in forming correct attitudes, feelings of sympathy in respect of fellow human beings and also result in personal growth and improved self image of the cadets. The NCC will in turn benefit immensely with its enhanced image.

2. Cadets being young and exuberant can be selectively employed through correct selection of areas of intervention. Indoctrination and strict supervision of their activities will ensure success of cadets. Some disaster situations may, however, demand functioning of cadets on their own. It would, however, be preferable to determine their areas of activity and responsibility in any disaster situation beforehand and limit the same to an indirect support role, while the direct intervention is left to the experts in the field. Ordinarily participation should be restricted to 2<sup>nd</sup>/3<sup>rd</sup> year SD/SW cadets only and selection of boys and girls should depend on area and distance from home town.

#### **Role of NCC**

3. NCC cadets can effectively assist the state system in management which could take shape in the form of:-

- (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.

### **Points for Consideration**

4. NCC is an extra-curricular activity of students and the cadets are not like embodied soldiers available at all times. Some points for employment of cadets are as under:-

- (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 alongwith the Army, Police, Fire Fighting forces and others in the State.

5. A number of international and national NGOs are active in the area of disaster preparedness and response. The national voluntary agencies working in various aspects of disaster mitigation, including risk reduction, preparedness and response. NCC is required to actively participating in disaster relief management in concerned states. Therefore, there is a need for a coordinating body for emergency relief efforts with each state government. The objective of such a coordinating body could be to strengthen the role of NCC in:-

- (a) Emergency preparedness.
- (b) Emergency response (both immediate and in reconstruction efforts).
- (c) Mitigation.

## **Areas of Collaboration between Government and NCC Agencies**

6. Potential areas identified for collaboration by Government of India (GOI)- NCC in emergency programming, particularly with respect to preparedness are:-

(a) **Conceptual Aspects**

- (i) Different vulnerability: Who is affected by a disaster? How to identify them?
- (ii) Participation of community in planning and implementing relief activities.
- (iii) Education and training of affected communities.
- (iv) Disaster preparedness cells.
- (v) Developing training modules for NCC.
- (vi) Long term disaster plans to be linked with development objectives.

(b) **Administrative Aspects**

- (i) Organisational capabilities.
- (ii) Facilitate coordinated access to donor groups.
- (iii) Directory of NCC.
- (iv) GOI-NCC forum.
- (v) Develop NCC emergency preparedness plans.

(c) **Community Training**

- (i) Develop staff capabilities.
- (ii) Develop NCC emergency preparedness plans.

(d) **Community Participation**

- (i) Mobilise participation in designing relief activities.
- (ii) Mobilise participation in implementing relief activities.
- (iii) Train communities in disaster preparedness.

(e) **Communications.** Improve on-site communications capacity.

## **Do's and Don'ts During Disasters**

### **7. Earthquake**

#### **(a) If You Live in an Earthquake-Prone Area**

- (i) Learn about its causes and effects. Speak about them in a calm and composed manner.
- (ii) Keep in a handy place, a torch and a portable transistor radio.
- (iii) Arrange your home in such a way that it is possible to move more easily, keeping corridors clear of furniture and toys.
- (iv) Attach shelves, gas cylinders, vases and flowerpots to the walls of your home.
- (v) Place heavy or bulky objects on the floor or on the lowest shelves.
- (vi) Teach all members of your family how to turn off the electricity, water and gas supply.

#### **(b) During an Earthquake**

- (i) Keep calm and keep others calm.
- (ii) If you are at home or inside a building or an auditorium:-
  - (aa) Do not rush to the doors or exists; never use the lifts; keep well away from windows, mirrors, chimneys and furniture.
  - (ab) Protect yourself by staying under the lintel of an inner door, in the corner of a room, under a table or even under a bed.

#### **(c) If You are in the Street**

- (i) Walk towards an open space, in a calm and composed manner. Do not run and do not wander the streets.
- (ii) Keep away from buildings, especially old, tall or detached buildings, electricity wires, slopes and walls which are liable to collapse.

#### **(d) If You are Driving**. Stop the vehicle away from buildings, walls, slopes, electricity wires and cables and stay inside the vehicle.

(e) **After an Earthquake**

- (i) Keep calm, switch on the transistor radio and obey any instructions you hear on the radio.
- (ii) Keep away from beaches and low banks of rivers. A huge wave may sweep in.
- (iii) Expect aftershocks.

(f) **Culture of Prevention**

- (i) Turn off the water, gas and electricity.
- (ii) Do not smoke and do not light matches or use a cigarette lighter. Do not turn on switches. There may be gas leaks or short-circuits.
- (iii) Use a torch.
- (iv) If there is a fire, try to put it out. If you cannot, call the fire brigade.
- (v) If people are seriously injured, do not move them unless they are in danger.
- (vi) Immediately clean up any inflammable products that may have spilled (alcohol, paint etc).
- (vii) If you know that people have been buried, tell the rescue teams. Do not rush and do not worsen the situation of injured persons.
- (viii) Avoid places where there are loose electric wires and do not touch any metal object in contact with them.
- (ix) Do not drink water from open containers without having examined it and filtered it through a sieve, a filter or an ordinary clean cloth.
- (x) Eat something. You will feel better and more capable of helping others.
- (xi) If your home is badly damaged, you will have to leave it. Collect water containers, food and ordinary and special medicines.
- (xii) Do not re-enter badly damaged buildings and do not go near damaged structures.
- (xiii) Do not walk around the streets to see what has happened. Keep clear off the streets to enable rescue vehicles to pass.

8. **Cyclone.** Listen to the radio for advance information and advice. Allow considerable margin for safety. A cyclone may change direction, speed or intensity within a few hours. So stay tuned to the radio for updated information.

(a) **If the Storm Force Winds or Severe Gales are Forecast for Your Areas**

- (i) Store or secure loose boards, corrugated iron, rubbish tins or anything else that could become dangerous.
- (ii) Tape up large windows to prevent them from shattering.
- (iii) Move to the nearest shelter or vacate the area if this is ordered by the appropriate government agency.

(b) **When the Storm Hits**

- (i) Stay indoors and take shelter in the strongest part of your house.
- (ii) Listen to the radio and follow instructions.
- (iii) Open windows on the sheltered side of the house if the roof begins to lift.
- (iv) Find shelter if you are caught in the open.
- (v) Do not go outside or to a beach during a break in the storm.

(c) Cyclones are often accompanied by large storm surges from the ocean or lakes and the precautions listed for floods should be taken if you live near the coast.

9. **Flood**

- (a) Listen to the radio for advance information and advice.
- (b) Disconnect all electrical appliances and move all valuable personal and household goods and clothing out of reach of flood water, if you are warned or if you suspect that flood waters may reach the house.
- (c) Move vehicle, farm animals and movable goods to the highest ground nearby.
- (d) Prevent dangerous pollution. Move all insecticides out of reach of the water.
- (e) Turn off electricity/gas and lock all outside doors and windows if you have to leave the house.

- (f) Do not enter floodwaters on foot if you can avoid it.
  - (g) Never wander around a flooded area.
10. In the event of disaster, the NCC should respond in an organised manner, so that its coordination with Government of India, State Government and the District Administration becomes easier. This is essentially the purpose of GOI-NCC partnership in disaster management.

## **SECTION-7**

### **TRAFFIC CONTROL IN DISASTER MANAGEMENT UNDER POLICE SUPERVISION**

#### **Introduction**

1. Disaster causes substantial damage to life and property and its impact effects life beyond the boundaries of one state. To avoid this chaos due to breakdown of command and control and general law and order effected by lack of or no communication means it is necessary that systems and organisations are set in place to ensure that evacuation and subsequent reconstruction can be carried out smoothly. The major confusion is caused, due to movement of men and transport moving out to secure areas and of over jealous volunteers rushing in to help. Thus police in general and traffic police in particular, play an important role in a disaster management loop.

2. NCC cadets are a genuine and potential work force who can be utilized to aid the civil authorities during such periods where civil authorities are short on trained personnel. However for the cadets to be usefully employed it is important to educate them on the role of traffic police during such situations.

#### **Objectives of Traffic Police**

3. Objectives of traffic police during disaster are as under:-
- (a) To help in smooth handling of a disaster situation from law and order point of view.
  - (b) To help in providing adequate safety and security to the VIPs/protected persons and the common people affected by the disasters.
  - (c) To help in securing the property of people affected by a disaster.
  - (d) To assist in evacuation of the injured persons to the near by hospitals on priority.

- (e) To ensure crowd control at the affected place as well as at respective hospitals and to prevent riots, looting etc.
- (f) To ensure all possible help to the fire service, medical and other paramedical personnel in handling the disaster.
- (g) To help in ensuring proper access to the fire brigade, ambulances, VIPs and other functionaries authorised to visit the scene or to carry out the rescue/relief operation.
- (h) To ensure cordoning of the area to restrict movement of onlookers and other vehicular and pedestrian traffic.
- (j) To help in ensuring collection of intelligence on the possibility of such disasters.
- (k) To ensure better liaison and co-ordination with official of Apex/Civic bodies and others responsible while handling the disasters.
- (l) To help in proper identification of the dead and injured.
- (m) To help in adequate mobile patrolling in and around the affected area.
- (n) To ensure that all officials responsible to deal with the situation are thoroughly conversant with their duties and responsibilities.

#### **Responsibilities of Traffic Police and Employment of Cadets**

4. Responsibilities of local traffic police and where cadets can be employed during disaster management stage are as under:-

- (a) **Immediate Action.** On receipt of the information about any Disaster taking place, 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 personnels.
- (c) **Cordonning.** 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 pointsman 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 videographed 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.

## 5. **Miscellaneous Points**

(a) The mock exercise of various Disaster Management Authorities and groups should be conducted from time to time. Cadets must participate in mock exercise to understand their role and drawbacks noted must be improved upon.

(b) Following details should be available with all concerned authorities and all locations can be visited and details coordinated by the cadets and NCC authorities for it to be of use during disaster management.

(i) List of vital installations and buildings falling in the jurisdiction of a district.

(ii) List of major hospitals/nursing homes, causalities and ambulances service functioning in the district.

(iii) List of licensed Blood Banks.

- (iv) Availability of heavy duty cranes.
- (v) List of persons/agencies having earth moving/rescue equipments.
- (vi) Important telephone numbers for disaster management authorities/groups.
- (vii) List of Fire Static water tanks.
- (viii) List of Officials of Home Guard and Civil Defence and NCC Directorate.
- (ix) List of NGOs/Voluntary organization to be contacted at the time of disaster.
- (x) List of colleges and schools falling in the sector.
- (xi) List of big temples, Gurudwaras, Masjids and Churches situated in district.
- (xii) List of market associations.

## **SECTION-8**

### **DISASTER MANAGEMENT DURING FLOOD/CYCLONE**

#### **Introduction**

1. India is a large land form with peculiarity of varied geographical features. It has many rivers flowing through it and is surrounded by sea on its three sides and high mountain ranges to its North and a plateau to its central part. Though this makes India unique it also brings along vagaries of climatic and weather changes and other geographical phenomenon. Flood and cyclones have been an integral part of India's history. The rivers bring along huge volume of water and the cyclones from the sea bring along miseries of high velocity winds and water. Both floods and cyclone cause unimaginable damage to people and property devastating lives of large number of our countrymen. It is therefore imperative that both floods and cyclone need to be studied in conjuncture with each other as also their management during disaster.

#### **Flood**

2. Floods have ravaged portions of India from times immemorial. Though floods are one of the very few well-recorded natural phenomena, the catastrophic damages caused by them attracted focused attention in recent decades. With increasing population

pressure and accelerated economic development, the adverse effects of floods are being increasingly felt now. Floods cause great distress whenever they damage crops and property and endanger lives. Floods are generally defined as a relatively high flow of water or a stage in a river resulting in the inundation of low land. Therefore, the term flood is also used to convey all outflow due to jamming or blocking of rivers by landslides and inadequate drainage to carry away surface water speedily.

3. Vast stretches of land are submerged under water causing adverse effects such as destruction or damage to houses, property, bridges, roads and other means of communications and lives lost. Dense population, weak infrastructure and rapid urbanization aggravate the problem.

4. The Central Water Commission is the nodal agency of the Government of India for flood forecasting. They have been involved in scientific flood forecasting on most interstate rivers regularly, managing over 150 flood forecasting stations. In addition, the various state governments have their own flood forecasting stations to meet their respective particular needs. The forecasting procedure involves trained hydrological and meteorological specialists while its wide dissemination are handled by the district administration. In river systems which extend beyond the political boundaries of India, there is a need to receive useful data to indicate field conditions there so that flood forecasts become useful and reliable. In yet other cases, there is the need to share such forecasts as also hydrometlogical data on shared river systems for mutual benefit and to be cooperative. India has such cooperative arrangements, existing or under contemplation, with the neighboring nations as are mutually agreeable. Meteorological data exchange on a regional basis is also an existing practice. Various approaches to deal with floods are available. These include modifying the floods not to allow water to accumulate, susceptibility of people to flood damages and the loss burden inflicted by floods.

## **Cyclone**

5. Cyclones are one of the most disastrous natural hazards in the costal areas of the tropics and are responsible for deaths and destruction more than any other natural calamity. Cyclones bring with them extremely violent winds, heavy rain causing floods and storm surge causing coastal inundation. As they move westward or northwestward, those forming in the Bay of Bengal come to the Indian territory while those forming in the Arabian Sea generally go away from India but sometimes they turn around to hit Gujrat. Fierce winds spiralling anti-clockwise in the northern hemisphere blow around the cyclone centre. Cyclones generally move 300-500 km in 24 hours over the ocean. On an average, about 5-6 cyclones form in the Bay of Bengal and the Arabian Sea every year, out of which 2 or 3 may be severe. Flood generated by cyclone rainfall are more destructive than winds. Rainfall of the order of 20 to 30 cm per day is common.

6. Severe tropical cyclones are responsible for large number of causalities and considerable damage to property and agricultural crop. The destruction is confined to the coastal districts and the maximum destruction being within 100 km from the centre of the cyclone and on the right side of the storm track. Cyclone forecasts are provided though six cyclone warning centres located at Calcutta, Bhubaneswar, Visakhapatnam, Chennai,

Mumbai and Ahmedabad. Cyclones are tracked with the help of INSAT, powerful cyclone detection radars and conventional meteorological observations including weather reports from ships.

### **Preparations**

7. The preparedness means measures which enable government agencies, private organizations, communities, and individuals to respond rapidly and effectively to disaster situations. The preparedness measures include the formulation of viable disaster mitigation plans. The prevention of tropical cyclone formation is not within the realm of possibility. However, the loss of human lives and destruction of properties can be minimised by adopting prescribed short and long term measures for risk reduction. Efforts have to be very comprehensive inclusive of public education and awareness campaign ahead, provisions for the issuance of timely warnings, development of orderly evacuation plans, and preparations for providing the evacuees with food, clothing and shelter on emergency basis. The moment the disaster strikes will also mark the start of the emergency response periods. The immediate onsite responses are spontaneous actions of local residents but their effectiveness could be improved by advance training. The speed and efficiency of the community reaction to save lives and mitigate suffering and losses is determined by adequate planning, training and rehearsals.

8. **Relief Measures.** These can be broadly divided into three distinct periods as follows:-

(a) **Warning Period.** This is the period when the warning signals are sounded indicating the extent and area that is likely to get affected by the floods/Cyclones. During this period the civil administration will be gearing itself to evacuate the local population, cattle and the movable property to safe areas. Therefore the focus of assistance will be in evacuation measures. Actions to be taken are pooling of resources, establishment of liaison cell, earmarking/identifying areas of rehabilitation and preparing check list.

(b) **Flood Period.** This is the period when the floods have already hit the areas under threat. This period may last from 2 to 10 days, by which time the water may recede to safe levels. During this period, the people in the areas that are inundated require succour in the form of food, medicines and shelter. The administration will be working towards providing these. Therefore, the focus of NCC should be to provide assistance in the form of boats with personnel who can reach the affected areas with succour. Due to limited resources with the NCC, civil administration would have to make elaborate arrangements for this phase.

(c) **Recuperation Period.** This phase is envisaged for the period when the floods have receded and the administration is in the process of clearing the debris and normalising the civic amenities. Assistance during this period to various organisations will be of immense value. The material and personnel resources stand as in other operations where as the role of NCC in this phase is in providing assistance to technical hands establishing the civil amenities. Debris removal, including the carcasses and the dead bodies, forms the major task, whilst there is a high probability of epidemic disease spreading in the region.

### **Assistances Required**

9. Types of Assists Required.
- (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.

### **Organisation**

10. The organisation for disaster management will be the existing organisation of NCC. To carry out disaster rescue and emergency relief operations readily with utmost speed, the DDG will be the decision maker who will act autonomously, keeping DG NCC informed. The implementers will be the Group Commanders and the Unit Commanders.

### **Method of Contacting NCC Cadets**

11. Most effective method is that cadets themselves speak to each other and form into working groups, other methods of contacting NCC cadets will be through :-

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

### **Execution of Assistance**

12. 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. The Group/Battalion form small action groups of 20 to 30 members each, depending on the convenience. Each group is given a particular responsibility like warning dissemination, rescue, relief etc. Details of which are given in

succeeding paras. Each group will have distinct activities to carry out before, during and after the flood/cyclone. These groups will have to be formed well in advance. They will have to be imparted basic training and mock up exercises will have to be carried out regularly.

- (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 villages 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. Cycles, boats and other transport and megaphones, drums and other communication aids would be obtained. During and after the flood/cyclone, this group should join other groups.
- (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. They will be imparted appropriate training for carrying out this task. If possible the Civil Defence Volunteers, members from the NSS\boys Scouts can be included in this group.

### **13. Miscellaneous**

(a) **Command and Control.** The over all command and control of the operation rests with the group commander of the groups. The group commander constantly provides feedback to the DDG who will be monitoring this from the directorate. Group commander is to nominate a unit to coordinate the operation with one or more flood/cyclone control liaison officers. Telephonic communication will be severely affected in the event of floods. Therefore it is imperative that alternate source of communications are identified and included in the operation. Press note must be made and distributed for wide coverage, photo and video cover must be arranged at the scene of participation.

(b) **Honours and Incentives.** Undertaking task in the event of the floods is voluntary and organisation driven. It is a service performed outside call of one's duty and therefore require due recognition. It is encouraging and stimulating to the NCC volunteers to be recognised by the media during their dedicated work. Therefore the liaison officer must be in constant liaison with the local and national press and electronic media.

## **SECTION-9**

### **DISASTER MANAGEMENT DURING EARTHQUAKE**

#### **Introduction**

1. Earthquakes are considered to be one of the most dangerous and destructive natural hazards. The commencement of this phenomenon is usually sudden with little or no warning. It is not yet possible to predict earthquakes and to make preparation against damages and collapse of man-made structures. Earthquake generates a set of horizontal and vertical vibrations of the ground which result in destruction of structures. Earthquakes may be defined as a natural phenomenon which tends to create panic due to the trembling vibrations or sudden undulation of a portion of earth's crust caused by splitting of a mass of rock or by volcanic or other disturbances.

#### **Characteristics of an Earthquake**

2. The basic characteristics of an earthquake are as under:-

- (a) It is not yet possible to predict magnitude, time and place of occurrence of an earthquake.
- (b) The onset is usually sudden.
- (c) Earthquake-prone areas are generally well identified and well known on the basis of geological features and past occurrences of earthquakes.

(d) Major effects arise mainly from ground movement and fracture or slippage of rocks underground. The obvious effects include damage to building and infrastructures alongwith considerable causalities.

(e) About 200 large magnitude earthquakes ( $M>6.0$ ) occur in a decade.

(f) The world's earthquake problem seems to be increasing with the increased population, high rise buildings and crowded cities.

### **Effect of Earthquake**

3. In general terms, typical impacts and effects of earthquake disasters tend to be:-

(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.

4. Following problem areas need particular attention in case of Earthquake Disasters: -

(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.

## **Organisation**

5. To effectively carry out the tasks and render timely assistance, it is necessary that the NCC be organised into sectors and sub-sectors without disturbing the existing command and control structure. Each state could be divided into a number of sectors. These sectors to conform to the areas of responsibility of groups with group commanders being the sector commanders. Sub-sectors are organised on the same analogy. The sector and sub-sector commanders should maintain a close liaison with the civil administration. They should keep an update on the resources available in their respective areas. They must refresh themselves with the disaster relief plans of the civil administration. All sector and sub-sector commanders will maintain an information folder, which will have the following data of their respective areas:-

- (a) Road map of their area of responsibility.
- (b) List of Primary Health Centres and Government Hospitals and their locations.
- (c) List of Private Medical Aid Centres/Hospitals and their location.
- (d) Names, addresses and telephone numbers of all state functionaries including ANOs and PI Staff.
- (e) Details of Army units likely to be deployed.
- (f) Details of Civil Relief Programmes already drawn up.
- (g) Existing communication network.
- (h) Government shops / godowns from where rations can be immediately drawn.
- (j) Availability of transport, both government and private.

## **Execution of Assistance**

6. The collector will exercise the powers and undertake responsibilities of the District Disaster Manager. The warning or occurrence of disaster will be communicated to all concerned including local units of defence services and sector/sub-sector commanders of NCC. Immediately, counter-disaster measures would come into operation. This will bring into force the following:-

- (a) The District Collector/ Divisional Commissioner will activate the District Control Room. Simultaneously the sector HQ and sub-sector HQ of the NCC in the affected district will be activated.
- (b) The District Disaster manager may in case of large-scale disaster, get in touch with the local defence units for assistance for rescue, evacuation and

emergency relief measures. The request will be communicated to NCC sector and sub-sector HQ.

(c) The Onsite Operation Centre will become operational. Similarly sub-sector commanders will issue warning to the columns to be ready to move at short notice. The communication network will become operational and flow of information to sector HQ will commence.

(d) Communication from the Disaster Control Room to the site operation centre, transit camps, feeding centres, relief camps and cattle camps will be activated. This should also be used by NCC.

(e) The District Disaster Manager will send the preliminary information report and action taken report as per the available information to the Chief Secretary, Relief Commissioner/Emergency Operation Centre and the Divisional Commissioner. Concurrently NCC sub-sector HQ will forward their preliminary information report and action taken report to sector HQ and neighbouring subsector HQs. The columns will be moved to disaster area after clearance from sector HQ.

## 7. **Important Points**

(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**

#### **Introduction**

1. Relief measures in the aftermath of disasters cover search, rescue and evacuation, relief for livestock, clearance of debris, disposal of dead, control of fires, damage assessment and shelter for victims. Setting up of relief camps encompasses shelter provision as part of emergency relief operations and long-term rehabilitation plans. Shelter provision can differ in view of peculiarities of location, climatic conditions and availability of resources. Inevitably, there will be a need for siting temporary relief camps in the proximity of the affected settlements for which tents may be required.
2. NCC cadets as trained and organised youth can contribute immensely for conditioning and preparing the locals in mitigating affects of disasters. The location of a displaced person camp may range from a spontaneous to an organised settlement from over a wide area to a concentration in a very limited area, from rural settlement to urban settlement. Site selection, planning and the provision of shelter have a direct bearing on the provision of other assistance. Decision must be made as part of an integrated approach taking into account, advice from experts, and views of displaced people. A solution that maintains and fosters self-reliance among the displaced is always preferable.

#### **Criteria for Site Selection**

3. **Social Needs.** In most circumstances the choice will be limited and any land meeting even minimum standards may be scarce. Once a site is located, it is wise to determine the reason to select or reject and examine whether the reason (e.g. no water or because it floods in the monsoon) would exclude use by displaced people.
4. **Water.** The single most important site selection criteria is the availability of an adequate amount of water on a year-round basis. A site should not be selected on the assumption that water can be acquired merely by drilling, digging or hauling. Where water is readily available, drainage often becomes the key criterion. For effective drainage therefore, the entire site should be located above flood level at a minimum of three meters above the water table, preferably on a gently sloping area. Marshes or areas likely to become marshy or soggy during the rainy season should be avoided. The watershed of the area may be a consideration.
5. **Open Space.** The site must provide a sufficient amount of usable space for the displaced population. WHO recommends a minimum of 30 square meters per person,

plus the necessary land for communal and agricultural activities and livestock. Of this, 3.5 square meters is the absolute minimum floor space per person in emergency shelters. Since there is always the possibility that more people may arrive, the site should be large enough to allow for major expansion. If the population has been displaced due to civil strife, the site should be removed from areas of potential conflict.

6. **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.

7. **Environment.** The area should be free of major environmental health hazards, potential diseases and harmful insects such as mosquito and tsetse fly. Climatic conditions should be suitable for habitation throughout the year.

8. **Soil and Ground Cover.** The soil should allow for water absorption and the retention of human waste. Rocky or impermeable sites should be avoided. If possible, land suitable for vegetable gardens and small scale agriculture should be selected for the site.

9. **Land Rights.** The land should be exempt from ownership rights or grazing and other uses by local population. Any use of the land must be based on formal legal arrangements in accordance with the laws of the country.

10. **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. These centres must have the same considerations as those relevant to long-term settlements.

### **Site Planning**

11. At the onset of an emergency, the immediate provision of essential goods and services is more important than efforts to change the way people have already arranged themselves.

12. Site planning should take potential need for expansion into account.

13. Site planning should first consider the characteristics and needs of the individual family and reflect the wishes of the community as much as possible.

14. A ‘displaced-persons’ settlement is not a natural community. Particular care will be required to ensure that special needs are met.

15. The overall physical layout of a site as well as other aspects of the site should reflect a decentralised community-based approach focusing on family, village or ethnic group.

## **Specific Infrastructure Design Considerations**

16. **Latrines.** While water requirements often determine site selection, sanitation requirements can dictate the site layout. If latrines are used there should be at least one for every 20 persons. To avoid contaminating water sources, latrines should have an effective drainage system that is easy to repair, both for rainwater and waste water.

17. **Water Distribution.** Water will often be pumped from the source to an elevated point in order to allow gravity feed distribution.

18. **Roads and Pathways.** The site should be accessible from other sites and contain all-weather roads and pathways connecting the various areas and facilities.

19. **Administrative and Community Services.** At the onset of an emergency, it may be difficult to foresee all the administrative and community services likely to be required. Therefore, where adequate space is available, free areas must be allocated for future expansion of these services. The following administrative and community services are often required:-

(a) **Likely to be centralised:**

- (i) Camp administrative office.
- (ii) Essential services co-ordination offices (health care, water supply)
- (iii) Tracing services (Overhauling, repair facilities etc).

(b) **Likely to be decentralised:**

- (i) Bathing and washing areas.
- (ii) Community services (health centres, social service centres).
- (iii) Supplementary feeding centres.
- (iv) Education facilities.
- (v) Institutional centres (such as for the disabled or unaccompanied old, infirm and children).

20. **Physical Layout.** The basic principle of any physical layout of a camp is that it should be organised into small community units. The location of centralized services will depend on the specific situation and in particular the space available. Warehouses should be located near the administrative office for security reasons.

## **Shelter**

21. Shelter must provide protection from the elements, space to live and store belongings, privacy and emotional security. Shelter is one of the most important determinants of general living conditions and is often one of the largest items of non-recurring expenditure. Neither pre-fabricated buildings nor specially developed emergency shelter units have proved effective in displaced persons emergencies. Both are ineffective due to their inappropriateness, high unit cost, transport problems, and inflexibility. Emergency shelter arrangements will already have been constructed before such systems can arrive. For similar reasons, tents are often not an effective means of providing shelter. If a continued high density of occupation is unavoidable, fire resistant materials may be needed. Housing should meet the cultural and social requirements of a displaced person's home.

22. Material and design should meet the minimum technical standards for the different local seasons. Roof material must be strong enough to withstand damage by the sun, rain, snow and winds. Raised flooring is required in areas of high rainfall. Wall material must afford privacy and protection from the elements. If the site lies in a hazard-prone area, the design of buildings and their siting should conform to hazard-resistant criteria. In buildings where cleanliness and hygiene are particularly important, the floor should be of cement or at least washable.

## **Conclusion**

23. Emergency shelters, including communal buildings, should be built by the displaced people themselves provided adequate organization and material support is given. This will help to ensure that housing will meet their particular needs. Work by displaced people will reduce their sense of dependence and can cut costs considerably.

## **SECTION-11**

### **ASSISTANCE IN REMOVAL OF DEBRIS**

#### **Introduction**

1. It is very essential to formulate a co-coordinated procedure/management of debris removal during and after a disaster. It is the responsibility of State Government for coordinating debris removal in event of a disaster. Debris that are eligible for clearance and removal include trees, sand/gravel, building, wreckage, vehicles and personal property. Debris removal and emergency protective measures are necessary to eliminate immediate threats to life, public health and safety, damage to public or private property and ensure economic recovery of the affected community to the benefit of the community at large.

## **Removal Process**

2. The debris removal process is divided in three basic planning requirements:-
  - (a) **Damage assessment.** It means to ascertain the damage caused due to natural disaster, which will help to ascertain the help required from all sources.
  - (b) **Resources Available.** To identify the resources available to meet these needs. The various agencies can be local government, state agencies and other voluntary organizations.
  - (c) **Use of Resources.** To organize efficiently use of resources to the requirement in the event of natural disaster. To ensure overall effective use of these resources an overall plan is formulated under one head of the organisation to coordinate working of all resources.
3. Debris removal is a major component of most disaster recovery operations. Following a disaster, debris removal must begin immediately to protect public health and safety. Debris is caused by following:-
  - (a) **Tornadoes.** Damage is caused by high velocity rotating winds. Debris consists of damaged and/or destroyed structures, trees and personal property.
  - (b) **Floods.** The damage is caused by flooding and high velocity of water. Debris from landslides consists primarily of soil, ground, rock and some construction material.
  - (c) **Earthquakes.** The damage is caused by shock waves and earth movement. Debris consists of building materials, personal property and sediments caused by landslides.

## **Priority for Removal**

4. The main sources of debris removal are to provide way for relief operations to commence by clearing of way with resources available and at the same time ensuring proper disposal of debris as per policy laid down. The priority for removal of debris could be as under:-
  - (a) **Priority I.** To remove debris that damage entry and exit for emergency services, public health and safety.
  - (b) **Priority II.** To remove debris that pose 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. It is the responsibility of the owner to make arrangements for removal of debris from his property. Efforts will be made to provide all necessary assistance required.

### **Debris Redemption Methods**

5 There are several methods available for debris removal like, burning, grinding, chipping, burying and recycling. All these methods have their own advantages and disadvantages. The debris needs to be dumped at a site, It is the responsibility of the local government to notify such sites.

6. After a disaster has terminated, it is necessary to return the debris holding areas back to their pre-disaster usage, this can be done by removal of debris, environmental assessment and environmental restoration.

### **Debris Removal Guidelines**

7. (a) **Debris Removal From Public Property.** Debris on public property must be removed to allow continued safe operation of government functions.

(b) **Private Property.** This is the responsibility of the individual property owner aided by insurance settlements and assistance from volunteer agencies. However fire and extended coverage insurance policies are expected to have specific coverage for debris removal and demolition of heavily damaged structures. However, an eligible local or state government may pick up and dispose off disaster-related debris placed at the curb by those private individuals.

(c) **Drainage Structures.** Debris removal from certain drainage structures may have to meet the following criteria:-

(i) **Reservoirs.** May be eligible in accordance with the criteria for debris basins. Removal of debris that poses immediate threat of clogging or damaging intake or adjacent structures may be eligible.

(ii) **Natural Streams.** Not normally eligible for assistance. Only debris that causes a threat to lives or public health and safety or damage to improved property from a 5 year flood event is eligible. It includes reservoirs and natural streams and may be eligible. The pre-disaster level of debris in the channel or basin is of particular importance to determine the amount of disaster-related debris.

(d) **Roads and Highways.** Debris to be cleared from roads and highways, including the travel lanes and shoulders, roadside ditches and drainage structures, and the maintained right-of-way.

(e) **Recreational and Wilderness Areas.** Debris removal is essential when it affects public health or safety or proper utilisation of such facilities. Trees frequently constitute a large part of debris in such areas.

8. **Coordination of Local Resources.** It is the responsibility of local administration to maintain an inventory of all resources in the form of personnel and equipment and their capabilities for response to a clean-up operation. This will include a working knowledge of the local contractors as well.

### **Role of NCC**

9. NCC cadets have a significant role to perform in augmenting the debris removal operations in conjunction with civil and army authorities. They can be gainfully employed in spreading public awareness and information about the magnitude of the situation, debris removal, identification and guidelines, disposal areas, environmental standards utilized and associated health risks. They can be employed for reporting/controlling illegal dumping activity.

## **SECTION-12**

### **COLLECTION AND DISTRIBUTION OF AID MATERIAL**

1. **Introduction.** Collection and distribution are essential steps in the loop of demand and supply. The normal items reach the common man from the manufacturers through a well laid out delivery systems where in many organisations work as a well oiled machine, however on the occurrence of a disaster this chain is completely broken down. Till this chain is not established there is an urgent need to create alternate methods of collection and distribution of emergency articles so that they reach the effected persons.

#### **Source and Nature of Aid Material Required**

2. To understand and help in this process it is essential to identify the sources and the types of aid material which will be required. The various sources and nature of aid material are discussed in succeeding paras.

3. **Type of Aid Material.** The types of Aid material required can be divided as under:-

(a) **Personal Clothing and bedding Items.** Personal items such as clothing for personal use, bedding, rain coats, blankets and other articles of bedding and shoes.

(b) **Medical and Life Saving Equipment.** In the medical field, items like, medicines and life saving drugs, provision of doctors and nursing staff, ambulances, mobile hospitals and equipment for immediate medical needs.

(c) **Housing and Shelters.** As a number of people are likely to become homeless due to damage to building and shelters there would be a need for housing facility and include shelter provision such as tentage pre-fabricated huts, water proof material for temporary overhead protection.

(d) **Transportation.** Restoration of transport system may take a long time. Thus transportation to move effected personnel to safer areas must be catered for by government organisations and NGOs.

(e) **Debris Clearing Equipment.** The effected area require to be cleaned off debris. Equipment varying from mechanical machines to hand operated equipment will be required. Some items which may be required are cranes, bulldozers, tippers, shovels, pick axes, drills and hand drills and ordinary hammers.

(f) **Animals and Live Stock.** The disaster also effects livestock. It will also require immediate fodder and rehabilitation. This is important as major outbreak of epidemics are due to death of animals.

(g) **Disposal of the Dead.** This aspect needs speedy attention, the recovery of bodies, identification, handing over to relatives, maintaining of proper records and eventually ensuring that all the dead get disposed with dignity. Equipment and personnel relating to the same will be required.

(h) **Communication.** The entire command and control is based on speedy restoration of communications so that adequate nets on radio sets can be established and telephone line are restored at the earliest.

(j) **Food, Water and Cooking Facilities.** Food is the major requirement of the effected population. Food needs to be provided so that they can survive. Some of the things which will be required are survival food kits which may be air dropped or given via road or water routes. Other items are dry rations, fresh vegetables, pre - cooked food packages, water in dispensers and bottles for individuals and in water bouser for cooking and general use.

(k) **Electricity and Lighting Facilities.** Darkness and destruction are enough to demoralise and kill the spirit of survival. Therefore provision of lighting facilities is very essential. Some items like lanterns, patromaxes, gas lights need to be provided and all efforts must be made towards restoration of electricity at the earliest.

4. **Sources of the Items.** Whenever there is a disaster, in addition to the Government Organisations a large number of NGOs and more so the general public flows with generosity and stores are received from a large number of agencies, such as :-

(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.

5. **Collection.** Government Agencies and Non Government Organisations (NGOs) are the primary collection agencies. All items need to be collected and sifted as per the requirement/groups and categories. It has been often observed that a large number of items get collected but do not reach the effected persons due to lack of planned and coordinated collection and distribution system. The following need to be kept in mind:-

- (a) Establish collection centres at various locations of the state keeping in mind the provisioning capabilities of the locality.
- (b) Collect items as per categories initially itself to avoid wasting time in sifting and repacking.
- (c) Perishable items of food to be collected at special centres to ensure speedy transportation.
- (d) Do not collect items which are not required.
- (e) Ensure that the next stage/ centre of collection is ready to accept these items and proper records are maintained of the arrival and dispatch of packages.
- (f) Sift the packages as per priority of requirement.
- (g) Ensure life saving drugs are routed through different collection and distribution channels to avoid delay.

6. **Distribution.** The distribution system is the most essential process for the timely receipt of emergencies items during and after a disaster. The entire process of rehabilitation depends on this system. Initially it is recommended to make the Public Distribution System (PDS ) as the base for the distribution as it is a already available functional chain of supply. Additional manpower may be required and minor adjustment will also be required keeping in mind the situation on ground. However the following needs to be also done:-

- (a) Establish distribution system as per the concentration of population and the established refugee camps and rehabilitation centres.
- (b) NGOs should carryout work in consultation with government agencies to ensure that proper flow of required material is received by all the people.
- (c) Individual organisation must also work in consultation with government organisation as per the priority of the items to be distributed.
- (d) Ensure that adequate items are distributed and records are maintained and given as per the available details of family members. Initially minimum requirement should be provided per family which can be subsequently increased with more availability of items.
- (e) If the collection process has been properly carried out it will save time and the material would reach the effected persons with speed.
- (f) The entire area should be divided into grids during rehearsal stage and adequate facilities should be put in place during this stage for use at a later date.
- (g) The bulk breaking of the items would have already been carried out at the collection stage. However, if for the limitation of transportation it is required to be repacked, it must be done speedily.
- (h) Major essential items can be moved by air, road, rail, waterways or a combination of any of these means depending on the ground situation.

### **Role of NCC Cadets**

- 7. NCC cadets can play an important role in the collection and distribution of items. Some of the tasks which can be performed by them are as under:-
  - (a) **Collection Stage**
    - (i) The Cadets must be incorporated in the process at the planning stage itself to identify the sources, the areas of importance and the agencies which they are likely to work with.
    - (ii) Cadets can help at the time of collection and help in maintaining records.
    - (iii) Help in the sifting of articles and bulk breaking and packaging.
    - (iv) Help in dispatch of items by various means.
    - (v) 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.

(vi) 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.

(b) **Distribution**

- (i) Can be co-opted with the PDS system.
- (ii) Work along with NGOs or other organisations.
- (iii) Work independently in the chain of NCC collection and distribution system.
- (iv) Work alongwith Defence Forces who are major contributors in crisis management.
- (v) Operate and man various posts established for escorting and guiding delivery agents with adequate signal communications.

### **SECTION-13**

#### **MESSAGE SERVICES**

##### **Introduction**

1. In the context of disaster management, fail-safe communication is vital during a wide range of actions, from the significant phase of ‘preparedness’ to impart knowledge, mass education and public awareness, to warning of impending threat of disaster, intimation to authorities calling for various resources and conducting disaster management. The basic requirements of unfailing and good communications during disaster are thorough knowledge of situations, clarity and conciseness of the message upto assimilation of the message received and correct and immediate response.

2. The various methods of communications may include:-

- (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.

### **Phases of Communication**

3. There are two basic phases of communication for which action to be taken is as follows:-

- (a) **Prior to a Disaster.**
- (i) Assessment of all probable causes of disaster likely to occur in the area is required to be made.
- (ii) All resources to be identified.
- (iii) Contingency action plan.
- (iv) Communication personnel placed ‘On call’.
- (b) **After A Disaster.**
- (i) Set up the communication facilities.
- (ii) Convey facts without creating any panic.

### **Tips for Essential Communication**

4. When an emergency or disaster is determined, it may become necessary to evacuate an entire facility. In some situations normal utility services, including electricity and telephone services may become non-existent. Some tips with regard to an alternate site to be considered are as under:-

- (a) Communication equipment should be located at a safe site for use in an emergency and disaster situation e.g. at a height in case of floods.

- (b) Plans for all possible contingencies, from a temporary or short-term disruption to a total communications failure, must be considered.
- (c) Procedures for restoring communications systems must be established.
- (d) Options may include messengers, telephones, portable two-way radio sets, amateur radios, field telephones, point-to-point private lines, and satellite and VHF/UHF/HF radio transmitters.
- (e) Determine the broadcast/reception area or zone of influence of the messages.
- (f) Identify the organisation/firm that is responsible for provision and controlling of the sets.
- (g) Location of the messenger services and tele-communication facilities.
- (h) Lay down standard operating procedures for operation of the communications facility and functioning of the message services.

## **CHAPTER-VII**

### **SOCIAL SERVICE**

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## **SECTION-1**

### **WEAKER SECTIONS OF OUR SOCIETY AND THEIR NEEDS**

#### **Introduction**

1. India is still divided into many endogamous groups, or castes and sub-castes, as a result of centuries of practicing a form of social hierarchy called the caste system. The traditional caste system, leads to severe oppression and segregation of the lower castes and other weaker sections and limits their access to various freedoms e.g, education and employment. According to ancient scriptures such as ‘Manu Smriti’, caste is ‘Varnasrama Dharma’, which means ‘offices given according to colour’. The practice of caste in India followed this rule.
2. After independence the constitution of India included safeguards for suppressed and other backward classes. The constitution came into effect from 26 January 1950. The Indian constitution prohibits any discrimination based on religion, race, caste, sex and place of birth. But, while providing equality of opportunity for all citizens, the constitution also contains special clauses to ensure reservation, ‘for the advancement of any socially and educationally backward classes of citizens or for the Scheduled Castes and the Scheduled Tribes’.

#### **Classes of Society**

3. The weaker section of society comprise of the following categories:-
  - (a) Scheduled Caste (SC) and Scheduled Tribes (ST).
  - (b) Other Backward Classes (OBC).

#### **Scheduled Caste and Scheduled Tribes**

4. Scheduled Castes and Scheduled Tribes are communities that are accorded special status by the Constitution of India. These communities were considered “outcastes”. These castes and tribes have traditionally been relegated to the most menial labour with little possibility of upward mobility and are subject to extensive social disadvantage and discrimination. The Scheduled Caste people are also known as Dalits and the Scheduled Tribes people as Adivasis. Mahatma Gandhi used the terms Harijans and Girijan , for SC and ST respectively. According to 2001 census, population of SC and ST is approximately 16% and 8% of India’s total population respectively.

#### **Other Backward Classes (OBCs)**

5. These classes are a group of sub castes which are socially and educationally backward while still having a higher status than scheduled castes or scheduled tribes. As of 2006 approximately 2300 communities are listed backwards. Central and all state governments are enjoined to ensure their social and educational development.

## **Problems of Weaker Sections and their Solution**

6. **Problems.** The general problems are widespread poverty, unemployment, backwardness, untouchability and lower status in society. They suffer discrimination in all walks of life vis-à-vis the privileged sections of the society. Scheduled tribes are basically nomads and don't have any land to settle down or cultivate. OBC comprises persons belonging to backward classes of country and due to backwardness, remoteness or lack of infrastructure and development, job opportunities are grossly insufficient.

### **7. Likely Solution**

(a) **Education.** Right approach would be to provide all weaker sections proper primary education , to prevent them from dropping out of school and making them 'natural competitors' and to give scholarships at higher level. Number of educational institutes should be increased.

(i) At the village level opening of schools which impart basic education coupled with the vocational skill that can be taught with the naturally available resources e.g. basket weaving, painting printing, tailoring, embroidery, pottery, music, dance, etc will help in achieving self sufficiency. Specially trained teachers should be adequately compensated so that talented people do not hesitate to go to villages.

(ii) School should also educate the villagers on moral values, hygiene, first aid, family planning, budgeting, savings etc.

(iii) Villagers must be educated on the need for educating the girl child as she is the one responsible in bringing up the future generations. She should therefore develop courage, self confidence, competitive spirit and a sense of equality with boys.

(iv) Social evils such as the dowry system, child marriages and superstitions, should be taken up for discussion and their drawbacks be pointed out, so that they become events of history.

(b) **Employment.** Provision of land to landless and helping them in working out a life by providing softer loans for cultivations etc can take care of employment problems to some extent. Taking up of infrastructure projects will help in creating large number of jobs.

(c) **Reservation in Educational Institutions and Govt Jobs.** Reservations are intended to increase the social diversity in campuses and workplaces by lowering the entry criteria for certain identifiable groups who are grossly under represented in proportion to their number in general population.

### **Reservation Policy of the Government**

8. Reservation is a term used to describe policies whereby a portion of jobs, positions or academic seats are set aside or reserved for a given group. Government has taken initiatives on a large scale by providing reservations in different fields such as government jobs, educational institution and other such government aided and semi-govt institutions, to help the SCs, STs and OBCs. A certain percentage of seats are reserved for sections so that the discrimination against them can be reduced and they will be provided with equal opportunities to work and grow. The Constitution lays down that 15% and 7.5% of vacancies in government-aided educational institutes and for jobs in the government /public sector are reserved as quota for the SC and ST respectively. Although originally supposed to last for 10 years, the reservation system has continued till date and now applies to higher education and legislative offices also. Currently 22.5% of the seats in higher education institutes under the Central Government are reserved for SC and ST, and 27% for OBCs.

9. It was felt that intended benefits were not percolating down to the deserving candidates of OBC. Well-to-do families only within OBC were reaping the benefits again and again. Hence ‘creamy layers’ in the OBC is excluded from the policy of reservation. This layer includes children of President, Vice-President and Judges of the Supreme Court and High Court. Children of members of the UPSC and State Public Commission, Chief Election Commissioner, Comptroller and Auditor General of India and other persons holding Constitutional positions of this nature, also fall under the creamy layer category. Further, persons with gross annual income of Rs2.5lakh or above are also excluded. The creamy layer also covers children of Group A/Class 1 officers of the All India Central and State Services.

### **Points in Favours of Reservation**

10. (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.

### **Points in Favour of Anti Reservation**

11. (a) Economic conditions should be the basis for reservation. Reservation based on economic backwardness can be the only way to give justice to all deprived sections of society.
- (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.

### **Contribution of NCC Cadets**

12. Our NCC Cadets are from every nook and corner of India. We must therefore utilise this huge potential of eager, helpful, energetic, educated and talented cadets, to achieve our aim of imbibing values and skills amongst the weaker sections of our society which will make themselves self-sufficient and confident. They will cease to be a drain on the resources of India and will become valuable contributors to our economy.

### **Conclusion**

13. There is no doubt that the interests of the weaker sections need to be protected and their legitimate needs fulfilled so that we can have a just and fair society where the under privileged are not discriminated against and no section lags behind the other.

## **SECTION-2**

### **SOCIAL SERVICE AND ITS NEED**

#### **Introduction**

1. The origin of social service is ancient, stemming from the tenets of the Judaco-Christian teachings. The modern institutional service took shape with the impact of the industrial revolution upon family and community life , substituting as it did an industrial for an agrarian economy, urban living for rural living and creating dependence upon the wage system as a means of livelihood.

#### **Definition**

2. The term ‘Social Service’ is defined broadly as the provisions made by governmental or voluntary efforts to meet income maintenance , medical care , housing and recreational needs and provisions for the care and protection of recognised special groups.

#### **Objective**

3. Social service characterises a formalised way of helping people to help themselves. It is based on the reorganization of variations in individual capability and

variations in the social structure . The objective is to help the individual to utilise his capability for his own welfare and for that community.

### **Methods**

4. There are generally three accepted methods identified in social service which are as under :-

- (a) **Social Case Work.** This aims to help the individual make maximum use of the established community, through understanding the individual in his total situation.
- (b) **Social Group Work.** It seeks to help the individuals utilize their fullest capacity for their own welfare and for the welfare of the group as a whole, through understanding of the behaviour of individuals in a group setting.
- (c) **Community Organization.** It attempts to help groups of individuals or groups of agencies to work together so that their combined efforts will be useful for the social welfare of the whole community .

### **Types of Social Services**

5. The various types of social services which have been initiated are as under :-

- (a) Education.
- (b) Family welfare, Medical care, Family planning and Nutrition.
- (c) Provision of Water and Cooking fuel, Roads, Electricity and Sanitation.
- (d) Old age support systems.
- (e) Employment.
- (f) Social assistance, Social security and Care & protection.
- (g) Housing and Rehabilitation.
- (h) Recreation, Sports and Social activities.

## **SECTION-3**

### **FAMILY PLANNING**

#### **Introduction**

1. The rapid growth of population is one of the major problems facing the country today. Considering that the population of the country is over 1000 million and the annual surplus of births over deaths at 15 million, the population explosion continues. Some social facts like reluctance of uneducated masses and minority groups towards adopting family planning programmes emerge as major constraints. Family planning is not only concerned with limiting the measure of children through preventive measures, but very much related with aspects of health care and better standard of living.
2. Family planning is defined as the voluntary, responsible decision made by individual and couples as to the desired family size and timing of birth. Therefore on the micro level it means children are born because they are wanted and provided for and on the macro level it contributes to the betterment of human life.
3. **Family Planning.** Family planning versus population growth was the motto of the national population policy of independent India since the first five-year plan. Family planning programme is perhaps the most effective policy-intervention to stabilise population size. Since the effect of the program varies from state to state, the impact also varies from state to state. Contraception is the need of the day to counter the explosive increase of population. After independence, family planning was stepped up. The sole aim was the lowering of the birth rate. However, there was no significant economic or social measures to accompany it.

#### **Factor Affecting Family Planning**

4. This concept deals with the health consequences of uncontrolled fertility:-
  - (a) Fatal, infant and childhood morbidity.
  - (b) Poor physical and intellectual development of the unwanted child.
  - (c) Pregnancy wastage.
  - (d) Maternal risk of illness and death.
  - (e) Father's risk of hypertension and gastric ulcers.
  - (f) Marital risk.
  - (g) Poor nutrition.
  - (h) Environmental hazards such as overcrowding, poor water supply and atmospheric contamination.
  - (j) Increased incidents of genetic diseases.

(k) Mental health problems of parents as well as children due to strains caused by large family.

### **Methods of Family Planning**

5. Family planning methods are:-

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

### **Measures to Attain Objectives**

6. Effective measures to be under-taken are:-

- (a) Voluntary encouragement of family planning can have positive health benefits. In small families mother takes more care of child which is necessary for healthy development.
- (b) Stringent laws be enacted to curb the menace and the violators severely punished. Couples violating family norms should be debarred from contesting elections and their voting rights withdrawn. A massive campaign could be launched through the electronic and print media to create conducive environment.
- (c) Take steps encouraging a two-child norm so that growing population is controlled.
- (d) Educating women particularly in backward and rural areas be taken up with complete sincerity which would help in eradicating this menace.
- (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. In this regard, couples should be made to attend counseling sessions after marriage in which they should be made aware of the needs and benefits of family planning.
- (g) The problem can also be solved by providing basic health care facilities specially to the backward classes and such families to be given assurances that proper health care would make sure their children survive.
- (h) Involvement of religious leaders in the programme.
- (j) Development of rural areas.

## **Conclusion**

7. Family planning assumes greater importance today as population has passed the one billion mark. Rapid growth of population is straining the available resources. In India resources are already scarce. There will be scarcity of land, houses and food coupled with unemployment. This will give rise to crime in the society. There is an immediate requirement to educate the masses involving religious, political and intellectual aspects to motivate them to adopt family planning if we want to see India as the economically and technologically leading nation in the world.

## **SECTION-4**

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

#### **Introduction**

1. Few diseases have been feared as much as HIV/AIDS has been ever since human beings began efforts to prevent and control major diseases. Although a large number of health problems continue to defy human efforts to control them, none of them presents a challenge greater than the prevention and control of HIV/AIDS. This is mainly because at the moment there is neither a scientifically proven cure for HIV/AIDS nor a vaccine to prevent it. Globally, an estimated 38.6 million people are living with HIV, of which an estimated 4.1 million were new infections. In Asia, an estimated 8.2 million people are living with HIV including 1.2 million new infections last year. In India, an estimated 5.2 million people are living with the virus, most of whom are poor and marginalised. Although HIV is more common in six states of India – Tamil Nadu, Karnataka, Andhra Pradesh, Maharashtra, Manipur and Nagaland – it is present all over the country.

2. HIV is not just a disease. It is a developmental problem. Just as in other countries, the patterns of HIV infection in India reflect underlying patterns of social and economic inequality, such as in terms of distribution of wealth, power, gender relations, women's status, poverty, lack of sustainable livelihoods, civil unrest and disorder, etc. Several misconceptions about the causes and mode of transmission of HIV/AIDS exist in India. These misconceptions and the social stigma associated with AIDS have been major barriers to prevent and control this disease. They have also been major hurdles in providing the desirable social and medical support to people with HIV infection. A concerted and broad based approach is necessary to mitigate the adverse impact of HIV and AIDS.

## **What is HIV/AIDS**

3. Although HIV and AIDS are often used synonymously, they are different. HIV (Human Immuno-deficiency Virus) is a virus that gradually destroys the body's immune system. AIDS (Acquired Immuno Deficiency Syndrome) is a condition wherein various diseases affect the body because of the body's weak natural defense mechanism – the immunity. AIDS stand for Acquired (not inborn, but passed from mother to baby), Immune (relating to the body's immune system, which provides protection from disease causing bacteria/viruses/ fungi); Deficiency (lack of response by the immune system to bacteria / viruses / fungi / cancer cells); Syndrome (a number of signs and symptoms indicating a particular disease or condition).

4. Therefore, AIDS is an acquired condition in which a person may have various diseases that cause similar symptoms, all of which are due to the body's diminished ability to fight diseases. Anyone who has HIV infection will develop AIDS over a period of time.

## **How Does HIV Affect the Body**

5. A special variety of white blood cells called T lymphocytes secrete chemicals that are necessary for destroying the disease causing germs or agents. HIV destroys T lymphocytes (also called T-cells), and thereby reduces the body's ability to fight diseases. T-cells contain a protein called CD4 on their surface. HIV first attaches itself to CD4 and then fuses with the T-cells to multiply. Fusion with T-cells destroys the T cell and several copies of HIV are produced.

## **How Does HIV/AIDS Spread**

6. HIV is present in all body fluids of an infected person and is more in number in blood, semen and vaginal fluids. HIV infection normally spreads when there is contact with these body fluids through four main routes:-

- (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.

7. **Sexual Transmission.** The most common route of spread of HIV infection is through unprotected sex between two people, where at least one has HIV infection. Unprotected sex means having sex without condom. Although the risk of HIV being transmitted during one sexual act depends upon several factors, it is important to remember that even one episode of unprotected sex with an infected partner can transmit HIV. Increased number of unprotected sex increases the risk of infection. Detailed below are some issues related to sexual transmission of HIV.

8. **Increased Risk for Women.** Women are at greater risk of developing HIV infection through unprotected sex. This means that the risk of transmission of HIV from man to woman is higher than that from woman to man. There are five main reasons why women are at greater risk:-

- (a) The semen from the infected male sexual partner remains in the woman's vagina for a longer time, thereby increasing the duration of contact between infected semen and delicate lining of the vagina.
- (b) The surface area of the vagina is larger than the surface of tip of the penis in men, which provides greater opportunity for the virus to enter the body.
- (c) Many women with sexually transmitted infections (STIs) do not have any symptoms and therefore do not seek treatment. Presence of STIs increases the risk of HIV transmission.
- (d) The gender imbalance makes it difficult for women to exercise their sexual rights. This means that they have less control over, when and with whom, they have sex.
- (e) Women are less likely to take treatment, especially for STIs, which increase the risk of HIV transmission.

9. **Sexually Transmitted Infections.** Presence of STIs increases the risk of HIV transmission. People who have ulcers in the genital organs or abnormal discharge either from the penis or the vagina are at higher risk of HIV transmission. Early treatment of STIs reduces the risk of HIV infection.

10. **Anal Sex.** Although anal sex is more common among men who have sex with men (MSM), some heterosexual partners also practice it. Anal sex has higher risk of HIV transmission as compared to vagina sex. This is mainly because the delicate inner lining of the anus gets easily damaged during anal sex. This damage helps the HIV to enter the body easily.

11. **Menstruation.** The menstrual blood of a woman with HIV infection will contain the virus. Thus, sexual intercourse during menstruation with an infected woman increases the risk of the male partner getting HIV infection.

12. **Blood Transfusions.** As per the guidelines of the National AIDS Control Organization (NACO), it is mandatory to test blood for HIV before transfusion. The risk of transmission of HIV through tested blood is therefore very remote. The only possibilities of infection through blood are if the blood was not tested for HIV or the HIV infection was in the *window period*. Window period is the term used for the duration between the entry of HIV in the body and the detection of its antibodies through blood tests. Window period is normally up to three months. This means that during this time, even if a person is HIV infected he/she will test negative. He/she can however transmit infection to others. **Blood donation has no risk of getting HIV infection because the needle and other equipment used for collecting your blood are safe.**

13. **Intravenous Injections.**

- (a) When people inject drugs intravenously, they may draw small amounts of blood into the needle. If another person uses this needle immediately, the blood containing HIV will be injected into the second person. Thus, he/she can also be infected with HIV. Normally, people who are addicted to intravenous drugs form a group and share needles with each other. Thus, the infection can spread very rapidly from one to another in the same group. In India, intravenous drug abuse is the most important cause of HIV infection in the North East.
- (b) Despite several concerns about the poor sterilisation practices by some doctors, especially in rural areas, HIV infection through injections given at a health centre is not a common mode of transmission in India. This is mainly because most of these doctors, even if they are not qualified, boil them for a short time. HIV is destroyed by even short duration heat and drying. Shorter boiling time for sterilizing needles may not destroy other disease causing germs such as Hepatitis B virus. It is also important to remember that injections that are given in the muscles, under the skin or in the skin layers carry little risk of transmitting the HIV. They however can carry higher risk of transmitting infections such as Hepatitis B.
- (c) For several years now, rumours are periodically spread about people with HIV infection intentionally pricking other people with infected needles in public places such as movie theatres, markets, bus-stops etc. with an intention of transmitting the infection to them. These rumours are baseless because of three main reasons:-
- (i) There should be adequate amounts of blood containing the virus on the needle before it can cause infection. A needle that has been merely pricked in the body of a person with HIV is not likely to have the number of HIV necessary to cause infection.
  - (ii) Even if the infected person were to use needle that has been used intravenously, the virus may not be alive if the blood on the needle has dried up.
  - (iii) When an infected needle is pricked into the muscles, the risk of transmitting the infection is very low.

14. **Mother to Child Transmission.** Mother to child transmission of HIV can occur in three ways:-

- (a) During pregnancy, when the HIV crosses the placenta.
- (b) During delivery.
- (c) During breastfeeding.

15. Although HIV is present in breast milk, it does not mean that the baby will always be infected with it. Also, in a country such as India, the alternative to breast-feeding is bottle-feeding, which is not only expensive but also carries a higher risk of diarrhoea, poor nutrition and as a result death. Since the benefits of breast-feeding are much more than the risk of getting HIV infection, it is recommended that women with HIV infection breast-feed their babies.

16. **Skin Piercing.** There are several cultural practices in India that involve skin piercing such as piercing ears or nose for ornamental reasons, tattooing, etc. Although skin piercing is not currently one of the major routes of transmission of HIV infection in India, it is desirable to use sterilized equipment for prevention of infections such as Hepatitis B.

17. **Oral Route.** Many people believe that kissing, sharing utensils etc. with people who have HIV can transmit the infection. This is not true. HIV has not been shown to be transmitted through saliva. If the virus is ingested in the stomach, the acids in it are likely to inactivate or destroy the virus. The risk through oral route may be there only if there are cuts or wounds in the mouth or bleeding gums.

18. There are several misconceptions about the spread of HIV infection through oral sex. Some studies have indicated that oral sex has higher risk of transmitting HIV infection as compared to kissing. This is because oral sex allows vaginal secretions and/or semen to enter the mouth. In case there are wounds or injuries in the mouth, the virus present in vaginal secretions or semen can easily enter the body. Although the risk of getting HIV infection is lower with oral sex if there are no wounds in the mouth, it is not recommended as an alternative to safer sex, i.e. sex using condom.

### **How is HIV Diagnosed**

19. HIV is normally diagnosed through blood tests that detect antibodies to HIV. Although many private laboratories conduct HIV test, it is recommended that they are done only at the Voluntary Counselling and Testing Centres (VCTCs) set up by National AIDS Control Organisation (NACO). At these centres, person's risk assessment is done before recommending testing for HIV. Counselling is done before and after the test in order to ensure that the person being tested is aware of all the issues related to HIV transmission, prevention, treatment, care and support. In case of a negative test result, the test is repeated after three months to rule out the possibility of the first test being carried out in the window period.

20. Confidentiality is strictly maintained while testing for HIV. This means that no one other than the person being tested is informed about the test results. He/she is encouraged to share the results with those who can offer emotional and other forms of care and support.

21. It is desirable that people with high-risk behaviours test for HIV at the earliest in order to:-

- (a) Prevent further transmission of HIV.

(b) Improve their quality of life and longevity by adopting recommended lifestyles and treatment as and when necessary.

### **Prevention of HIV/AIDS**

22. HIV/AIDS can be prevented in four main ways:-

(a) Being in a mutually faithful sexual relationship. If this is not possible, then correct and consistent use of condoms for every sexual act, irrespective of the type of sex is essential.

(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.

23. **Condom Use.** Condoms have two main advantages-they prevent infections such as sexually transmitted infections (STIs) and HIV, and also prevent pregnancy. Many people use condoms only for commercial sex. It is important to remember that anyone who is not in a mutually faithful sexual relationship should use condoms for every sex.

24. Some people argue that condoms do not offer complete protection. This is not true. Several studies have persuasively indicated that failure of prevention of pregnancy with condoms is often because of inconsistent and incorrect use of condoms. This is also true for sexually transmitted diseases including HIV/AIDS.

25. Some people complain that condoms, especially those that are distributed free by the government, are probably not of good quality and therefore break during sexual act. These complaints are not valid as several strict quality control methods are adopted during condom manufacturing. They normally break only if they have not been used correctly or have been damaged because of improper storage.

26. A belief that condoms reduce sexual pleasure is one of the major barriers to condom use. This is also not true. There may be a difference in the sensation in the initial stages of using condoms but most people adapt to them very soon. Also, newer condoms such as ribbed condoms, dotted condoms, etc. are reported to enhance pleasure for some people.

27. **Preventing Parent to Child Transmission.** NACO has set up 'Prevention of Parent to Child Transmission (PPTCT) centres in all districts of the six states where HIV infection is high and in several other hospitals in other states. In these centres, pregnant women are counselled and tested for HIV. If they are positive, they are given medicines

for HIV at the time of delivery and caesarean section is done to surgically deliver the baby. This reduces the risk of infection for the newborn from about 45% to less than 2%.

### **Symptoms of HIV**

28. Most people infected with HIV are not likely to have any symptoms for about three to ten years. Few develop symptoms earlier while few others may not develop any symptoms for more than ten years. Even if a person does not have symptoms, he/she can transmit the infection to others. This is why it is recommended that anyone who has sex with a partner who is not in mutually faithful relationship should use condoms for every sex.

29. A normal person has about 500 to 1500 CD4 cells per millilitre of blood. When the CD4 count decreases below 200, people with HIV can present with opportunistic infections, which are infections that affect the body because of poor immunity. Opportunistic infections are caused by bacteria, virus, fungus and parasites. They may also get some types of cancer.

30. When HIV progresses to AIDS, the infected person would have had unexplained weight loss of more than ten percent, unexplained diarrhoea or fever for more than one month, fungal infections, tuberculosis or severe bacterial infections.

31. **Tuberculosis**. Since tuberculosis is already one of the major health problems in India, people with HIV infection are at higher risk of getting it. Very often, tuberculosis is the first indication that a person has HIV infection. Although tuberculosis largely affects the lungs, it can affect other organs of the body also. People with AIDS are more likely to get infection in other organs of the body. One of the major concerns related with tuberculosis and AIDS is resistance of the tuberculosis bacteria to several medicines that were earlier effective for its treatment. Common symptoms of tuberculosis include cough, fever, increased sweating at nights, loss of weight and excessive fatigue.

### **Ethical Issues Related to HIV Infection**

32. Ethical issues related to HIV infection are mainly for ensuring that a person with HIV infection leads a life of dignity. HIV testing should not be done without informed consent of the person to be tested. This means that the person to be tested should have understood what test results would mean and its likely impact on his/her life. People with HIV infection have as much right to get education, employment and medical treatment from any source as everyone else.

### **Role of the Youth in Preventing HIV**

33. HIV is more common in the most productive age group of 15-45 years, and therefore causes major impacts on the economic status of the affected individual, family, community, and the nation at large. The young adults can play a very important role in preventing the HIV at community level, and also minimise its impact at all levels.

34. Youth can assume responsibility in preventing HIV infections. Both men and women share the responsibility of avoiding behaviour that might lead to HIV infections. Equally, they also share the right to refuse sex and assume responsibility for ensuring safe sex. In many societies, however, men have much more control than women with whom and how they have sex. In such cases, men need to assume greater responsibility for their actions.

35. Since everyone is entitled to fundamental human rights without discrimination, people living with HIV/AIDS have the same right to education, employment, health, travel, marriage, recreation, privacy, social security, scientific benefits etc. All should share responsibilities for avoiding HIV infection / re-infection.

36. NGOs and youth have an important and very special role to play. The close interpersonal interaction that NGOs/youth have with people in the communities they work in is extremely useful for implementing the behavioural interventions necessary for HIV/AIDS prevention and care. NGOs have a lot of flexibility and the capacity to accommodate changing programmes and public needs and can innovate and implement new initiatives more easily.

37. The youth needs to be actively engaged not just in spreading awareness about HIV but also in promoting responsible behaviours, especially those related to sexual behaviours and drug abuse. Peer pressure often leads to unsafe behaviours such as experimenting with alcohol, drugs and sex. By creating a positive peer pressure, it is possible to delay the age at first sex, avoid sex before marriage, practicing safer sex, and preventing alcohol and drug abuse. The stereotypical image of a “macho” male needs to be changed to depict responsible behaviours.

38. The young can also play an important role in addressing gender imbalance, which is one of the important factors for underdevelopment and HIV transmission. Increasing values to the roles and responsibilities assigned to women, increasing access to services for women and encouraging them to be involved in decision making at individual, family and community levels can address the gender imbalance.

39. Youth should educate general public by spreading the information that 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).

## **Conclusion**

40. HIV can be transmitted from person to person only if the body fluids like blood, semen and vaginal fluids come in contact with body fluids of an HIV infected or AIDS patient. Young people, with or without HIV/AIDS, have an important role to play in actively countering discrimination against young people living with HIV/ AIDS. We require to provide a platform for people living with HIV/AIDS, so that we work together according to their interests. We also need to mobilize support of local authorities and community leaders to listen to people living with HIV/AIDS and to combat actively against their discrimination and exclusion. Setting up training programmes, to improve the integration of the young people suffering from HIV/AIDS into society, is the need of the hour.

## **SECTION-5**

### **CANCER, ITS CAUSES AND PREVENTIVE MEASURES**

#### **Introduction**

1. Six million worldwide die of cancer every year. The present rapid growth rate of cancer is required to be controlled or retarded to prevent an epidemic-like situation in India. If growth of cancer is not controlled, it may lead to a ‘National Crisis’. Sixty percent cancer cases are preventable and it is curable if detected and treated in time. Experts strongly feel that improved level of cancer awareness to the masses will help prevention of cancer considerably. NCC as a disciplined organization with assistance and co-operation of Non Governmental Organizations can play a vital role by educating masses on cancer awareness. There are billions of cells in the human body. Normally they grow in a well-regulated pattern. But when cancer sets in, a group of cells, suddenly starts multiplying and forms a tumor or lump. As the tissue progresses in the degree of malignancy, it invades the original site where it has occurred and through blood vessels or lymphatic channels can reach distant parts of the body.

#### **Types of Cancer**

2. Different types of cancer that men and women suffer are :-

- (a) Oral cancer.
- (b) Larynx cancer.
- (c) Lung cancer.
- (d) Cervical cancer.
- (e) Breast cancer.
- (f) Prostate cancer.
- (g) Colon cancer.

### **Causes of Cancer**

3. 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.

### **Effects of Cancer**

4. (a) Pain.

- (b) Mental anguish.
- (c) Results in loss of work.
- (d) Expenses to family.
- (e) Loss of loved one.

### **Cancer Signs**

5. An early detection of cancer can lead to an early cure. The cancer signs are:-

- (a) A change or lump anywhere in body however small.
- (b) A persistent sore throat that does not heal.
- (c) A change in a mole or a prominent new spot on the skin,
- (d) A constant cough or hoarseness.
- (e) Frequent difficulty in swallowing.
- (f) Persistent indigestion.
- (g) Vomiting and coughing of blood.
- (h) Persistent diarrhoea or constipation.
- (j) Blood in urine bowel movement.
- (k) Weight loss without causes.
- (l) Abnormal vaginal bleeding.
- (m) Unexplained loss of appetite.

6. Early **warning sings** due to **gutka and tobacco** chewing are:-
- (a) Any sore and ulcer on tongue, cheek or gums that does not heal within a fortnight.
  - (b) Red and white patches on the lips or mouth.
  - (c) A lump or swelling anywhere in the mouth or neck.
  - (d) Difficulty in walking.
  - (e) Difficulty in speech.
  - (f) Repeated bleeding in the mouth.
  - (g) Numbness in the mouth.
7. Warning signs of **lung cancer**, which kills more people than any other type of cancer, are:-
- (a) Increasing cough and breathlessness.
  - (b) Change in voice.
  - (c) Pain in chest.
  - (d) Lump in neck.
  - (e) Coughing out blood.

### **Preventive Measures**

8. Endeavour should be made to prevent cancer from ever occurring by :-
- (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.

### **Myths About Cancer**

9. (a) Cancer is contagious and infectious.
- Fact :** Cancer is not transmitted by touching, eating from the same plate, kissing or sexual intercourse.

(b) Severe depression can cause cancer.

**Fact:** Cancer is a physical phenomenon and not related to emotions as its cause. However, depression affects the disease adversely.

(c) Cancer is a disease of the blood.

**Fact :** Though cancer cells travel through blood, it is not caused by any imbalance or impurity in the blood.

(d) Cancer spreads very fast after a knife (i.e surgical knife) touches it.

**Fact :** This impression has been created by the fact that many patients die soon after a surgery. This actually means that there was delay in diagnosis or treatment and by the time surgery was performed, the disease had spread substantially and became unmanageable. The patient did not die because of surgery.

(e) Cancer is a product of the ills of modern civilisation.

**Fact:** Indications of bone cancer have been found even in Egyptian mummies, more than 3000 years old. ‘Ayurveda’ also deals with cancer.

(f) Cancer is God’s punishment for sins committed.

**Fact:** Religious man like Ramakrishna Paramahamsa Dev and Maharshi Raman had cancer.

(g) Irregular food habits may cause cancer.

**Fact :** No co-relation exists. However, irregular food habits may cause other gastric problems.

(h) All moles and warts will become cancer.

**Fact :** Not necessarily. Attention is to be paid only when colour or size changes and if there is any discharge from them.

(j) All lumps in the breast are malignant.

**Fact :** Only a small percentage is malignant. However, all lumps need attention and self-examination helps in early detection of tumour in breast.

(k) Children do not get cancer.

**Fact :** Unfortunately there is no lower age limit for cancer.

(l) Nausea and other side effects mean the treatment is working.

**Fact** : Each patient responds differently to the treatment. Some get a lot of side effects, some hardly any.

(m) Pain killing medicines are habit forming and hence should be avoided as far as possible.

**Fact** : People do not get high on pain killer and hence these do not cause addiction. Patient should not wait till the pain becomes unbearable and then ask for a pain killer. It is easier to control the pain when it is mild.

(n) Over a period of time pain control drug will stop working.

**Fact** : At times the body may become used to a particular drug. In that case another drug or a combination of drugs or an increase in the dosage of the present drug may be prescribed.

(o) Homosexuals and lesbians are more vulnerable to cancer.

**Fact** : No scientific correlation exists.

(p) Neglected piles may turn into cancer.

**Fact** : Piles is enlargement of vein in the rectal wall and cancer is found above this area. However, bleeding through rectum should be carefully investigated.

(q) Cancer cannot be prevented.

**Fact** : Through at present no anti cancer vaccine is available, careful life style like healthy food habit, avoiding tobacco and betel products, limiting alcohol intake etc may help in preventing cancer.

(r) Physically weak people are more prone to cancer.

**Facts** : No scientific correlation exists.

(s) Cancer is incurable.

**Facts** : With timely detection more than 80% cancer is fully curable.

(t) A patient of TB cannot get cancer.

**Facts** : Cancer may develop in a TB patient or a patient having any other disease.

## **Conclusion**

10. Cancer is not a contagious disease. There is a life after cancer. Sixty percent of the cancers can be prevented through life style changes, diet, exercise, weight control,

alcohol in moderation and non consumption of tobacco in any form. More than eighty percent cancer is completely curable if detected and treated early. We must not get scared of cancer but must fight cancer with full sincerity. There is an urgent need to organise cancer awareness programmes in print and electronic media to reach out to the people in a meaningful manner.

## **SECTION-6**

### **CONTRIBUTION OF YOUTH TOWARDS SOCIAL WELFARE**

#### **Introduction**

1. Youth constitute the most creative segment of any society. Their role and contribution are vital to all societies and more so in a country like India with wide social, cultural and other demographic diversities. Youth constitute about 34 % of the total population of India and their role and contribution towards social welfare and nation building can not be ignored. For a better understanding of the subject it is important to first understand the basic of social welfare.

#### **Definition of Social Welfare**

2. Social welfare has been defined by a United Nations expert group as “Organised activity that aims towards a mutual adjustment of individuals and their social environment”. Social welfare is considered as including the attempts made by governments and voluntary organizations to help families and individuals by maintaining incomes at an acceptable level. This can be achieved by providing medical care and public health services, adequate housing and community development, facilitate social adjustment, facilities for recreation , in addition , pass legislation and creating facilities to protect against exploitation and to care for the underprivileged social groups. It will also include subject relating to education.

#### **Contribution of Youth Towards Social Welfare**

3. The contribution of youth towards social welfare have been discussed in the succeeding paras :-

(a) **Leadership.** Youth are the leaders of tomorrow and young and vibrant youth are essential for future leadership. Support is provided to voluntary organizations to participate in youth development programmes. Youth need to involve themselves in activities which will develop creditable leadership.

(b) **Community Service.** Youth need to work in social welfare activities and community services. Therefore, Community Service has been developed as an integral part of the curriculum for education, instruction and training of all students enrolled in educational institution so that youth can fruitfully understand and contribute in community service.

(c) **National and Cultural Integration.** The youth, when organized as youth force will contribute for the promotion of national and cultural integration of the country. Fostering and developing interaction between youth from different parts of the country specially the isolated border and tribal areas will help in achieving national integration. It should be the endeavour of youth to motivate the general public to work against the separatist forces and ensure unity of the country is maintained.

(d) **Education and Literacy.** The Youth need to educate themselves and subsequently get into the process of providing quality education to all sections of society. They need to promote education and self development capabilities of the rural youth specially of girls and youth in backward areas.

(e) **Environment.** The youth must understand the importance and implications of environment on the society and the ecological wealth of the nation. They must help in improving and protecting the environment. They need to engage in aforestation programmes and cleaning of rivers and lakes and disposal of degradable and non degradable waste.

(f) **Health Care and Family Welfare.** They must promote awareness and involvement in social programmes pertaining to health and family welfare. Programmes such as 'Youth against AIDS' campaign, 'Pulse Polio', 'Small Family' norm and various immunization programmes should be promoted. They must also volunteer in manpower intensive programmes at the implementation stage.

(g) **Physical Education and Adventure Training.** The youth must understand the importance of physical education for health and physical fitness with a view to increasing individual productivity and the value of sports as a means of recreation and with a potential for promoting social harmony and discipline .

(h) **Old Age Care.** Our basic social fabric and the joint family system inherently provide for old age care. However with the break down of the joint family system the need for old age care has increased. The youth must contribute to the well being of the senior citizen of the society by taking care of their aged and provide them financial security and moral self respect and make all efforts to ensure that they have a secure old age with adequate housing and health care.

(j) **Watershed and Waste Land Development.** These two are one of our major resources which need to be continuously protected and systematically proclaimed and developed and can be used for various social welfare activities . Youth has genuine potential for this nature of work. They must contribute in these programmes and ensure that these areas are protected from unscrupulous elements who may enter these areas of interests for personal gains.

## **Conclusion**

4. Our youth are the strength of the family , village , locality and the community . They are also the future of our nation. We must take all necessary steps to mobilize this most idealistic, inspired and energetic section of our society in the mission of nation building and social welfare.

## **SECTION-7**

### **NON- GOVERNMENT ORGANISATION AND THEIR CONTRIBUTION TO THE SOCIETY**

1. For the progress and development of the country, there are mainly two types of organizations, Government and Non Government.

2. **Government Organisation.** The steps undertaken by the government for the overall development of the nation and the society are included in the charter of duties of our government organisation. The government fully controls such actions which are directly or indirectly undertaken for such developments. Some of the works undertaken by government organisation are implementation of Five year plans, Welfare and empowerment of women, Rozgar yogana, Child welfare programme, Literacy programme and AIDS awareness programme.

3. **Non Government Organisations.** These organisations are controlled by members of society, who form a group or groups and work towards social welfare and nation building. People with common objective and aspirations, together make organisations called Non Government Organisation (NGOs) and get them registered. 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.

4. NGOs firstly make survey of various problems, collect information about them, organize various demonstrations, give speeches and wherever action needs to be taken, they take with full vigour. They understand social problems, the causes, affects and create necessary infrastructure to overcome them. NGOs usually gain at least a portion of their funding from private sources. Major sources of NGO funding include membership dues, grant from international institutions or national governments and private donations.

5. Some of the examples of important NGOs are:- **Shri Niketan Yojna**-Started by Ravinder Nath Tagore, **Seva Gram Yojna**-by Gandhiji, **Gram Yojna** by Vinoba Bhave, **Child Relief and You**, **Helpage India**, **People for Animals(PFA)**, **Society for Prevention of Cruelty to Animals (SPCA)**. **International Red Cross and Red Crescent Movement** are the world's largest group of humanitarian NGOs.

### **Types of NGOs**

6. Some of the types of NGOs are as follows:-

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

### **Activities of NGOs**

7. Following activities are undertaken by NGOs:-

- (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 the ill-effects of AIDS and education for prevention of the same.
- (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 to reduce diseases and help in creating a healthy and fit population.
- (u) Cottage Industry.

(v) Orphanage and Old Age Homes.

### **Conclusion**

8. NGO are the true example of selfless service and teamwork. Employees are highly committed to the aims and the principles of the organisation. They share equal contribution with government organisation and social welfare programme. Though government on its part has introduced a number of programmes, however government cannot be entirely successful without the active participation by each member of society. NGOs provide the necessary platform towards this end.

## **SECTION-8**

### **DRUG TRAFFICKING AND CRIME**

#### **Introduction**

1 A `DRUG` is a substance—solid, liquid or gas that brings about physical and / or psychological changes. Drugs affect the central nervous system. They act on the brain and can change the way a person thinks, feels or behaves. These drugs are known as psychoactive drugs. Drug menace is one of the most serious problems facing the world. Drug trafficking is considered as a greater problem than drug consumption.

#### **Types of Drugs**

2. There are three main types of drugs affecting the central nervous system:-

(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 (Tranquillisers), 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

### **Legal Drugs**

3. Laws and regulations control the availability, quality and price of the legal drugs. For example tobacco may not be sold to persons below age of 18 years .

4. **Illegal Drugs.** Because they are illegal there are no prices or quality controls on the illicit drugs such as heroin. This means that a user can never be sure that the drug they are taking is in fact what they think it is. The user also cannot be sure of a drug's strength or purity. Various batches of an illegally manufactured drug may have different mixtures of the drug and additives such as poisons, caffeine or even talcum powder.

### **Golden Crescent**

5. India due to its geographical location has become a transit route base for illicit heroin, hashish and morphine from Afghanistan, Pakistan and Iran. This area is known as Golden Crescent. Cannabis smuggled from Nepal is mainly consumed in India. Most heroin transiting through India is bound for Europe.

6. A peculiar system of supply and demand that characterizes the Indian drug market is that the user and traders are often the same. To fund drug consumption many users resort to crimes and thefts.

### **Users**

7. It was found that all the addicts were taking either cannabis or heroin. Seventy two percent of addicts are in the age group of 20-24 years. Females comprise only 2% of the addicts. Seventy eight percent of addicts come from the families which are facing problems such as loss of one or both parents or separation of the parents, However, no correlation is found between liability for addiction and economical status of the family, as judged by per capita income.

8. Drug addiction is found to be most common in peer group. The other reasons are curiosity (19.85%), pleasure seeking (12%) and mental tension (5%). Majority of addicts (84%) mention that the drug is easily available to them. Education and occupation has no significant effect on the habit. The problem of drug addiction appears to be common

amongst youths (20-24 yrs). High incidents in youth may be due to their emotional immaturity. Children from problem families and broken homes, who lack proper parental control and guidance are most likely to become victims of this dreadful habit. In peer groups, Curiosity and pleasure seeking are the common reasons for developing the addiction. The availability and easy access of the drugs contribute towards continuing drug use.

### **The Law**

9. Control over cultivation of opium and all matters relating to narcotic drugs and psychotropic substances are regulated by the “Narcotic Drugs and Psychotropic Substances (NDPS) Act and Rules”, which provide for:-

- (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.

### **Conclusion**

10. Drug trafficking and consumption has become a global menace. To eradicate this, it requires mobilisation of international communities through a comprehensive approach in combating illicit production, trafficking and consumption of drugs. Government and NGOs should emphasise on education, healthcare, treatment and rehabilitation for effective control of drug abuse.

## **CHAPTER-VIII**

### **HEALTH AND HYGIENE**

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## **SECTION-1**

### **STRUCTURE AND FUNCTION OF THE HUMAN BODY**

1. The human body is the greatest of all complex machineries. In order to carry out first aid, a first aider should have basic idea of structure and function of every part of human body.

#### **Structure of the Body**

2. Human body consists of :-

- (a) Skelton (Bones of the body) - see Fig 1
- (b) Muscles.
- (c) Blood Circulatory Organs.
- (d) Respiratory Organs.
- (e) Digestive Organs.
- (f) Excretory Organs.
- (g) Nervous System Organs.

#### **Functions**

- 3. (a) **Skeleton**. Bones of the body (See Figure-1) gives shape and firmness to the body. It protects the important organs of the body like brain, heart, lungs, spinal chord and so on. There are 206 bones in the body. Bones are either long, short, flat or irregular in shape. Long bones are found in the upper limb. Femur, Tibia, Fibula are in Lower limb and Sternum and Ribs on the chest. Short bones are found in wrist and ankles, flat bones, are found in cranium, shoulder and hips. Irregular bones are found in the vertebral column. Joints are places where two or more bones meet which permit the movement of the body.
- (b) **Muscles**. They are attached to the bones and are responsible for body movement. They are of two types, voluntary and involuntary.

## Skeleton (Bones of the body)

### Muscles.

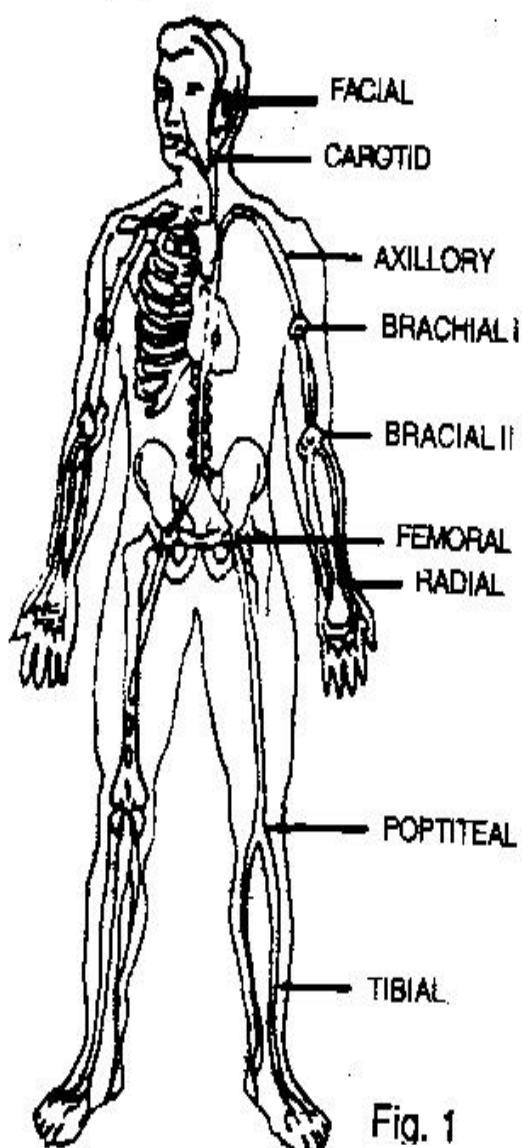


Fig. 1

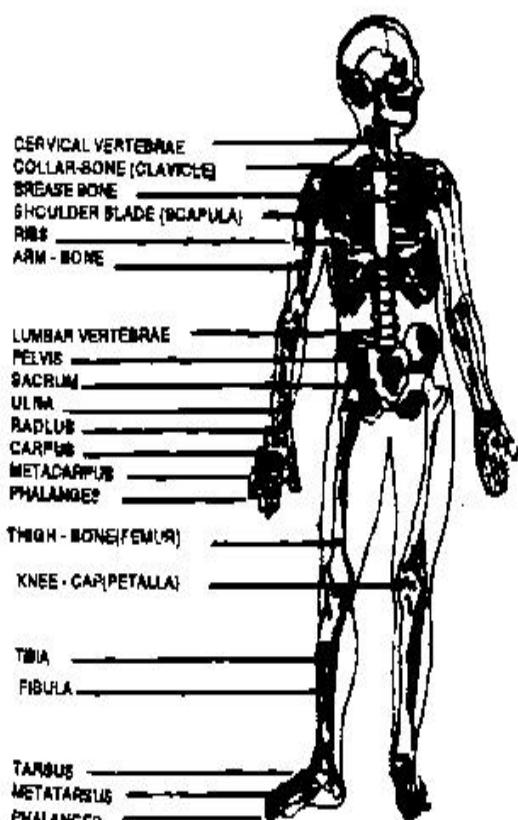


Fig. 2

(c) **Blood Circulatory System**

(i) Heart is most important organ of blood circulation. It lies on the left side of the chest and is of the size of a closed fist. It is an in-voluntary hollow muscular organ which functions without the control of our will. Pericardium, Myo Cardium and Endo Cardium are its three layers. It is divided into two compartments, right and left. Right side contains impure blood while left side contains pure blood. Each side is again divided into AURICLE and VENTRICLE. Auricles are the receiving chambers. Heart circulates blood to all parts of the body through arteries and receives it back through veins. This is done by pumping action of the heart contraction and dilation.

(ii) **Blood.** Blood is an essential fluid which circulates in our body. It carries oxygen and nourishment to the body tissues without which we cannot survive. It also removes all waste products like carbon-di-oxide. Blood circulation is brought about by function of the heart and blood vessels.

(iii) **Blood Vessels**

(aa) **Arteries.** These are the Blood vessels which carry pure blood from the heart. Aorta is the biggest artery from where the branches of other arteries take the pure blood to each part/organ.

(ab) **Veins.** These blood vessels collect and carry impure blood to the heart. Main veins are superior and inferior Vena Cava.

(ac) **Capillaries.** Tiny blood vessels which connect the small arteries and veins. The exchange of oxygen and nutrition with carbon-oxide by the tissue takes place in capillaries.

(d) **Respiratory System.** Two lungs 'Right' and 'Left' are the important organs of respiration. During breathing in, fresh air goes in to the lungs, the blood absorbs the oxygen from inhaled air and distributes it to all parts of the body. Oxygen is most essential for living. Carbon-di-oxide, a poisonous waste product is removed from the lungs during breathing out. Thus we see that the process of 'breathing in' and 'breathing out' are most important for the continuation of life process.

(e) **Digestive Organs.** Stomach and intestines help in the digestion of food we eat, through a number of gastric juices and secretions from the liver, pancreas and intestines and the nourishment is carried to all parts of the body by blood. The unabsorbed food passes via intestines and is evacuated as faeces.

(f) **Excretory Organs**

(i) **Kidneys.** Waste material in the form of urine is removed by kidneys.

(ii) **Skin.** Waste matter in the form of sweat is removed through perspiration by skin.

(g) **Nervous System Organs**

(i) **Brain.** It is a compact nerve tissue structure which controls and coordinates all body functions through nerves.

(ii) **Nerves.** They control all the organs and their function. They are silvery wire like fibres which are connected with brain.

## **SECTION -2**

### **HYGIENE AND SANITATION**

#### **Introduction**

1. Hygiene is the science which seeks to preserve and improve the health of the individual and of the community as a whole. Its study is aimed at making the cadets aware of the many health hazards and to enable them to look after themselves more efficiently. It seeks to develop in them the concepts of healthy living. Hygiene has nothing to do with religion or social customs but it is simply based on scientific requirements. Personal hygiene involves all aspects of the health of an individual. Responsibility for the maintenance of personal health, therefore lies with the individual. Every person must remain in perfect physical, mental and social health, only then can he serve the community and the country well. The basic factors which make a person healthy are enumerated in the subsequent paragraphs.

#### **Personal Hygiene**

2. **Sleep.** Sleep means the periodical rest of both body and mind. The amount of sleep one requires varies with individuals and age. Older people sleep less than the young. The average requirement of sleep is from 7 to 8 hours a day.

3. **Bathing.** Keeping the Skin clean and in healthy condition is essential for good health. A warm bath in winter and cool one in summer and use of soap are essential for body cleaning.

4. **Eating and Drinking.** Properly cooked food with its full nutritive value is beneficial for health. Eat slowly and chew well. Do not swallow hastily. Avoid strenuous exercise after a heavy meal. Drink plenty of water between meals.

5. **Care and Cleanliness of Skin, Hand, Hair and Teeth.** Our skin keeps on secreting sweat and hence it is necessary to keep it clean through bathing and by removing dust and dirt. Constant use of soap is required otherwise the clothing would get a foul smell and attract vermin. Regular changing and cleaning of clothing is essential to keep the body fit. Hands and finger are to be kept clean and washed before taking meals and after a visit to the lavatory. Nails should be kept trimmed to keep them free from dirt. The hair should be kept clean by regular washing and combing. Care of teeth plays an important part in keeping fit. Digestive and other disorders take place when decayed teeth and unhealthy gums bleed giving foul smell in the mouth. Teeth should be regularly brushed after the last meal at night and early in the morning. In-sufficient vitamins C &D are the cause of dental decay.

6. **Food and Rest.** Properly balanced diet is essential for physical well being. Food should be hygienically and properly cooked. It should be chewed well and taken in proper proportion. Sufficient rest, recreation and sleep are essential for mental and physical fitness.

7. **Exercise.** Organized games and physical exercise are necessary for proper development of the body and mind.

#### **Water Supply and Its Purification**

8. **Source of Water Supply.** These are:-

- (a) Rain Water.
- (b) Surface Water.
- (c) Underground Water.

9. **Rain Water.** Life on land depends on rain. It fills the rivers and lakes, it lets seeds germinate and grow, and provide us with drinking water though it is unfit for drinking as it comes through suspended impurities in the atmosphere.

10. **Surface Water.** Rivers and streams get polluted by discharge of human, animal and industrial waste into them. Lakes and ponds provide good water source if kept away from pollution. This can be achieved by:-

- (a) Providing fence all round the water point to keep away the animals.
- (b) Prohibiting animal grazing and human habitation in the vicinity of the fenced area.
- (c) Prohibiting washing of clothes.
- (d) Ensuring no draining of dirty/industrial waste water is allowed from the surroundings.

11. **Underground Streams.** Wells are a good sources of water supply which can be protected as under:-

- (a) Avoid soakage pits, latrines, urinals, sewerage or any leaking drains within 100 ft of a well.
- (b) The well should be protected with stones or bricks set on concrete or cement lining. Construction of a parapet is necessary to stop waste water going into the well.
- (c) Cover the well with a dust proof top.
- (d) It is desirable to have a pump, if facilities are available or alternatively a bucket and a chain.
- (e) Use of fence all around is necessary.

12. **Purification of Water.** Safe drinking water comes only from an authorised source. Purification provides good and safe water by eliminating the following:-

- (a) Suspended matter.
- (b) Harmful salts in solution, bad taste, smell and undesirable colours.
- (d) Disease germs.

13. **Method of Purification.** The following methods are used:-

- (a) **Boiling and Distilling Water.**
- (b) **Clarification.** Removal of suspended matter through filtration by passing it though filter beds of gravel and sand or through properly sterilized filters.
- (c) **Sterilization.** By using chlorine gas or bleaching powder.
- (d) **Pinking.** During cholera epidemic potassium permagnate should be used for pinking of wells.
- (e) **Precipitation.** By adding alum or some similar chemical to water which carries all impurities to the bottom with it and leaves pure water. Water is then passed through a filter.

## **Latrines**

14. These are of various types:-
- (a) **Water Carriage System.** It implies ample supply of pipe water available to carry the faeces away. It is simple, hygienic but require a lot of money and time.
  - (b) **Aqua Privy Latrines.** Nominal cost, used where construction of water carriage system is not possible.
  - (c) **Removal System.** It implies collection of faeces and subsequent removal for final disposal. The method is not very hygienic.
  - (d) **Deep Trench Latrines.** A pit three feet wide, atleast eight feet deep and of a length suitable to the requirement is constructed and wooden seats placed over it with proper partitions and curtains. Soil may necessitate reverting of sides with sand bags, bamboos or wire netting.
  - (e) **Shallow Trench Latrines For Temporary Camps.** For camps of less than a week's duration dig a row of trenches in parallel, each trench being 3 feet long, 1 foot wide and 2 feet deep. Each trench should be 2 feet apart. The ratio is 5 trenches for the first hundred users and three for each subsequent hundred. After defecation cover the excreta with loose earth by providing a shovel or a scoop. Fill the trenches after 24 hours and get new trenches dug in.

## **Urinals**

15. (a) **Trough Urinals.** Made of corrugated plain galvanized iron bent in the form of a gutter and mounted on four wooden legs. It slopes slightly towards one end where a vertical drain pile runs down in a soakage pit.
- (b) **Funnel Urinals.** For temporary camps funnel urinals can easily be constructed over a simple soakage pit.

## **Soakage Pits.**

16. 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.

## **Disposal of Garbage.**

17. Disposal of solid refuse like kitchen garbage, bones etc, be done by burial or burning. The household refuse should be deposited in a covered bin placed outside. Improvised kerosene/ oil tins are not advisable. Further disposal should be done under municipal arrangements.

## **SECTION-3**

### **PREVENTABLE DISEASES**

#### **Introduction**

1. Many of the deadly diseases can be prevented from spreading to healthy persons if proper precautions are taken by checking infection and contagion of several diseases and by killing carriers of several other diseases.

#### **Classification**

2. Communicable diseases can be classified as follows :-

(a) **Excremental Diseases.** The germs pass out of the body of a sick man suffering from the diseases along with excreta (urine and faeces). The excreta can contaminate food, water or hands of cooks and thus pass the infection. Typhus fever, dysentery, diarrhoea, jaundice and intestinal worms are some of the important diseases belonging to this group.

(b) **Droplet Infection.** The germs are sprayed out from the nose, throat or lungs in the air in small droplets of saliva during coughing, sneezing or even while talking. These germs are inhaled by a healthy man if he happens to be near the sick. Common cold, tonsilitis, influenza, diphtheria, meningitis, (inflammation of the brain) and tuberculosis are the common diseases in this group.

(c) **Contact Diseases.** The germs move pass from the sick to the healthy by actual body contact. Venereal diseases i.e. syphilis, gonorrhoea and skin infection are common examples. Complete segregation of patient can prevent the spreading of the diseases.

(d) **Inset Borne Diseases.** The germs move from a sick person to a healthy person through blood sucking insects known as 'Carriers'. These insects first bite a sick person and then a healthy person leaving the germs of the diseases in the blood of the healthy person. These germs multiply in the blood of the healthy person during the period of incubation, at the end of which he starts showing symptoms of the disease carried by the inset. These are:-

- (i) Carried by Mosquito – Malaria, Dengue and Filariasis.
- (ii) Carried by sand fly - Sand fly fever, Kala Zar, Oriental sore.

- (iii) Carried by lice - Typhus, Relapsing fever.
- (iv) Carried by flies - Diarrhoea, Dysentery, Cholera, Typhoid.
- (v) Carried by fleas - Plague, Typhus.
- (vi) Carried by ticks - Relapsing fever, Typhus.

(e) The preventive steps that can be taken to stop spreading of these diseases are to destroy all these insects by draining out all stagnant water, puddles and by spraying drains and muddy places with anti-mosquito emulsion. Mass drives should be organized to kill all flies, fleas, ticks and lice through sanitation. All heaps of dirt and refuse should be removed. Anti- rat campaigns ought to be organized. All casualties ought to be segregated.

(f) **Water Borne Diseases.** Certain diseases spread due to infection carried through water. These are cholera, dysentery, diarrhoea, jaundice etc. These spread as water gets contaminated through vomits or faeces passing into it. Epidemics are likely to spread if immediate steps are not taken to disinfect water and to properly dispose off the excreta through efficient conservancy arrangements. All sources of the diseases ought to be segregated.

(g) **Animal Borne Diseases.** The germs are transmitted through the agency of animals by drinking milk or through the agency of insects. Rabies, plague, anthrax and tuberculosis are some of the common diseases.

### **Preventive Measures**

3. The following preventive measures are necessary to ward off these diseases:-
- (a) Segregate the patient
  - (b) Destroy agents (germs) causing infection.
  - (c) Dis-infection.
  - (d) Control of the food and drink.
  - (e) Inoculation and Vaccination.

## **SECTION-4**

### **FIRST AID IN COMMON MEDICAL EMERGENCIES**

#### **Introduction**

1. There will be a number of occasions on which we may be faced with situations where we may be required to provide First Aid to the injured because of an accident or due to any calamity. Therefore it is very important for all cadets to have knowledge of

providing First Aid in common medical emergencies. In the succeeding paras we will deal with certain medical emergencies and discuss about the method of First Aid to be provided.

### **Injuries to Internal Organs**

2. These injuries cannot be seen but can only be suspected where bleeding instead of coming to surface, occurs into the cavity of chest or abdomen wherein important organs like Heart, lungs liver or Spleen might get ruptured . The following symptoms are observed in case of internal injuries:-

- (a) Cold clammy skin.
- (b) Weak thready rapid pulse.
- (c) Shallow sighing and breathing.
- (d) Face pinched and pale.
- (e) Eyes deeply sunken with dark rings around them.
- (f) Patient usually restless and anxious and may lose consciousness

### **First Aid Treatment.**

- (a) Keep the patient warm and 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.

### **Burns and Scalds.**

4. Burns may be caused by heat, either dry as by contact with fire or flame. Burns caused by moist heat such as hot water, hot fluids and steam, is called a scald. Chemical burns may be caused by strong acids or alkalis. If the burn is chemical let water from a pipe or hose flow freely on the burn so that the chemical flows off.

### **First aid Treatment**

- (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.
- (e) Evacuate patient to the nearest hospital or dispensary.

### **Snake Bite**

- 6. In Snake bite the poison is injected by the snake through a pair of hollow and deeply grooved biting fangs. The majority of bites occur on parts of limbs which are exposed like hands, feet and lower legs.
- 7. **First Aid Treatment.** All cases of Snake bite should be treated as being bitten by poisonous snakes. The first aid treatment will be as follows:-

- (a) Make the victim lie down comfortably.
- (b) Give convincing reassurance against fear of death.
- (c) Apply a light constricting tourniquet with 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.

### **Scorpion Bite**

- 8. Bite by a scorpion should be treated as snake bite.

#### **First Aid Treatment**

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

### **Rapid Dog Bite**

- 10. Rabies is a very dangerous disease transmitted by a rabid dog. The disease is preventable by giving anti- rabies vaccine.

11. **First Aid Treatment**

- (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.

**Foreign Bodies in Eye, Ear and Nose**

12. **Foreign Body in Eye.** Particles of coal or dust may lodge on the eye-ball or inside the eye lid causing discomfort and damage to the tender structure.

13. **First Aid Treatment**

- (a) Ask the patient not to rub the eyes.
- (b) Wash the eye with water repeatedly for a minute or two.
- (c) Search for the foreign body by lifting the upper eyelid and parting the lower eyelid down. The patient should face the light. If the foreign body is seen, it can be wiped off with the moistened corner of 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.

14. **Foreign Body in Ear.** This is common with children. They often put beads, peas, nuts and other objects into the ear or an insect may get into the ear.

15. **First Aid Treatment.** Do not try to remove the foreign body with the help of a pin or forceps as this may push the foreign body further in, causing damage to the ear drum. The patient should be sent to the hospital.

16. **Foreign Body in Nose.** This is a common occurrence among children. They might put peas, beads, etc in the nostril.

17. **First Aid Treatment**

- (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.

## **Respiration: Natural and Artificial, Asphyxia and Insensibility**

18. The tissue and organs of the body are supplied with oxygen through respiration, essential for the functioning of body. Respiration consists of inspiration, expiration, and a pause. During inspiration air is drawn inside causing the lungs to expand. During expiration the lungs contract and air is pushed out. The respiratory system consists of the air passage known as respiratory tract and lungs. The actions of muscles concerned with respiration are controlled and regulated by the respiratory centre of the brain.

### **Asphyxia**

19. Any thing which interferes with respiration producing irregularities in breathing produces a condition known as Asphyxia.

20. **Causes**

- (a) Drowning – Due to water entering the air passage.
- (b) Hanging and Strangulation due to obstruction to entry of air
- (c) **Suffocation**
  - (i) Due to obstruction to entry of air through the air passage.
  - (ii) Foreign body obstructions in air passage.
  - (iii) Inhalation of poisonous gases e.g. carbon monoxide.
- (d) Over dosage of drugs such as sleeping pills, morphine, pathedine.
- (e) Electric Shock.
- (f) Diseases e.g. tetanus, epilepsy, rabies.

21. **Sign and Symptoms**

- (a) Dizziness and weakness.
- (b) Shortness of breath - rate of breathing increases.
- (c) Rapid pulse.
- (d) Partial loss of consciousness.
- (e) Swelling of the veins of the neck.
- (f) Face, lips, nails, fingers and toes turn blue.

22. **General Rules for Treatment of Asphyxia**

- (a) Remove the cause if possible or the casualty from the cause.
- (b) Ensure that there is a free passage for air.
- (c) Lay the individual on his back. Press the head back- wards supporting the neck on your palm, lift the tongue clear of the airway. Give mouth to mouth breathing.

23. **First Aid for Special Cases: Drowning**

- (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.

24. **First Aid in case of Strangulation or Hanging**

- (a) Cut the constriction.
- (b) Clear the air passage.
- (c) Start artificial respiration.
- (d) Give inhalations if possible.
- (e) Make the patient warm and comfortable.

25. **First Aid in case of Choking.** Bend the casualty's head and shoulders forward, to dislodge the obstruction. In case of a small child hold him upside down, and thump his back hard between the shoulder blades or encourage vomiting by passing two fingers to the back of the throat.

26. **First Aid in Case of Suffocation by Poisonous Gas.** Protect yourself and remove the casualty from the gas as early as possible.

27. **First Aid in Case of Electric Shock**

- (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.

#### **Insensibility or Unconsciousness**

28. It is due to interruption of the action of the brain through some interference with the functions of the central nervous system.

29. **Stage of Unconsciousness.**

- (a) I<sup>st</sup> Stage- Delirium – When the restlessness of body and mind are present.
- (b) II<sup>nd</sup> Stage- Patient responds to loud commands, gives maximum response to minimum stimulus.
- (c) III<sup>rd</sup> Stage- Semi - Coma- Patient responds to painful stimuli only (minimum response to maximum stimulus).
- (d) IV<sup>th</sup> Stage- It is a stage when the patient makes no response to any stimulus.

30. **Causes of Unconsciousness of Coma**

- (a) Head Injury.
- (b) Hemorrhage from brain.
- (c) Heart failure.
- (d) Diabetic coma , Hepatic coma , Uraemic coma.
- (e) Excessive narcotic e.g. sleeping pills, morphine.
- (f) Intracranial or brain infections like meningitis, encephalitis.
- (g) Physical agents such as heat strokes, electric socks.
- (h) Epilepsy.
- (j) Hysteria.

31. **General Rules of First Aid in Casualties of Unconsciousness**

- (a) Make the patient lie down with head turned to one side, pull out his tongue.

- (b) Loosen the clothing, ensure fresh air.
- (c) If breathing has stopped or is irregular, start artificial respiration.
- (d) Keep the air passage clear.
- (e) Nothing should be given by mouth. Remove false teeth, if any.

### **Artificial Respiration**

32. If there is any irregularity in breathing or a cardiac arrest, artificial respiration is given. If it is given correctly and in time, the patient's life can be saved.

33. **Type of Artificial Respiration**

- (a) Holger-Nielson Method.
- (b) Schaefer's Method.
- (c) Mouth to Mouth Breathing.

34. **Holger-Nielson Method.** Keep the casualty in prone position.

(a) **Movement -1.** Go down on the left opposite the casualty's head, placing the right foot on the ground. Place the casualty's arm carefully above his head and keep them there during the turn. Grasp his right upper arm and turn his face to one side. The mouth and nose must be unobstructed. The operator should be 6" to 12" from the top of his head. Place the hands on casualties back with the heel of the hand on the lower part of the shoulder blade, the thumb on spine and fingers pointing to casualty's feet. Keeping the arms straight rock gently forward until the arms are almost vertical, depending on the build of the casualty using no special force. The movement takes 2 second counting one, two. This pressure causes expiration. This is called movement 1.

(b) **Movement -2.** The operator now rocks back counting 3 for one second and slides his hand and grips the upper arms near the elbow. He raises and pulls on the arms for 2 second counting 4,5. He should take care not to raise the chest from the ground. This movement causes inspiration. Counting 6 the operator lowers the casualty's arm. The movements should be rhythmic in character and continued until breathing recommences. When the casualty begins to show signs of breathing the operator should continue with movement 2 only. For children the pressure on the shoulder blade should be considerably reduced or applied with fingers. The ratio should be 12 times in a minute.

35. **Schaefer's Method.** Position of the casualty: Lay the casualty in prone position with hand one over other under his head, the head turned to one side, mouth and nose unobstructed.

(a) **Position of the Operator.** Face the casualty's head, kneel on both knees at the side of casualty just below his hip joint. Sit back on your heels, place your hands on the loins of the casualty, one on each side of back bone with wrists almost touching, and thumbs as far forward as possible with out strain, and fingers together.

(b) **Movement -1.** With out bending your elbows swing slowly forward by unbending the knees until the thighs are in almost upright position, allowing the weight from your body to be communicated to the casualty's loins. This causes abdominal organ compression against the ground and up against the diaphragm. Air is forced out of the lungs, thus expiration takes places.

(c) **Movement -2.** Swing back slowly on to your heels, thus relaxing the pressure. This causes the abdominal organs to fall back and the diaphragm to come down thus inducing inspiration. These 2 movements must be carried out smoothly and rhythmically and should take 5 second (i.e. 12 times per minutes). Artificial respiration must be continued until natural breathing is restored, or unless a doctor decides that further efforts will be of no use.

### **36. Mouth to Mouth**

- (a) Casualty should be in supine position.
- (b) Clean the mouth and throat to maintain clear air passage.
- (c) Extend the neck to straighten the air passage.
- (d) Cover the patient's mouth with clean gauze and blow directly and slowly into it (10-12 times per minute).

## **SECTION -5**

### **DRESSING OF WOUNDS**

#### **Definition and Classification of Wound**

1. **Definition.** It is the brake in continuity of the skin or muscles membrane. It is caused by violence.

2. **Classification.** Wound can be classified as follow:-

(a) **Inside Wound.** It is wound caused by sharp instrument like knife, razor and so on. Its edges are clean.

(b) **Lacerated Wound.** It is caused by blunt instrument. The edges are torn or uneven.

(c) **Punctured Wound.** It is a deep narrow wound caused by a pointed instrument like knife, bayonet. The wound is small on the surface but may be very deep injuring internal organs.

(d) **Gun Shot Wound.** It is caused by a bullet. The bullet may lodge in the body and the wound become infected. It may have both an entry and exit, The entry is usually very small and exit may be very large and lacerated. It may become complicated with fracture if bullet strikes a bone.

(e) **Shell Wound.** It is caused by splinters of a shell or grenade wound is lacerated and fragment may lodge in the body .

(f) **Contusion.** A contusion is an injury or a bruise in which some of the tissues or a part is irregularly torn or ruptured but the skin, may not be broken. It is caused by a blow or blunt instrument.

### **First Aid**

3. (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.

### **Dressing of Wounds**

4. A wound is to be cleaned with anti septic lotion and covered with cotton or Gauze piece with medication before applying bandage.

5. **Aim.** Aim of dressing of wound is manifold:-

- (a) To protect the wound from infection.
- (b) Reduce swelling and early healing.
- (c ) To support the effected part.
- (d) Enable the individual to carry out his day to day routine.
- (e) Stop the bleeding.

6. **Articles Required.**

- (a) Anti septic (A/ S) lotion.

- (b) Cotton.
- (c ) Gauze piece.
- (d) Bandage of different size and band aid.
- (e) A/S ointment or powder.
- (f) Scissor.

### **Procedure**

7. (a) Reassure the patient and place him in comfortable position.
- (b) Stop the bleeding, remove foreign body and clean the wound with A/S lotion and cotton.
- (c ) Apply A/S ointment or powder and cover it with gauze. Select suitable bandage, Start bandaging clock wise from outer aspect to inner aspect by covering 1/3 of previous lining.
- (d) Put the knot away from the wound.
- (e) Bandaging should not be either too tight or loose.

## **SECTION-6**

### **YOGA: INTRODUCTION AND EXERCISES**

#### **Introduction**

1. Health is not merely considered by absence of disease or infirmity in a person but who has complete state of physical, mental and social well being. Fitness of a person strictly relates to his ability to meet the demands of the environment. Yoga fulfills all needs to be in a state of complete fitness. Sage Patanjali was founder and father of yoga. Yoga of Patanjali is Ashtanga or has eight fold path.

- (a) Yama.
- (b) Niyama.
- (c) Asana.
- (d) Pranayama.
- (e) Pratyahara.
- (f) Dharma.
- (g) Dhyana.
- (h) Samadhi.

2. Yoga is a science for right living. Yoga not only relieves pain, rigidity and tension but it gives much more to acquire peace and mental tranquility. Yoga calms and clears the mind and rejuvenates it. Yoga helps in purifying the disrupted natural rhythm and harmony of the body, bestows grace, heals and makes one free from all ill effects.

## **Holistic Approach of Yoga**

3. One undergoes through various degrees of stress, strain, tension, anger, sadness and other emotional upsets in day to day life. This adversely affects the physical, mental and spiritual power of a person. Yoga harmonises all disturbances in the body and eradicates ill effects completely. For better management of stress, strain and other disorders, Yoga approach is more holistic, which brings efficiency and mental clarity. A person who develops his power of thoughts through Yoga has charming and dynamic personality.

## **Stress Management by Yoga**

4. Today no one can escape stress due to high expectations and pressures from the environment, be it industrial sectors or students or Armed Forces. Revolutionary changes in attitude, living pattern, work design, transport and communication methods have all transformed the environment and work culture. However, body response has remained same which gets exposed to psychological, organizational and societal stress. Yoga provide physical, mental and spiritual strength, thus help in overcoming the stressors.

## **Asanas**

5 There are innumerable asanas. Some of the asanas useful for curing ailments and maintain good health are as follows:-



(a) **Padmasana.** Sit on the asan. Spread the legs forward, place your left foot on the joint of your right thigh, and right foot on the joint of left thigh in such a way that both heels touch each other below your navel in the middle of abdomen. Place your hands on your knees. Keep the head and spinal column erect. Keep your eyes close or open. Stay in the final position for 1 -2 minutes in the initial stage. Later increase the time gradually. This asan is useful for Jaap, Dhyana and Samadhi. This asan also helps in curing diseases like asthama, hysteria and insomnia.

(b) **Baddha Padmasana.** Sit in padmasana. Try to project the feet as far as possible. Take the hand behind your back. Catch the right toes with your right hand and left toe with your left hand. Keep the back bone straight and fix your eyes on the tip of the nose. This asana improves nervous system and the abdomen. It also cures drowsiness, sleepiness, laziness and night discharge.





(c) **Siddhasana.** The main function of this asana is to awaken the power of kundalini. Sit on the carpet. Place the heel of left foot under the testis on the prostate gland in such a way, that the sole of your foot should be placed at root of genitals. Place the hand on the knees so that palm face upward. This asana helps the mind to be firm, attentive and alert.

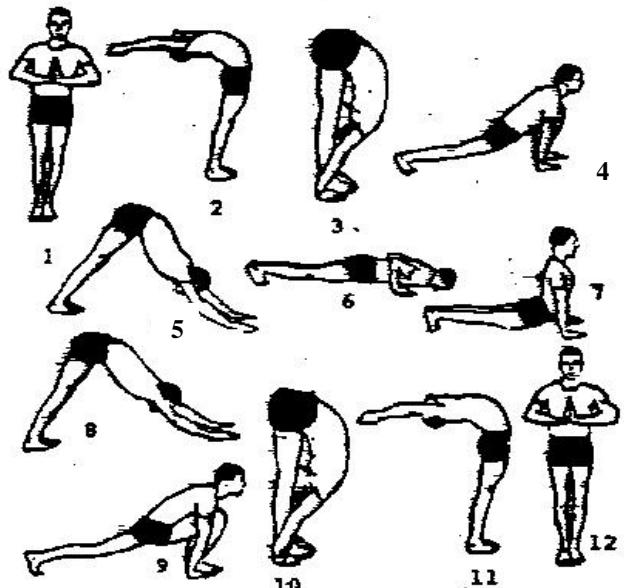
(d) **Gyan Mudra.** Sit in Padmasana or Siddhasana. Put your hands on your knees with palm facing upwards. Bend your index finger and place them at the root of your thumbs. Spread the remaining three fingers forward, all joined together. This asana is most suitable for pranayam and dhyana.



(e) **Trikonasana.** Stand erect keeping the distance between the feet 60 - 75 cm. Raise your right hand towards the sky and look towards its palm. Then bend the truck to the left side and try to touch left toe with the left hand without bending your legs. Repeat this process with your left hand up and right hand down. This asana is useful to the eyes, spinal cord, neck and mental power. Timings 3 - 6 sec. 4 - 6 times.

(f) **Ardha Chandrasana.** Stand erect. Raise your both hands and join them above your head. Bend towards left from the waist. After some time bring the body back in straight position. Repeat this by bending the body towards right. This asana improves the functioning of heart, liver, intestine, stomach, lungs and make the body flexible. Timings 4-6 sec, 4-5 times.





(g) **Suryanamaskara.**

Suryanamaskara is a combined sequence of 12 positions. By this sequence of 12 positions, the whole body is well exercised. While practicing Suryanamaskara recite the different names of Sun God at each position.

(i)ॐ गित्राय नमः। (ii)ॐ रवे नमः। (iii)ॐ सूर्याय नमः। (iv)ॐ आनन्दे नमः। (v)ॐ खग्नय नमः। (vi)ॐ पूष्णे नमः। (vii)ॐ हिरण्याभार्व नमः। (viii)ॐ मरीचये नमः। (ix)ॐ आदित्याय नमः। (x)ॐ सवित्रे नमः। (xi)ॐ अकार्य नमः। (xii)ॐ जास्कराय नमः।

**Stage 1 :-** Stand in attention. Fold your hands in the centre of your chest. Now recite the first of the twelve mantras.

**Stage 2 :-** Stretch your hands up and take the body backwards from the waist as far as possible. The hands must remain straight and touch your ears.

**Stage 3 :-** Now bend down without bending the knees. Try to put the palms on the ground and touch the nose with knees without bending knees.

**Stage 4 :-** Take left leg back. Bend your right knee, the knee will remain between the two arms, with the hands sticking to the ground. Now bend the neck backward as far as possible. Look forward and hold the breath.

**Stage 5 :-** Take right leg back. Put both the toes and the knees together and pull your body up in such a way that it looks like inverted 'V'. Look backward through your legs keeping the head, the waist and the arms in a straight line.

**Stage 6 :-** Bend down your body in such a way that your forehead, chest and knees should touch the ground except your hips which should be slightly raised from the ground.

**Stage 7 :-** Stretch the arms, Inhale, put the chest forward and move back your neck as much as you can. Look up and hold the breath.

**Stage 8:-** Maintain same position as in Stage 5.

**Stage 9:-** Maintain same position as in Stage 4.

**Stage 10:-** Maintain same position as in Stage 3.

**Stage 11:-** Maintain same position as in Stage 2.

**Stage 12:-** Maintain same position as in Stage 1 and then take your hand down. Make the rest posture.

(h) **Shavasana.** The main aim of this asana is releasing the mind from the body. By this asana we can achieve relaxation in the shortest possible time. This asana provides relief in disease like blood pressure, weakness of nerves and other ailments. Lie on your back and let your body be relaxed completely. Your feet should be 30-45 cm apart, arms in sides with palm upwards, eyes gently closed with attention on breathing. Keep body in a straight position. For proper blood circulation in the body, the legs, hand and neck should have no curves or bend. Take a long and deep breath then concentrate on each and every part of your body, putting it in a relaxed state. Timing 5-10 minutes.



(j) **Gomukhasana.** Sit on the seat comfortably. Place your left foot heel under your left hip. Now take the right leg over the left buttock in such a manner that the heel of your right foot is placed near your left hip. Take right arm behind back from above and left arm from below, so that fingers of the both hands are interlocked behind the back. Stay in this position for sometime. Then repeat this with opposite side. Timings 20-30 seconds, 4-6 times.

(k) **Vajrasana.** Bend the legs and sit on knees. Place the heels at the sides of the anus in such a way that thighs rest on the legs and the buttock rest on the heels. Stretch the arms and place the hands on the

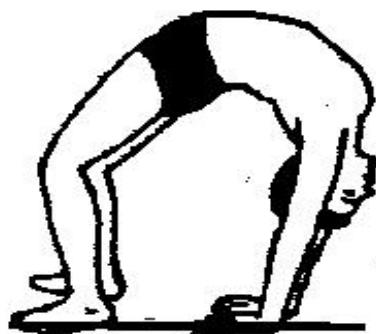
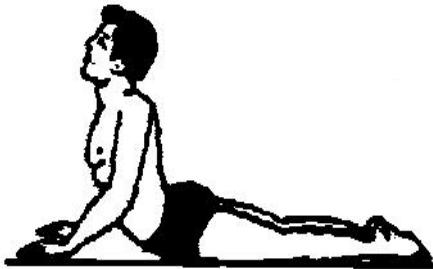


knees. Keep the knees close by. Sit erect. This asana can be done immediately after eating food. This helps digestion and eliminates gas troubles. Timing 1-3 minutes.



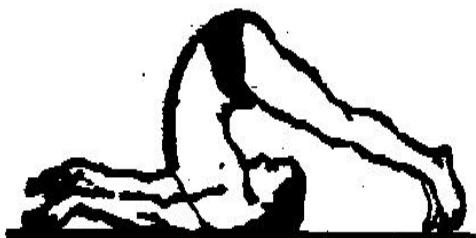
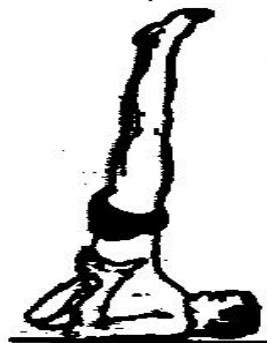
(m) **Bhujangasana.** Lie down on the chest. The hands should be below the shoulders with the fingers pointing forward. The legs are kept straight with the feet touching each other and the soles facing up. Raise the head, giving a backward bend to the spine. Try to keep the spine bent backward as much as possible without raising the navel. This asana is good for the spine, the chest, the neck and the head. Timings 20-30 sec. 4-6 times.

(l) **Dhanurasana.** Lie down on the chest, legs should be folded at the knees and the feet should be grasped with both the hands near the ankles. The thighs and the chest should be raised, making the body appear like a bow. This asana provides good exercise to the abdominal muscles, lower back and thighs, Timing 10-30 seconds, 4-5 times.



(n) **Chakrasana.** Lie down on the back. Bend the legs at the knees. Heels are close to the hips and sole touching the ground. Bend the arms at the elbows and place them on the ground on either side of the head. Place them in such a way that palms should rest on the ground and the direction of the fingers should be towards your feet. First raise your hips and waist, keeping the legs straight. Raise the back as far as possible. This asana helps in making the spine supple. Timing  $\frac{1}{2}$  -1 min, 1-2 times.

(o) **Sarvangasana.** Lie down flat on the back. Raise legs from the hips, push the trunk up until legs are in vertical position. The chin should press against the chest. The hands are giving support to lower ribs. Hold this position upto 2-10 minutes. Come back as slowly as possible. Do not give any jerks to the body. This asana improves circulatory, respiratory and alimentary systems of the body.  
Timings:  $\frac{1}{2}$  - 1 minute.



(p) **Halasana.** Lie down flat on the back. Place the arms by sides along the hips, palm facing the ground. The legs are raised up in a single motion and put down behind the head keeping knees unbent. The chin should touch the chest. In this exercise, the legs will remain straight and breathing should be normal. Hold this position for 30-50 seconds. This asana stimulates blood circulation and makes the spine flexible and elastic.

### **Conclusion**

6. Perfect state of health means attaining physical, mental and spiritual health. Yogasanas are simple activities for keeping the internal and external parts of the body in good health. However, Yogasanas must be learnt from qualified instructor to gain maximum benefit.

### **SECTION-7**

#### **PHYSICAL AND MENTAL HEALTH**

### **Introduction**

1. Earlier doctors defined health simply as 'an absence of disease or illness'. However, after the formation of World Health Organization (WHO) in 1948, health is defined as 'a complete state of physical, mental and social well being and not merely the absence of disease or infirmity'. The mind and body are actually single system. Charak a renowned physician of ancient India has said that health is vital for artistic, ethical, material and spiritual development of man.

### **Physical Health**

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

### **Mental Health**

3. 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.

### **Elements of Good Health**

4. Good health is essential condition for a purposeful existence. The main elements of good health are:-

- (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.

### **Objectives of Health Education**

5. Objectives of health education formulated by WHO are:-

- (a) To ensure that health is regarded as an asset in the community.
- (b) To promote the development and proper use of health services.

### **Scope of Health Education**

6. The scope of health education are:-

- (a) Emergency and first aid.
- (b) Food and its significance in the development of body.
- (c) Physical exercise.
- (d) Recreation, rest and sleep.
- (e) Various ailments and disease.
- (f) Sex hygiene.

### **Importance of Mental Health**

7. It is of paramount importance to lay due emphasis to the development of mental health of children. Any disregard to this may lead to mental disorder and conflicts which ultimately may bring frustration, misery and unhappiness. Parents and teachers play a major role in providing an environment in which children develop healthy mental attitude.

### **Characteristics of Healthy Mind**

8. 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.

### **Mental Disorder**

9. Following causes mental disorder:-

- (a) Undue anxiety.
- (b) Embarrassment in presence of others.
- (c) Lack of courage.
- (d) Undeveloped habits and will.
- (e) Low intelligence.
- (f) Irritability.
- (g) Depressed and pessimistic outlook.
- (h) Moodiness.
- (j) Bad temper.
- (k) Full of prejudice.

### **Measures to Secure Mental Health**

10. Following measures will help in securing mental health:-

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

### **Health and Socio Economic Development**

11. The relationship between health and socio economic development is very important. Health component has an important bearing on the overall economic development of a nation. Health not only affects the individual but also the community in which he/she lives. Healthy people make a happy society and happy societies make the nation economically and militarily strong.

## **SECTION-8**

### **FRACTURES, TYPES AND TREATMENT**

#### **Definition**

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

#### **Causes**

2. The fracture can be caused due to the following:-

- (a) **Through Direct Violence.** The bone breaks on the spot where direct violence is applied by a kick, bullet, blow etc.
- (b) **Through Indirect Violence.** The bone breaks at some distant place from the spot of violence i.e. fracture of clavicle, base of skull etc, when the force is on out stretched hands or other extremities.
- (c) **Through Forcible Muscular Contraction.** Fracture of patella (knee cap) by contraction of thigh muscle. Fracture of ribs may be caused by violent coughing.
- (d) **Diseases of Bones.** Certain diseases of bones make them weak and easily breakable.

## Varieties

3. A fracture is broadly classified into the following three categories:-



Fig 1



Fig 2

- (a) **Simple or Closed.** The broken bones are covered with skin (Fig 1).
- (b) **Compound or Open.** Skin overlying fracture is broken or ruptured and sometimes the broken piece may protrude through it (Fig 2).
- (c) **Complicated.** The broken bone damages the under lying structure like blood vessels nerves, lungs, brain etc.

## Symptoms & Signs

4. The Symptoms and signs are:-

- (a) Pain, swelling and tenderness over the part and around it.
- (b) Loss of power.
- (c) Abnormal mobility.
- (d) Deformity and irregularity of bones.
- (e) Grating sound due to broken bones.

## First Aid Measures for Fractures

5. The first aid measures to be adopted are:-

- (a) Reassure the patient and make him comfortable.
- (b) Apply splints to immobilise 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.

6. **In Case of Compound Fracture.** The first aid measures in Compound Fractures are:-

- (a) Bleeding should be stopped.
- (b) Remove foreign objects, if any, but do not meddle too much.
- (c) Cover the wound with a clean pad and light bandage.
- (d) Apply appropriate splints.
- (e) Transfer to the nearest hospital immediately.

### **Treatment of Fracture**

7. **Fracture of Jaw Bone**

- (a) **Apply Barrel Bandage.** Place the centre of a narrow bandage under the patient's chin. Tie a single hitch on the top of the head. Draw one loop forward and one loop backward until they form a horizontal turn round the head, meeting the half hitch in front of the ear. Take the free ends and tie them on the top of the head.
- (b) Warn the patient not to speak.
- (c) Instruct the patient to sit.
- (d) In lying cases, place patient on his chest, his head projecting outside the stretcher canvas, properly supported with bandages secured on stretcher handle.



**Barrel Bandage**

8. **Fracture Clavicle.** In fracture of the clavicle we need to:-
  - (a) Support the arm of injured side, around the centre of each arm pit, pass a narrow fold bandage and tie it on the back of the shoulder, leaving one end of the knot longer than the other. Pull the longer end towards the other, thus drawing back the shoulders and tie them together.
  - (b) Put a pad in arm pit, apply greater arm sling and fix the arm with a narrow fold bandage tied across the elbow to lower chest.
9. **Fracture Ribs.** When ribs are fractured following action is taken:-
  - (a) **Uncomplicated.** Restrict the movement of chest on fracture side with broad-fold bandage, one above and one below the fracture side, half over lapping each other. Support the arm of injured side with greater arm sling.
  - (b) **Complicated.** Put the patient on the affected side and support the position by long fold blankets. Send the patient immediately to the nearest hospital.
10. **Shoulder Blade and Fracture of the Upper Limb.** Fix the elbow to the affected side and put the finger in a position touching the opposite shoulder. Secure the hand in position by cuff sling. Secure the limb firmly to the chest by

two broad bandages one on shoulder and the other at the elbow level and knot on opposite side.

11. **Fracture Lower Limb.**

- (a) Fix the injured limb to the sound limb with four narrow folds.
- (b) Apply long wooden splint from axilla to just beyond foot on each side. Secure them by seven broad folds bandages tied at chest, pelvis, ankles, both thighs below the fracture, both legs, and knees. The bandage on the ankles should be tied in figure 8.
- (c) In case of fracture of pelvis, apply Thomas splint if available, otherwise the methods described in (a) and (b) should be used for immobilization of lower limb before evacuation of injured person to the nearest hospital.

12. **Fracture of the Spine.** Fractures of Spine are to be very carefully handled, We have to:-

- (a) Treat any case of back injury as a fracture of the spine. There will be severe pain and shock in all cases.
- (b) Make the patient still. Do not allow the patient to move about.
- (c) If unconscious see that the tongue does not fall back and choke the patient.
- (d) Get medical aid at the earliest.
- (e) Apply broad bandages for thigh and knees.
- (f) Carry patient face downwards on a board placed lengthwise on the stretcher.

13. **Fracture of the Skull.** It may injure the brain, nervous system or the arteries and cause concussion and compression. It may be caused by direct or indirect blow.

- (a) **If Breathing is Normal.** Lay the casualty on back with shoulders and head raised with cushions. Turn the head to one side.
- (b) **If Breathing is Abnormal.** Lay the casualty in a three quarter prone position. Apply pads under the chest and draw up the upper knee.
- (c) Do not give anything to drink.
- (d) Do not disturb the patient.
- (e) Keep air passage clear.
- (f) Treat for shock.

**Dislocation**

14. Dislocation means displacement of one or more bones at a joint. The joints more frequently dislocated are shoulder, elbow, lower jaw, thumb and finger.

(a) **Signs and Symptoms**

- (i) Severe pain at or near the joint.
- (ii) Fixity of the joint or loss of power.
- (iii) Deformity of joint and un-natural position of the limb.
- (iv) Swelling at the joint.

(b) **First Aid**

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

### **Sprain**

15. A Sprain is the wrenching of the ligaments and tissues around the joint.

(a) **Signs and Symptoms**

- (i) Pain at the joint.
- (ii) Inability to use the joint.
- (iii) Swelling and later bruising.

(b) **First Aid.** Place the joint in a comfortable position and apply a firm bandage. Prevent movements. Keep the bandage wet with cold water to avoid swelling. Later gently massage over the muscle and apply a crepe bandage. Analgesics should be given. Whenever you are in doubt whether an injury is a sprain or dislocation or fracture, treat it as a fracture.

### **Strains**

16. A strain is the over stretching of a muscle.

(a) **Signs and Symptoms.**

- (i) There is sudden sharp pain.
- (ii) There may be swelling or severe cramp.
- (iii) Further exertion is difficult or impossible.

- (b) **Treatment.** Place the patient in the most comfortable position. Support the injured part. Give cold compress.
17. **Crepe Bandage.** A crepe bandage is made of elastic material which stretches and binds firmly around the joint to which it is applied. It thus helps in reducing swelling and movements at the affected joint, thereby minimising pain and giving it rest. It is used in sprains and strains around joints. It can be washed and used agains.

## **SECTION-9**

### **EVACUTION OF CASUALTIES**

1. **Introduction.** Natural calamities like earthquake, cyclones, tsunami, floods, land and snow slides occur unannounced leading to large scale causalities. More often than not people in a large numbers become victim to train, aircraft and ship accidents. Keeping in view of these facts, plans and preparation be made in advance to combat any of such eventuality. Medical authorities make preparation with assistance and cooperation from voluntary organizations like Red Cross Society, Saint Johns Ambulance Association, Home Guards and Civil Defence and NCC cadets for evacuation and treatment of casualties.
2. The first Aider plays an important life saving role when there is an accident or a raid. It is their presence of mind, intelligence, resourcefulness, dexterity, alacrity and determination which can minimize danger to the casualties.
3. On hearing of an accident or air raid having taken place, send a rescue party by transport if available, to the scene of the incident to have the casualties immediately brought to the First Aid Post.

#### **Preparation**

4. Before the casualties begin to arrive the following should be done:-
  - (a) If no First Aid Post is available transform a sheltered place, away from the main road, into a first aid post.
  - (b) Collect as many First Aid Boxes as possible from the nearby offices or institutions. Collect sterilized cloth and cotton from shops or nearby house. Collect as much dressing material as can be collected from the nearby resources. Collect some even twigs, sticks, umbrellas strings etc. to be used as splints and tourniquets, whenever required.
  - (c) Collect some blankets, cots and durries.
  - (d) If possible, arrange for some clean drinking water and hot drinks, tea or coffee, if available.

5. After a casualty arrives diagnose quickly and correctly by observing and promptly take the following action:-

- (a) The details of the site and the history of the accident, i.e is it a scooter or motor accident or has a building or pillar fallen upon the person or if there has been a fire, and so on.
- (b) The signs of the suffering-whether the person looks pale or there is bleeding, or swelling of the injured parts and deformity of a bone or the person has fainted.
- (c) The symptoms of the suffering i.e., the casualty complains of pain, shivering , or has fainted.

6. Having quickly diagnosed the nature of the ailment, treat in the following manner:-

- (a) Reassure the patient, cheer him up and let him not get worse due to worries.
- (b) Ask on-lookers not to crowd and disturb the patient. Tell the relatives, tactfully, not to upset the patient by making a fuss about the event.
- (c) If bleeding profusely, plug and dress the wound and press the nearest pressure point and give the patient lots of fluid.
- (d) If bones are broken, apply splints and immobilizes the portions. Let the patient rest.
- (e) If it is a case of asphyxia, give artificial respiration.
- (f) If it is a case of burning, cover the wounds with sterile dressing, treat the patient for shock and give fluids.
- (g) If it is a case of poisoning, try to remove the poison.

7. The First Aider should make all efforts to revive the patient so that the condition does not get worse. Do not perform the functions of a doctor and must quickly dispose off the casualty by sending it to the nearest hospital.

### **Prioritization of Casualties**

8. All casualties to be classified into three following priorities for treatment and evacuation:-

- (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.

**CHAPTER-X**  
**ENVIRONMENT AND ECOLOGY**

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## **SECTION-1**

### **WHAT IS ENVIRONMENT**

#### **Introduction**

1. The earth is the only planet in the solar system that supports life. Life on earth exists in the biosphere, a narrow zone made up of land, water and air extending up to a few kilometers above and below the earth's surface. The conditions in which an organism exists make up its environment. The physical components of the environment include materials such as rocks, soil, water and air.

#### **Factors that Influence Human Beings**

2. (a) **Physical Factors**. Earth, water, mountains and climatic conditions.
- (b) **Biological Factors**. Plants, animals, micro-organisms and man himself.
- (c) **Cultural Factors**. Economic, social and political.

#### **Human Activities and the Environment**

3. To meet his various needs, man alters his natural surroundings. Sometimes such changes disturb natural processes and worsen the living conditions of human beings and other organisms. For example, untreated wastes are often dumped into the rivers. This affects the health of all organisms such as fish, that live in the water and man who drinks that water. This amounts to environmental degradation.

#### **Depletion and Deterioration**

4. Environmental degradation takes mainly two forms. One is resource depletion i.e., a decline in the quantity of resources. The other is resource deterioration or pollution i.e. decline in the quality of resources. Overuse and wastage are the main reasons for the depletion of resources. In India, forests are rapidly being cleared to provide firewood and agricultural land for the large population.

#### **Deforestation**

5. Large scale felling without planting trees has led to deforestation or the complete removal of forests. Deforestation also disturbs the balance of gases in the atmosphere, causes global warming, reduces rainfall and increases soil erosion. Such changes in the environment directly or indirectly harm living organisms.

#### **Forest and Wildlife**

6. Presently, forests cover about one third of the world's land area. But at one time, they covered about double the area that they cover now. The land is denuded of forests largely as a result of human activities, although natural occurrences such as volcanoes and forest fires also destroy forests. As the human population is growing, the need for

more crop fields, pastures, settlements, mines and so on, is causing more trees to be felled and more forests to be cleared. Like deforestation and environmental damage, reckless hunting by humans is also a threat to the world's wildlife. The Indian tiger, hunted for its hide is near extinct. Whales have been hunted to near its extinction for their meat and fat. Wild life forms an important link in the balance of ecology and must be protected.

### **Water Resources**

7. We use water in agriculture and industries and for transportation, power generation and domestic purposes. Agriculture accounts for most of the water used. The groundwater level is sinking because users are pumping out water faster than nature can replace it. The dams built in rapid successions to provide facilities for irrigation, flood control and power generation disrupt the natural flow of water and harm the life forms that thrive in flowing water.

### **Environment**

8. Since ages man is related with the environment. He resides in the surroundings alongwith different plants, trees and animals. Long ago he lived with the environment without disturbing its components. But now man has started extensively changing the surroundings, thus transforming the environment and consequently affecting the delicate balance of the ecosystem which is so essential for life on this planet, due to his ever-expanding needs. People need food, water and space to live, air to breathe and energy to drive their machines. Increase in number of people, thus increase in consumption of food, water and space, leaves less and less space for other animals and plants which means that many environmental problems have been caused by people. Global warming, acid rain and holes in the ozone layer are just three such example.

(a) **Global Warming.** The carbon dioxide gas helps in maintaining the temperature of the earth's surface at level that enables life to thrive. But if this natural carbon dioxide level increases even two fold, it would raise temperature by  $5^{\circ}$  to  $6^{\circ}$  making survival of life in earth difficult. Green house gases like methane, CFCs, nitrous oxide are chiefly the result of industrialization and excessive use of inorganic fertilizer. It is not an exaggeration to say that civilization is the ultimate cause of global warming. Green house gases are more efficient in absorbing infra red energy (the invisible radiation that ordinarily carries excess heat into atmosphere) than carbon dioxide. The global warming due to carbon dioxide and green house gases will have following effects:-

- (i) Reduction in yield of food crops.
- (ii) Rise in level of sea thereby submerging small island and coastal areas.
- (iii) Increased and unpredictable rainfall.

(b) **Acid rain**

- (i) Acid rain is a form of pollution in which the rain water contains greater than normal acidity (Technically the acid rain water will have a pH below 5.6).
- (ii) Oxides of sulphur and nitrogen generated by burning of fossil fuels in power plants, pulp and paper mills, mining and smelting and other industrial processes are continuously released into the atmosphere. Tall chimneys in the industries release the gases high in the atmosphere and before they can drop to the ground they have enough time to combine with atmospheric moisture under the action of sunlight to become acid. Precipitation of such particles is acid rain.
- (iii) Our environment is greatly affected by acid rain which causes exfoliation of marble and limestone buildings, kills fresh water fish, invertebrates and most plants. It leaches nutrients of soil such as calcium and magnesium. It draws toxic metals such as mercury out of sediments and into water. Acid rain can cause forest and crop damage.

- (c) **Depletion of Ozone Layer.** Ozone layer is beneficial and protective layer in stratosphere. It filters ultraviolet rays radiating from sun. The ultraviolet rays are one of main causes of cancer. CFCs used in air conditioner as refrigerant, as cleaning solvents and as raw material for making plastic foam are persistent and remain in upper atmosphere for decades have destructive effect on ozone. It is responsible for hole in ozone layer. Ozone depletion is a consequence of insoluble inert CFCs from terrestrial sources reaching the troposphere and reacting with UV radiations. Chlorine is liberated in the process which catalyses the conversion of ozone into molecular oxygen.

**Environment Consciousness in India**

9. Indians have been very conscious of environment from time immemorial. For many Indians, the relationship with nature starts every morning, when they recite Gayatri mantra an invocation to the sun at sunrise and again in the evening. The Vedic Gods such as Agni (Fire), Surya (Sun), Pawan (Wind), Bhumi (Earth), Varuna (Water) and Indra (Thunder & Rain) together represent atmosphere, sunlight and energy. Much has been said about the importance of these elements and environment in general in the Vedas and the Mahabharata. In fact most of these texts were written in the sylvan surroundings of forests.

**Poverty, Population and Environment**

10. The real danger to man's existence comes from two factors that have an overwhelming effect on the environment i.e. population and the amount of land available for agriculture. The state of the economy, poverty and environment are inextricably linked in developing countries where the entire economy is based on natural resources. Population growth also has an adverse impact on environmental resources. In the race for

growth our environment has been subjected to constant damage. The basic approach to follow is sustainable development and an integrated approach to the problems of poverty, population and environment.

### **Role of the NCC Cadet Towards Environment**

11. Every one is aware of the environmental problems. NCC Cadets are well organized to carry out environmental awareness campaign which is the need of the hour. NCC cadets can conduct tree plantation drives in order to curb the menace of environmental degradation. They should be the motivating and guiding force to friends and family members. As responsible citizens every one should plant trees and not cut them. Water conservation and proper disposal of the waste also leads to the safeguarding of the environment. Therefore, it should be the duty of every NCC Cadet to educate others towards this grave problem.

### **Conclusion**

12. It is a fact that the interest of rapid economic development and environment conservation and preservation will have to be balanced and harmonized and needs no emphasis. Only on this will rest all our measures to see that the development process is suitable.

## **SECTION-2**

### **WHAT IS ECOLOGY**

#### **Introduction**

1. The word ecology was coined from the Greek word ‘Oikos’ which means home. Ecology, therefore, means the home of plants, trees and also the animals that survive on them. Ecology is the study of organisms and the inter-relationship among organisms and the environment. The destruction of our forests has led to the disturbance of the delicate balance in the entire ecosystem. It has given rise to grave risks for the very survival of life on earth. Only recently we have started correcting this dangerous situation. The concern for ecological conservation has come to dominate the world scene.

#### **Eco-System**

2. Eco-system is the basic functional unit which includes both the organisms and non-living environment, each influencing the properties of the other and each one is necessary for maintenance of life on the earth.

#### **Component of Ecological System**

3. Each ecosystem has two main components:-

- (a) **Abiotic.** Heat, light, water, wind, soil, rocks, organic matter etc.

(b) **Biotic**. The biotic components of ecosystems are of the following order:-

(i) **Producers**. They are autotrophic green plants and some photosynthetic bacteria. They produce radiant energy and with the help of minerals derived from water, they manufacture complex organic substances as carbohydrates, proteins, lipids etc.

(ii) **Consumers**. They are heterotrophic which depend for their nutrition on the organic food manufactured by producers, the green plants. They are three types:-

(aa) **Primary Consumers**. These are herbivores feeding, directly on living plant residues e.g. Benthos, Zooplanktons, Cow, Deer etc.

(ab) **Secondary Consumers**. They are the carnivores which feed on the primary consumers. These are chiefly insects, fish, wolves, snakes etc.

(ac) **Tertiary (Top) Consumers**. They are some large fish or animals that feed on the smaller fish or animals.

(iii) **Decomposers**. They are chiefly bacteria, fungi, and actinomycetes. They bring about the decomposition of complex dead organic matter of both producers (plants) as well as macro consumers (animals) to simple forms. Thus they play an important role in the return of minerals and elements again to the soil.

4. **Food Chain**. The transfer of food energy from the producers, through a series of organisms (herbivores to carnivores to decomposers) with repeated eating and being eaten is known as a food chain. A food chain in a grassland ecosystem starts with grasses and goes through grasshoppers, frogs, snakes, hawks and so on.

5. **Development and Ecology**. A sweeping statement like all development is destructive would seek to convey the impression that the protection and preservation of ecology is the fad of a few freak groups who are out to run down development as the root cause of all our ills and irritations. Industrial development is often blamed for the destruction of ecology as it causes pollution, whether through the smoke being belched out by chimneys in the various factories etc or through effluents being constantly dumped into rivers. We need not forget the fact that our civilisation has traversed through several stages to reach its present position. However, progress has not been achieved only at the cost of ecology. There have been several other factors contributing to the modern scientific civilisation.

6. **Pure Environment**. Our long term survival depends on environment. We must not, therefore, ignore this fact. Mass poverty and ecological degradation are mutually harming our environment. Environment and economic developmental goals must consequently go hand in hand. After all it is the biosphere i.e the air and the water

encasing our earth, besides the green cover and the wild life, that sustain life on this planet.

7. **Struggle for Preservation.** The struggle is now on for preservation and adequate renewal of these resources. Attempts are being made to check the reckless destruction of our precious environment. Scientists have warned that mankind may have to return to the much dreaded ice age if reckless destruction of trees, other greenways and natural resources continues at the present pace associated with progress, especially in industry.

8. **Environmental Degradation.** Environmental degradation is drawing phenomenal attention of the academicians and policy makers. During the last two decades because of rapid and indiscriminate industrialisation all over the globe, the most precious heritage of man—the natural environment is in danger. Today it is realised that investments in environmental conservation and pollution control measures would enhance productivity in the long run, rather than be a stumbling block in the path of development.

9. **Changes in our Ecology.** Ecological changes are caused by increasing exploitation of underground water, increased use of fertilizers leading to degradation of soil content, rapidly increasing consumption of oil, petroleum and diesel, therefore depletion on a huge scale. All these factors cause imbalances in the physical and biological surroundings.

10. **Greenhouse Effect.** The greenhouse 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. The greenhouse effect, acid rain, ozone depletion and nuclear winter all these reflect human interference in the environment and all have become synonymous with catastrophe. Respect for ecology is, therefore, a vital part of any responsible strategy. Investment in conservation and pollution control measures would be beneficial in the long run.

11. **Study of Ecology.** From a small beginning ecology has emerged into a frontline service. By the turn of the 20<sup>th</sup> century widespread environmental degradation and catastrophic episodes have generated serious concerns and environmental-friendly growth in agriculture, forestry, urban and industrial systems by holistic management methods.

### **Conclusion**

12. The study of ecology and environment sciences has assumed great significance, particularly during the second half of the 20<sup>th</sup> century. While ecology deals with the study of structure and functions of nature, ecology must be at the core of any environmental science programme. Ecology provides the most scientific approach and methodology to understand and evaluate the present day environmental crisis and to find ways and means to resolve the crisis so as to ensure a better tomorrow for the human race. Resolution of burgeoning environmental problems is not possible without a thorough understanding of ecological principles and, therefore, requires trained ecologist for a deep and wide analysis, understanding and application of the principles.

## **SECTION-3**

### **CONSERVATION OF ENVIRONMENT AND ECOLOGY**

#### **Introduction**

1. Ecology has been defined as the study of organisms in relation to their environment. This covers the whole world of organic life-plants, including fungi, and animals, including microbes and humans. The environment in which all organisms exist includes not only the animate organisms that populate the bio-sphere but also the inanimate forces operating in nature. Thus agriculture, forestry, fisheries, soil, wildlife, forests, mountains, water bodies and water sources, rocks, air and forms of energy such as heat and light are essential physical components of the system that nature has, which ensure that living beings get every thing they need to survive from their surroundings. In order to live, all organisms must interact with the environment, not destroy it. However, to meet his many needs, man alters his natural surroundings. Sometimes, such changes disturb the natural process and worsen the living conditions of human beings and other organisms. In other words, they degrade the environment. Environmental degradation takes mainly two forms. One is the resource depletion, that is, a decline in the quantity of resources. The other is resource deterioration or pollution, that is, decline in the quality of resources. While Earth may survive environmental degradation, the depleted and deteriorated environment will be unfit for life on Earth

#### **Resource Depletion**

2. Over-use and wastages are the main reasons for the depletion of resources. In technologically advanced countries, the main cause of resource depletion is over-use e.g. enormous amounts of petroleum used. In less advanced countries sources get depleted due to excessive use to meet needs of large population and wastage due to absence of technology e.g. deforestation for wood and land space. While depletion of non-renewal resources like minerals and fossil fuels is irreversible, depletion of renewable resources like water, soil and forests is not immediately reversible if the depletion is faster than regeneration. They may also be permanently depleted if our activities create environmental conditions that are unfavorable for their regeneration just as large scale felling without replanting has led to deforestation.

#### **Resource Pollution**

3. Pollution means deterioration in quality caused by the presence of undesirable or harmful substances called Pollutants. Pollution of the environment refers to pollution of land, water and air causing permanent damage to the environment, which cannot be repaired by the natural process. Non-biodegradable wastes such as polythene which cannot be decomposed by natural agents i.e. bacteria, chemical fertilizers and pesticides contaminating soil and crops, waste water from homes ,factories and hospitals carrying harmful micro-organisms and chemicals , oil spills into seas, industrial emissions sending fumes and various gases into the air (including automobile emissions) excessive carbondioxide, even nuclear or radioactive substances, rising into the air causing global warming , are some examples of resource pollution posing a serious threat to life on earth

### **Environmental Damage.**

4. Deforestation disturbs the balance of gases in the atmosphere, causes global warming leading to the Greenhouse effect arising due to increased carbondioxide content in the atmosphere, therefore, increase in global temperature. Other damages are depletion of ozone layer (due to use of chlorofluorocarbons), acid rain (rainfall made acidic by pollution), nuclear winter (interference with the rays of the sun due to presence of radioactive waste materials from the use or reprocessing of nuclear fuel) and drought. Other factors contributing to environmental damage like deforestation, are reckless hunting leading to extinction of species (for example, extinction of the Dodo, a flightless bird) resulting in resource depletion and environmental damage (for example, extinction of flesh-eating species can lead to rise in the population of plant-eating species, this can, in turn lead to overgrazing, droughts and soil erosion) and invasion by plants and animals brought by man from other eco-systems (for example, choking of water bodies in Asia and Africa by water hyacinth introduced from tropical America). The ground water level is sinking because man is pumping out water faster than nature can replace it. Surface water, too, is getting depleted due to advancement e.g. river water to dams, large crop fields and power generation plants in such huge quantities that sometimes rivers run dry in hot season. In turn this disrupts natural flow thus affecting life forms that thrive in flowing water and again, water to dams submerge forests and wildlife habitats.

### **Environment, Life and Ecology**

5. From the above, it is clear that there is an unmistakable relationship between all life forms and the environment with undisturbed ecological balance. The condition in which a living organism lives makes up its environment. Within the environment, materials are cycled, energy is passed on and living beings interact with each other and their surroundings in a fine ecological balance. Energy resources give energy in useful form for existence. While sunlight, wind and water are renewable energy resources, others like minerals, coal, petroleum and natural gas are non-renewable and are fast depleting. Wood is renewable but mindless deforestation can make depletion faster than renewal. With depletion of resources due to over-use and wastage, the problem of environmental degradation has started affecting the entire planet and needs to be tackled at all levels. Natural environment, man's most precious heritage, has been suffering a tremendous onslaught by reckless development hinged on the criteria of technical feasibility and economic profitability only. All human developmental activities have impinged upon the natural environment and caused serious ecological imbalances.

### **Conservation Measures**

6. Protection of natural wealth and conservation of nature and life in all forms is a matter of great concern. Checking environmental degradation is a crying need. While degradation is affecting the entire planet and conservation has the attention of all countries, each person has personal responsibilities in this. Following are some of the measures that must be co-ordinated or taken by each one as the case may be, for survival of life on earth.

- (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**

#### **Introduction**

1. Pollution means imbalance in the atmosphere caused by pollutants. Air gets polluted with the smoke from homes, factories and vehicles. Water gets polluted by city and factory wastes. Loud noises cause sound pollution. Pollution infact spreads diseases and makes life uncomfortable on earth. Man has played a very crucial role in destroying the very essence of life i.e. destruction of forests due to excessive urbanization. Due to increase in population and industrialization, the forests have been exploited for wood from trees and land space. Unscrupulous felling of trees has led to the destruction of the forest cover. Hence the air purifier i.e. the trees which give us oxygen to survive have been depleted. Depletion of greenery and forests and the pollution of the earth's atmosphere have led to reduction of the protective ozone layer and increase in global warming.

#### **Types of Pollution**

2. (a) **Land Pollution.** Today's industrialised society produces a huge amount of garbage, the disposal of such wastes is a major problem, especially in the urban centers. Non-biodegradable wastes such as polythene bags, which cannot be decomposed by natural agents like bacteria have become a menace to the environment besides being health hazards. Use of chemical fertilizers and pesticides containing harmful substances contaminates the soil. Soil may become deficient in nutrients due to excessive cultivation or if the same crop is grown repeatedly on the same plot.

(b) **Water Pollution.** Waste-water from our homes, hospitals and factories is usually discharged in to the water bodies. Such water contains excreta, disease-causing micro-organisms and harmful chemicals. It makes water unfit for drinking and may even kill aquatic plants and animals. Harmful substances seeping through earth rainwater contaminate groundwater. Plant nutrients derived from fertilizers and organic wastes like dead bodies thrown into water sometimes cause excessive growth of weeds. Many aquatic organisms die as a result of oil spills from tankers. Leaking pipelines also pollute water organisms. Many

species of birds and fish die from contact with oil as it makes feathers and gills inactive.

(c) **Air Pollution.** Air pollution is caused mainly by harmful substances emitted into the atmosphere by industries and automobiles. It causes respiratory diseases and affects the skin and eyes. Some of the gases emitted by industries dissolve in rainwater to produce acid rain, which can damage vegetation. Atmospheric ozone which protects us from harmful ultra-violet rays is depleted due to release of certain carbon compounds called chlorofluorocarbons (CFCs) into the atmosphere. This also increases the risk of skin cancer and eye damage in humans.

(d) **Sound Pollution.** Sound produced from motor vehicles, trains, aero planes, factories, sound during religious and political public meetings, noise produced by the masses and other living creatures also plays an important role in producing sound pollution. It also affects the health of human beings. Loud sound affects the human heart; create auditory problems and causes mental stress.

### **Causes of Environmental Pollution**

#### **3. Water Pollution**

(a) **Discharge of Domestic Waste.** The discharge of untreated domestic wastes like human excreta, urine, washing of kitchen and laundry wastes directly into reservoirs of water courses. The problem is particularly true of unsewered small towns or cities situated close to the flowing rivers.

(b) **Discharge of Industrial Wastes.** Industrial wastes comprise of organic and inorganic chemical substances in minute or colloidal suspension which undergo microbial decomposition resulting in products odoriferous or unacceptable in tastes or appearance and are harmful to human beings.

(c) **Discharge of Agricultural Wastes.** The agricultural wastes are primarily due to barnyard drainage or washing in of chemical fertilizers, insecticides, pesticides and herbicides into surface or ground water sources with the impetus on agricultural development. The increasing use of such chemicals without forethought of health hazard involved is bound to accentuate the pollution problems.

#### **4. Air pollution**

(a) Smoke is produced due to incomplete combustion of coal in industrial plants, locomotives, furnaces and hearths. About 45% of smoke comes from industrial plants alone.

(b) Dust, a salt particle from oceans, pollens, spores, rust etc remain suspended in air and is affected by large air movement, dispersing them into vast areas.

(c) Gaseous impurities from chemical manufacturing industries like sulphur dioxide, benzene, carbon monoxide acid vapour, fumes etc often combine with the aqueous vapour of the air and then intermingle with the smoke already present in the air.

(d) Chloro Flouro Carbons (CFCs) used in air conditioning is responsible for depletion of ozone layer of atmosphere.

(e) Automobile exhaust gases in particular, exhaust from trucks and buses, contain products of incomplete combustion, carbon monoxide, hydrogen, methane and unburnt carbon.

### **Effects of Environmental Pollution**

#### **5. Water Pollution**

(a) The principal effect of pollution is to deplete through the excessive organic load, the dissolved oxygen content of receiving water to a point that stream becomes incapable of exercising the self purification process. The deoxygenation may be sufficient to destroy practically all the aquatic life.

(b) Pollution of stream by causing suspended solids to deposit on the stream bed causing silting, and the organic matter undergoing purification with the solid matters buoyed up by gas rising to the top thus resulting in floating masses of sludge.

(c) Use of polluted water downstream by communities for their daily requirements may cause the sporadic outbreaks of water borne diseases.

(d) Polluted waters are also difficult to be treated and it is found that treatment plants have to incur increased costs in handling such waters.

#### **6. Air pollution**

(a) Occurrence of diseases like silicosis (respiratory disease), rickets, dental caries.

(b) Deterioration of health in the form of nausea, headache, loss of appetite and irritation due to high sulphur dioxide content in air.

(c) The incidence of cancer is being increasingly related with the smoke and fumes from industrial plants.

(d) Smoke severely interferes with normal course of sunshine and visibility resulting in the possibility of untoward accidents.

### **Measures to Control Pollution**

7. (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

### **Role of the NCC Cadets in Curbing the Menace of Pollution**

8. NCC being one of the largest youth organisations has to play a significant role towards the pollution control. A youth can guide and contribute by educating others about the dangers of pollution. We have to respect our environment and natural resources and not pollute the same. Rivers and water bodies must be kept clean as water is an essential resource and it cannot be wasted. Infact every drop has to be saved. Cadets can visit villages and guide the farmers regarding the use of natural manure instead of chemical fertilizer produced after generating industrial waste.

9. Article 21 of the constitution guarantees the right to life, a life of dignity to be lived in a proper environment, free of danger of disease and infection. Further, Article 51A provides that it shall be the duty of every citizen of India to protect and improve the natural environment including forests, lakes, rivers and wildlife and to have compassion for all living creatures.

10. In order to stop the pollution menace, we need to take help from all. It is the duty of every NCC cadet to contribute towards this end through personal example and by educating others about various constitutional rights on the subject.

## **SECTION-5**

### **FOREST ECOLOGY AND POLLUTION**

#### **Introduction**

1. Forests are our natural resources. They have a vital role in maintaining a balanced ecological system. Forests help in global recycling of water, oxygen, carbondioxide and nitrogen in a balanced way. In controlling the environment and to maintain a healthy eco-system, forests have greater role to play.
2. Forestry is now a recognized subject and deals with establishment, development, care and reproduction of forest trees. The Ministry of Environment, Government of India has laid down a national forest policy for the improvement of our forest wealth. Programmes for forest development include the development of economic plantation, rehabilitation of degraded forests and forest protection measures. A healthy national economy requires that 33 percent of the total land area should be under forests.

#### **Importance of Forests**

3. Forests are a great national wealth. They provide fuel, wood, and timber for construction and pulp for paper, gums, resins, turpentine and allied materials as well as a variety of medicines. The loss of forest areas has resulted in the persistent loss of these valuable materials.

#### **Influence of Forests on Ecology and Pollution**

4. Forests have a great role in maintaining ecological balance on this earth. Along with other living organisms of the earth, the forests and our environment are dependent on each other and constitute an integral unit called ecological system or eco-system .The science which deals with the study of the eco-system is called ecology. Forest ecology is responsible for maintaining an adequate balance of carbon dioxide and oxygen in the environment. Heavy accumulation of greenhouse gases like carbon dioxide and related gases have affected the balance of the atmosphere which has resulted in an environmental problem of global warning. Forest cover utilizes a major portion of carbon dioxide of the bio-sphere and by the process of photosynthesis produces carbohydrates and release oxygen. Carbohydrates synthesised by the forest plants are a major source of energy consumed by herbivores feeding on plants and carnivores feeding on herbivores. The plants of the forest cover have the capacity to draw in carbon dioxide of the air and to release free oxygen into the atmosphere. All living organisms respire and release carbon in the atmosphere and this process goes on all the time. Only a wide-spread range of forest cover can absorb the unlimited load of carbon dioxide present in the environment.

5. Apart from absorbing carbon dioxide the forest cover helps in maintaining the oxygen cycle of the bio-sphere and the total oxygen budget of the earth. Due to inhaling of oxygen during respiration of man and animals the level of oxygen in the atmosphere is depleted. Plants of the forest cover are the major source of oxygen supplied to the atmosphere. Oxygen not only supplies life but plays a fundamental role as a building block of practically all vital molecules in the living organisms. Forests are, thus, not only

augmenting our oxygen supply and make the air fresh but also reduce the total supply of carbon dioxide which is increasing to alarming dimensions.

6. In the present days there is increasing concern to check the environment pollution created due to soil erosion and persistent threat of drought and flood .Our forests prevent soil erosion and the degradation of hills. The roots of various trees of the forest hold the soil firmly to prevent the soil being blown away by air or washed away by water. Whenever the land is stripped of its plant cover, soil is inevitably lost by erosion. Top soil is an extremely valuable natural resource. If the surface layer of top soil is blown or washed away, the remaining sub soil can not support plant life. Forests, thus, play an important role in conservation of the soil.

7. Forests also stop floods. The roots of the forest trees have the property of absorbing water. Due to this property they quickly absorb flood water and control the flowing of flood water in the agricultural fields. Due to deforestation the washed out soil goes to the bottom of the rivers and raises water level to an increased threat of flood.

8. Due to global warming weather conditions in many areas of the world have become unpredictable. Forests control humidity of the environment and regulate the weather conditions. The water vapour generated by the forests due to transpiration serves as a major constituent of atmospheric humidity. The areas where monsoon does not reach or in the areas where there is no way for rain, the nearby forests regulate rains. Forests bring down the temperature and maintain favourable weather conditions.

9. Forests are cities of wild animals and house innumerable endangered plant species which are of great economic value. All wild animals, including those which are our national pride, get their food and, shelter from the forests. The forests protect the disappearing species of many wild animals and birds and keep the nature balanced.

10. Forests have potential role in protecting the environment from the deleterious effects of hazardous obnoxious gases like carbon monoxide, sulphur dioxide hydrogen sulphide and the heavy metal pollution like lead, cadmium, arsenic, mercury etc. Which are regularly released in the environment due to industrial activities. Forests help in absorbing these gases and metallic pollutants due to special glands present in the different parts of certain trees which serve as scavengers of these toxic chemicals.

### **Conclusion**

11. In order to maintain a pollution-free environment, forests have a greater role. There is an effective need to conserve our natural heritage of forest resources not only to derive timber, fuel and other resources but to protect the eco-system, to ensure a balanced level of oxygen and carbondioxide to prevent soil erosion, to regulate the weather conditions, to rescue the environment from toxic pollutants and last but not the least to improve the quality of the environment in order to maintain a healthy eco-system.

## **SECTION-6**

### **WILD LIFE**

#### **Introduction**

1. Wild life comprises of nature and its inhabitants form the flora and fauna. Prior to the creation of life on the earth, the plants and trees were created for the survival of living beings. In the old ages, human beings were living in the forests in the company of wild animals. When the people felt the need to stay together as a group, society came into existence, which later gave rise to the villages, towns and cities. With the increase in the population, more villages are merging into the towns and cities at the cost of forests and wildlife and as a result the environment and biological equilibrium is disturbed. Therefore, the attention of the people all over the world is drawn towards the protection of forests and wild life.

#### **Importance of Wild Life**

2. India is a land with rich and varied wild life. Wild life in our forests, plains, hills and valleys includes such majestic animals as the tiger, the elephant, the lion, the cheetah, the wild buffalo and the rhinoceros. The majestic tiger has been declared as the National animal of India. On the plains and in the hills a large variety of deer and antelope are found. So are leopards, wolves, hyenas, jackals and foxes. Monkeys and langurs jump from one tree to another in our forests. Strange animals like the hedgehogs, scaly anteaters and porcupines play hide and seek in the bushy undergrowth of the jungles.

3. Anyone who cares to look around can see a large variety of birds fluttering about as well as soaring high. The kite, crow, pigeon, dove, sparrow, myna, bulbul, weaver bird are also common. The colourful peacock with its exotic plumage is known to every child. It is the national bird of our country, besides them, there are the ducks, cranes, herons, snipes, kingfishers and other birds of the waterside. Among the night birds, the owl is common.

4. The cheetah and the lion were once very common in Northern India. The cheetah is now almost extinct and the lion is confined to protected area in the Gir forest of Saurashtra. Man has meddled so much with the habitation of wild animals and hunted them so indiscriminately that many animals have already become extinct, while others are on the verge of becoming so.

5. Wildlife is indeed our national-wealth and the Government has set up several bird sanctuaries and national parks where birds and wild animals can live in peace in their own natural environment .The Corbett Park, named after the famous hunter Jim Corbett is a reserved area for the tiger. In Assam there is a park for the rhinoceros and at Bharatpur, we have a bird sanctuary. But laws alone are not enough to protect wildlife. What we need is to understand is that any imbalance of the natural cycle established by nature works only as a detriment to human progress. Felling trees indiscriminately leads to the land becoming almost a desert in course of time. Killing flesh - eating animals leads to the multiplication of grass-eating animals such as hares, rabbits and deer.

6. Recently the Government of India has declared big areas as bio reserves. They will help preserve both wildlife and rare varieties of plants. They are distributed in different climatic and vegetation zones such as the high Himalayas, the Rann of Kutch and the coastal waters of the Andaman and Nicobar islands, etc.

7. Some species of plants and animals have already become extinct and there are many facing danger of extinction. The basic reasons for extinction are as follows:-

- (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.

8. In India nearly 450 plant species have been identified as endangered or threatened. Similarly there are a large number of mammals, birds and reptiles which are endangered.

### **Wild Life Management in India**

9. Due to continuous increase in the number of endangered species of flora and fauna in wild life, steps have been taken to protect and manage wildlife in our country with an aim to :-

- (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) General awareness among the public.

### **Conclusion**

10. The protection of forest and wildlife has become essential for maintaining the human race on this earth. If the forests and wildlife become extinct from this world then there will be no human being on this earth. Therefore, it is the duty of every one of us to protect the forests and wildlife for our own survival.

**CHAPTER-XI**  
**SELF DEENCE**

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## **SECTION-1**

### **PRECAUTIONS AND GENERAL BEHAVIOUR OF BOY AND GIRL CADETS**

#### **Introduction**

1. Youth form an important proportion of any country's population and play a very important role in its progress. They are at an age when they are young, filled with new ideas and enthusiasm to bring these to fruition. They are, however, also at an age when mistakes, misbehaviour and rash-behaviour are certainly possible but entirely avoidable.

#### **Some Errant Ways**

2. These days some youth are more fascinated by a life of luxury and a carefree life-style. They are attracted to cinemas, restaurants and the like, devoting time and money to dresses, thus become spend-thrift while also spending precious time uselessly. Some are not interested in their studies. Some of the boys and girls are also more inclined towards or pre-occupied with making friends with the opposite sex. Regarding their personal hygiene, some of the young do not take a bath daily or change their clothes often. Some smoke, drink and take drugs too. All this affects their health. Some are always ready to criticize everything and show their disrespect to elders. They have least interest in higher values. It is important to set this situation right and to use the tremendous energies of the youth for their own betterment as well as for national benefit.

#### **Precautions**

3. NCC includes students, from both schools and colleges, who follow NCC motto of 'Unity and Discipline'. Therefore, the general behaviour of these cadets has to be upto the mark. For this, certain precautions have to be taken so that boys and girls cadets realize their responsibilities and become role models for the youth of the country. They should keep away from drugs, alcohol and tobacco. They should avoid bad company or even company which leads them to no-where. As is in a famous saying that "company makes a man", they must make friends after judging them. Therefore, all cadets must keep good company. They should be able to make use of their leisure hours in a constructive manner by engaging in some constructive hobby such as reading, music, painting, gardening or whatever they are interested in, instead of frittering away their time in idleness.

#### **Behaviour**

4. Cadets should be strictly disciplined, peaceful, friendly and co-operative, have a sense of healthy competitiveness, remain free of jealousy, maintain positive attitude and have respect for each other. As a general rule, and as cadets in particular, boys should not have a lustful attitude or carnal desire towards girls, eve-tease or indulge in vulgar behaviour or language. Infact, they must behave elegantly with them and should always respect their privacy. Healthy and normal intermingling between boys and girl cadets is desirable and a clean friendship must be maintained.

### **Conduct of Personal Daily Routine**

5. Cadet must give due concern to their personal and dental hygiene. They should actively participate in sports and games and take keen interest in exercise, outdoors activities and strictly follow constructive daily activities. Suggested daily schedule that can be easily followed by each cadet in everyday life is given below.

- (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.

### **Conclusion**

6. Human resource of a nation is its biggest capital with a greater emphasis on moulding the young, as they form a sizeable percentage of the population and they are, infact, the future of a nation. Accordingly, the NCC cadets have to shape the destiny of the country .It is required of them to assume responsibilities and act responsibly. They should develop the habit of discipline in order to face any situation with confidence and achieve success. They should imbibe knowledge, maintain a healthy body and build up a strong character. In short, carry a healthy mind in a healthy body. All NCC cadets should set an example for the youth of the country and always endeavour to remain “India’s Pride and World’s Envy”.

## **SECTION-2**

### **PREVENTION OF UNTOWARD INCIDENTS**

#### **Introduction**

1. As NCC cadets, with a built-in sense of responsibility, it is necessary that prevention of untoward incidents is ensured by all boy and girl cadets. As is the old saying that ‘Prevention is better than cure’; one must guard against undesirable incidents. In doing so, not only do we help ourselves or others but can also help in making our society a better place to live.

#### **Untoward Incidents**

2. Some of the untoward incidents that one can sometimes come across are given in succeeding paras.

3. **Road Safety.** Some people do not care for traffic signals. They are in a hurry to reach their destination and for that they over-speed, overtake from wrong side, fail to use horn from proper distance, jump lights etc, which sometimes leads to accidents. Though Zebra-crossings can be seen made at the right places on the road, still people prefer to cross roads from anywhere down the road which causes inconvenience for persons driving as they will have to apply brakes suddenly, on seeing someone crossing the road. The vehicle coming from behind may not anticipate the sudden halt leading to vehicle damage and also, sometimes, to serious accidents. The possibility of the vehicle hitting the pedestrian is also there.

4. **Pick-pocketing, Hooliganism, Theft and Robbery.** Generally pick-pockets are common in places like bus-stations, railway stations or some busy market areas. In buses and trains also such incidents of pick-pocketing can happen. Violence, fighting, looting, and creating trouble for everyone without any provocation is hooliganism. Theft is taking of someone’s movable property with the act of stealing and with the intention of retaining by actually moving it without the owner’s consent. Robbery is a severe form of theft.

5. **Eve-Teasing, Molestation and Sexual - Harassment.** This is a very disturbing trend. One can find boys teasing girls anywhere or every where just for fun or to attract the girls’ attention to their act. They do so for fun or as lustful behaviour, making vulgar gestures or passing lewd remarks. Some indulge in acts of molestation, sexual assault, ill treatment or harassment. Further, women are prone to sexual harassment, with news of rape, injury or murder, even in broad daylight, being read or heard every now and then. Whether a woman is a poor person, a worker, a domestic servant, an office goer or a company executive, wherever she is and whatever she is doing, she can be the focal point of harassment.

6. **Drugs, Smoking and Alcoholism.** Some of the young people can be seen lounging, staring into space or wandering aimlessly in a drugged or drunken state. Some

start smoking at a very young age. Young smokers can be seen everywhere, causing discomfort to non-smokers and posing a health hazard to themselves and others. These people just try to escape from the harsh realities of life or for immature fun involve themselves in such activities. It wreaks havoc on the members of his family.

### **Remedies**

7. The above incidents can be avoided if every person of society knows his/her responsibility towards society. Following are certain measures that can be taken, to prevent these untoward incidents.

- (a) **Road Safety.** To avoid accidents and mishaps, one should:
- (i) Drive/walk carefully on the roads.
  - (ii) Follow all safety rules.
  - (iii) Take into account all signals.
  - (iv) Start early to reach in time.
  - (v) Do not over-speed.
  - (vi) Do not mix drinking and driving.
  - (vii) Cross roads at zebra-crossing.
  - (viii) Where there is no zebra crossing, one should look towards both sides and then cross.
  - (ix) Hold children's hands, when they are going to cross roads.
  - (x) Children must be taught all the road safety rules.
- (b) **Pick-pocketing, Hooliganism, Theft and Robbery**
- (i) To prevent pick-pocketing, one should avoid traveling in crowded places, and should try to carry little cash and valuables.
  - (ii) Cadets should not indulge in hooliganism.
  - (iii) 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.
  - (iv) If the incident cannot be controlled, cadets should report the same to nearest police-station or to any law and order authority.
  - (v) Cadets must ensure prevention of robbery and theft and report any such incidents to law and order authority.
  - (vi) Cadets must make good contribution in prevention of such incidents in their neighbourhood. They must participate in their respective residents' associations in order to provide security to their colonies.

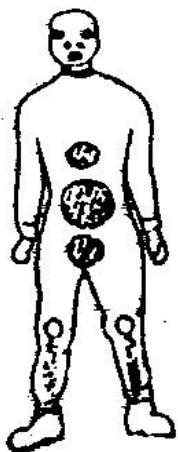
- (c) **Eve -Teasing, Molestation and Sexual - Harassment**
- (i) Boys must abide by moral values from young age.
  - (ii) They must learn to respect a girls' dignity.
  - (iii) Girls should not dress in such a way which can attract negative/adverse/lustful or degrading remarks, glances or action.
  - (iv) Girls should avoid travelling in darkness and least of all, alone.
  - (v) Working together with the opposite sex in a healthy environment must be ensured by all cadets.
  - (vi) Boy cadets must understand that eve-teasing, molestation and sexual harassment are criminal offences. Not only should they not indulge in such an activities, they should also help curb this tendency in society and give women their rightful and respectful place amongst men.
- (d) **Drugs, Smoking and Alcoholism**
- (i) Cadets should spend time with their families and should introduce their friends to them.
  - (ii) Cadets must understand that drug addiction, smoking and alcoholism are health hazards, and social evils and these are to be avoided.
  - (iii) Cadets must spread awareness and positive thinking amongst the society.
  - (iv) 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**

##### **Vulnerable Part of the Body**

1. **Infront.** Eyes, ears, temples, nose, mouth, chin, front and sides of throat, solar plexus, abdomen, fork (testicles), knees, chin and insteps (Fig-1).
2. **Behind.** Base of skull, spine (specially cervical and Lumber regions), kidneys, coccyx or testicles (Fig-2).



**Fig. 1**



**Fig. 2**

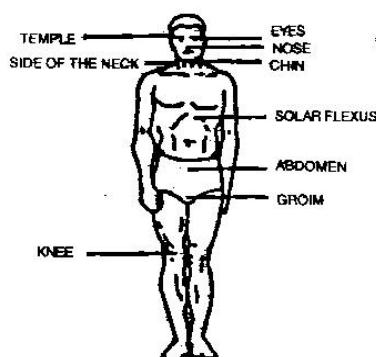
3. The human body has various sensitive or vulnerable spots, which in unarmed combat are considered as vital spots. These spots, such as solar plexus, temple and fork are very difficult to toughen, consequently, the degree of pain or injury from a blow to these spots will be graver and more serious than to the other parts of the body.

4. A soldier therefore must familiarize himself with the various degrees of vulnerability of vital spots and the body weapons, which would enable him to select the proper target to achieve the aimed injury and also to be able to defend against a seasoned blow effectively.

### **Vital Spots of the Body**

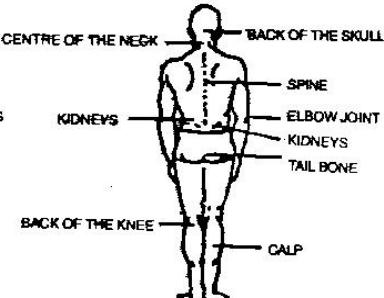
5. The front and the rear view spots of the body are given in Fig-3 and Fig-4 respectively:-

(a) **Front View**



**Fig. 3**

(b) **Rear View**



**Fig. 4**

## **SECTION-4**

### **PHYSICAL SELF DEFENCE/UAC**

#### **Introduction**

1. The form of self defence which an individual has to employ against an armed or unarmed enemy, has always been the cause of concern for a soldier through the ages. Whenever a man faced a wild animal or an enemy, his concern has been to render his adversary ineffective by any available means.
2. Necessity is the mother of invention and it is with the aim of ensuring self preservation that most of the modern day martial arts and arts of self defence were invented through the ages.
3. The unarmed combat is a collection of offensive as well as defensive techniques derived from martial arts and combat sports which are ideally suited to the requirement of warfare where surprise is of paramount importance. The need to fight in built up areas, where even the most innocent of persons may turn out to be an enemy, makes unarmed combat, an essential part of every soldier's training.
4. The thorough knowledge of unarmed combat in the hands of a well trained and highly motivated soldier, is a formidable weapon which in many circumstances, is a more effective weapon, against an armed enemy. The usefulness of unarmed combat during an ambush, sentry silencing etc, has been adequately demonstrated in various wars fought all over the world.
5. Training in unarmed combat aims at installing the idea into a soldier that the fight is not over, even though he has been disarmed and, that a seemingly hopeless and unarmed defensive situation can be changed into an aggressive and attacking position.

#### **Principles**

6. In order to enable the soldier to derive maximum benefit from a given situation by the use of unarmed combat. It is essential that he is aware of the various principles of unarmed combat. It is only by rigid adherence and implicit application of these principles that success can be ensured. The various principles are enlisted below:-

- (a) **Ruthlessness.** War is a matter of life and death, especially where unarmed combat is concerned, hence there must be no scruples or compunction over the methods employed. 'RUTHLESSNESS' is necessary in order to gain mastery over the enemy, and it must be used without any mercy. The brutal method of attack, such as, kicking, gouging the eyes, blow etc, must be used without any hesitation. Emphasis must be laid on this from the very first lesson and a note made of the occasion, when such attacks should be employed.

(b) **Determined Effort.** All attacks must be aimed and carried out in a fierce, ruthless and determined manner. A “half hearted” attack will always be futile and loses half its effectiveness.

(c) **Attack Vulnerable Points.** The soldier must be taught to close in with the enemy, whether the latter be armed or otherwise and immediately attack the most vulnerable points open to him, to achieve the aim. The location of these will depend upon the enemy’s dress, equipment and his position i.e., standing, kneeling, facing or with back to the attacker.

(d) **Efficiency of Initial Attack.** The vigour and suddenness of attack will probably catch even an armed opponent at a disadvantage, for it is unlikely that he will anticipate an attack from an unarmed man. The initial attack must be aimed at killing or disabling. However, if only a knock down or stunning blow can be delivered, it must be followed quickly by a hold, lock or throw which should succeed in giving the attacker, complete mastery over his enemy, even to the point of killing him.

(e) **Surprise and Speed of Attack.** Any defensive movement followed by speedy counter attack, must be aimed to catch the enemy by surprise. The surprise gained would diminish the chances of effective counter attack by the enemy.

(f) **Retaining Initiative.** Surprise, speed, strength, smoothness of execution and perhaps the most important of all, the gaining and retention of initiative, are essential if success is to be achieved. However, no two enemies will attack in precisely the same manner, but the skilled opponent of unarmed combat, by virtue of his knowledge gained, combined with constant practice with varied partners, under different conditions, will have variety of move at his commander to overpower his enemy.

### **Precautions**

7. The following safety precautions must be strictly adhered to, when conducting the unarmed combat training to avoid any injury or accidents:-

(a) All practical work to be supervised closely and constantly. A class must never be left unsupervised.

(b) A soldier must be familiarized with each movement, theoretically and with practical demonstration, before attempting any practical work.

(c) During learning stages to prevent accident, do not permit a soldier to go ahead of your instruction.

(d) During learning and perfection of technique stages, ensure that the training partner offers no resistance. He should allow the movements to be executed freely.

- (e) Ensure adequate space for practical work.
- (f) Establish a signal for stopping the application of pressure when executing holds.
- (g) Proper warming up is a must before carrying out any practical work
- (h) Caution the men to apply very light pressure, until they become familiar with the holds.

### **Preliminaries**

8. **Dress.** Initially start with denims and boots and progressively wear equipment and battle order.
  - (a) **Ambidexterity.** All attacks and defences must be taught using both left and right handed methods.
  - (b) **Realism.** Training should be realistic within safety limits.
  - (c) **Blows.** Practice these on punching bags, medicine balls or on a plank of thin wood.
  - (d) **Attacks.** These must be all out, followed up and doubled up whenever possible without losing the effect on the main attack.
  - (e) **Knowledge and Practice.** Understand, master and practice each move for speed and coordination.
  - (f) **Defence.** Follow all defensive moves or parries with attack.
  - (g) **Initiative.** Seize initiative at first opportunity.
  - (h) **Bluff.** The opponent should be bluffed into thinking that the individual is submissive and is not going to attack or that he is injured.
  - (j) **Balance.** Practice in pulling and tripping enemy off balance.
  - (k) **Surprise.** Surprise and unexpected attacks are important factors.
  - (l) **Strength.** It has an important part in unarmed combat.

### **Basic Throws**

9. The throwing techniques are important for meeting situation that may arise during a combat either as form of defence or attack. It is therefore essential that a soldier is well versed with the throwing techniques, which requires a great deal of coordination of

the mind, the body muscles, the body weight and also the quick reflexes which are of utmost importance, for imbalancing the enemy and achieving the required goal.

10. The under mentioned throwing techniques must only be practiced on soft mat/ground, to your sparring partner:-

(a) **Right Hip Throw.** Place the left foot in front of land slightly inside of your opponent's left foot. At the same time, strike your opponent vigorously on his right shoulder with the heel of your left hand and grasp his clothing. This blow knocks him off balance (Fig-4) and then pivot on to your left 180 degrees on the ball of your left foot. During the pivot, place your right arm around your opponent's waist and jerk him forward forcefully with both arms driving his mid section into your buttocks. This bends your opponent over your right hip at his waist and leaves him partially suspended in this position. Straighten your legs quickly thrusting your buttocks forcefully into your opponent's mid section. At the same time, bend forward at the waist and pull forward and down with both arms driving your opponent to the ground (Fig-5 ) (a) & 5 (b).

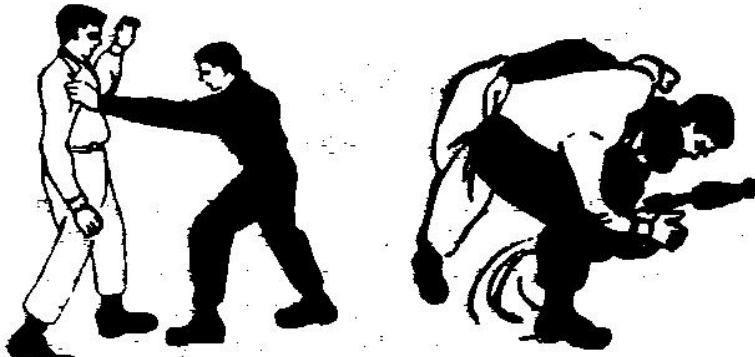


Fig.5

(b) **The Ankle and Shoulder Throw.** To attack an opponent from behind when silence is not essential, grasp his ankles with cupped hands and simultaneously force your shoulders into his buttocks. Pull his legs outward and backward as you come to the standing position. This will throw him forward on to his face and you should then follow through with a disabling kick to the fork Fig-6.

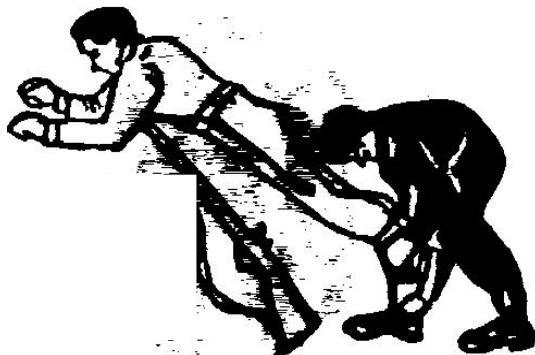


Fig.6

(c) **Over Shoulder Throw.** The first movement is identical to the right hip throw. Pivot to the left 180 degrees on the ball of your left foot. Keep your right arm in position to protect your head and neck region until you near the completion of the pivot. Then reach up and grasp your opponent's clothing at his right shoulder with your right hand, gripping him with a double hand hold. As you complete your pivot. Pull your opponent forward and drive his mid section into your buttocks. Your buttocks are directly in front of your opponent's hips. Your right foot is in front of and slightly outside of your opponent's right foot, your elbows are as close to your body as possible. And your knees are bent. Straighten your legs, bend at the waist and pull downward with both hands. This action will catapult him over your shoulder (Fig-7).

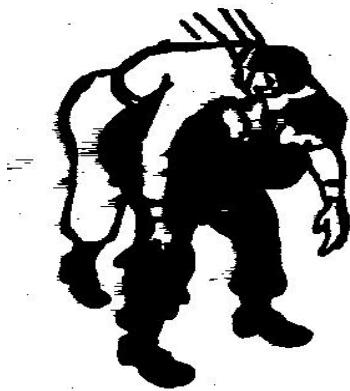


Fig. 7

(d) **The Rugby Tackle.** A rugby tackle from the rear consists of a swift dive at on opponents legs. As he starts to fall you must be prepared to deal with a disabling blow. This movement can be practiced either on a dummy, e.g. a weight sack suspended just clear of the ground or on a stationary / running man who has been taught how to fall (Fig- 8).

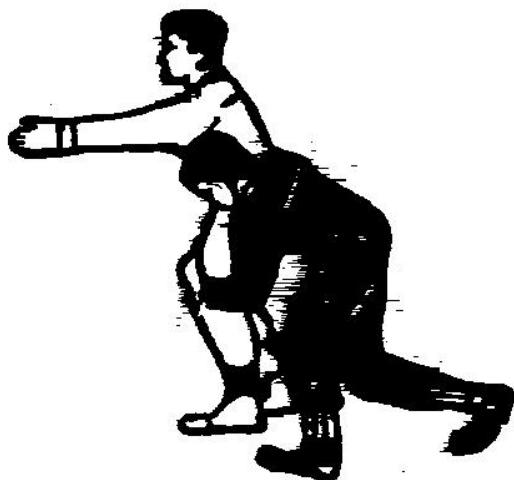


Fig. 8

(e) **Reverse Hip Throw.** Stand closer to your opponent than in the previous throws. Take a long step forward with your left foot and place it slightly outside of and a few inches beyond your opponent's right foot. Most of your weight is supported on your foot. At the same time, strike your opponent forcefully on his right upper arm and with your left hand grasp his arm at this point with that hand. This blow causes him to lose his balance to the rear Fig 5 (a) immediately step around your opponent with your right foot and place it directly behind him. At the same time encircle his waist with your right arm. Push your hips to your right as far as possible to gain buttock to buttock contact and pull your opponent in position on your right hip. At this time lock your opponents right arm into your left elbow. Straighten your legs, use your right hip as lever and throw your opponent over your hip, not over the side of your right leg (Fig-9).

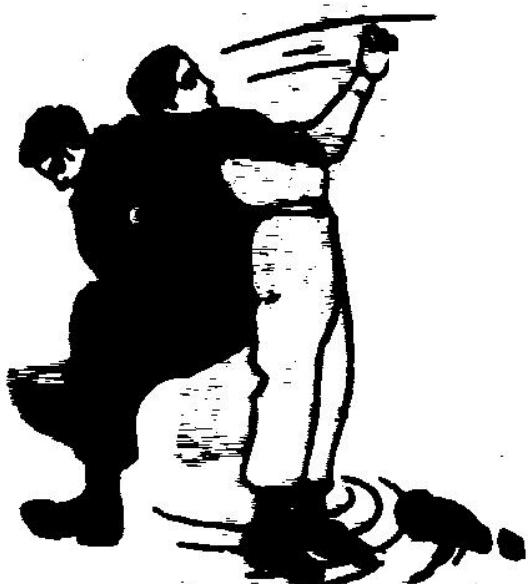


Fig. 9

(f) **Arm Throw.** Face your opponent and seize his right wrist with both hands, right above left, swing his arm up quickly forward and pass under it by turning right-about maintaining a firm grip with your hands, and thus twisting his arm. Bend slightly forward over your left knee straightening and bracing your leg. Pull sharply down on your opponent's arm by bending your leg. Pull sharply down on your opponent's arm by bending forward at the waist and throw him on to his back. In practice, after you have secured you grip and turned, the

remaining movements must be done gradually, otherwise you will dislocate your opponent's shoulder or cause him to strike the back of his head on the ground (Fig-10).

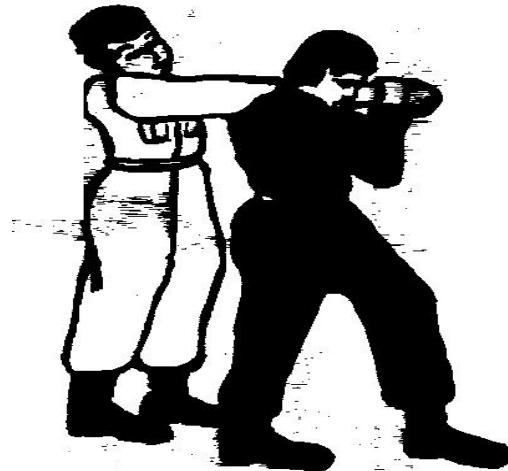


Fig. 10

(g) **Stomach Throw.** Grasp opponent's right and left side collars, disturb his balance by pushing him to his direct rear, In return when the opponent pushes you, place your right foot on his lower abdomen and retaining your firm hand grip on your opponent's lapel, side to the ground with your buttocks enabling your opponent's lapel, slide to the ground with you buttocks enabling your opponent to fly over your head to the ground beyond, describing an arc in light through space. Sit on his chest and press his neck with both hands (Fig-11 (a), (b) & (c)).

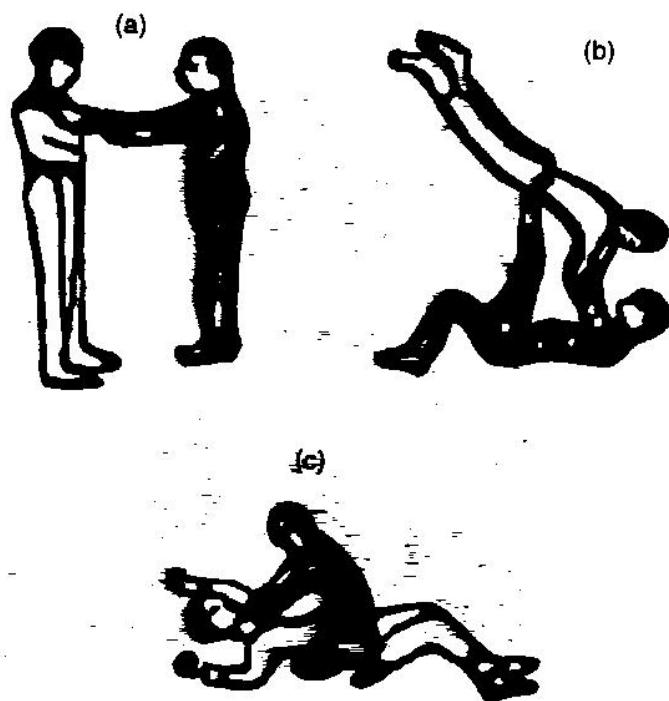


Fig. 11

## Attacking

11. **Chin Jab.** Sharp forward and upward blow delivered with the heel of the hand bent arm under an opponents chin. The weight of the body behind the blow (Fig-12).
12. **The Knee Blow.** A various blow with the bent knee to opponents fork/solar plexus or face (Fig- 13).

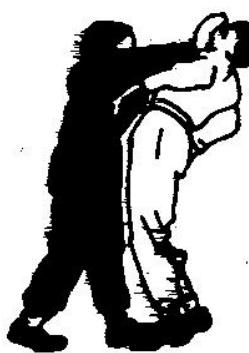


Fig. 12



Fig. 13

13. **The Kick.** (Fig-14 and 15 defence against the kick).



Fig. 14

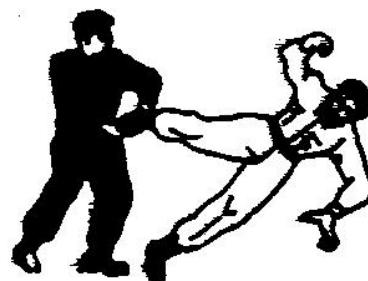


Fig. 15

14. **The Stamp.** When seized from behind or front use your boot sharply on the opponents shin followed by more disabling blow (Fig-16)

15. **Full Nelson.** With both arms under the opponents armpit place your hands at the back of his head. Apply downward pressure on his head and upward pressing under his arms (Fig-17) .



Fig. 16



Fig. 17

16. **The Wrist Locks.** Bending the wrist in any direction causes extreme pain. Fingers of the hand are also vulnerable . See double wrist lock . (Fig-18).

17. **Strangle Holds**

(a) **Front Strangle Hold.** Good for low frontal attack (Fig-19).

(b) **Rear Strangle Hold.** From behind stike him across his throat (Fig-20).



Fig. 18



Fig. 19



Fig. 20

- (c) Cross Collar Strangle Hold (Fig-21)
- (d) Japanese Strangle Hold (Fig-22).

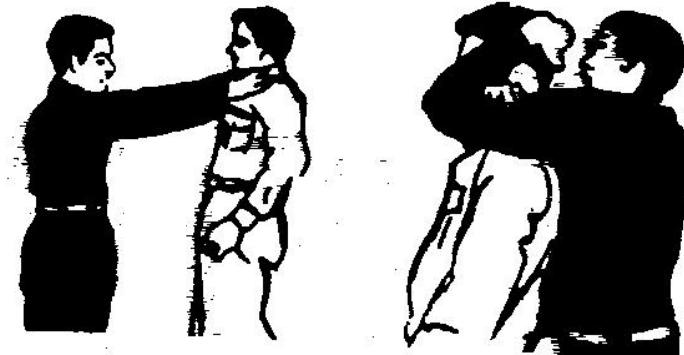


Fig. 21

Fig. 22

### **Release and Counter Attack**

18. Counter attacks to front strangle hold (Fig 23 and 24)

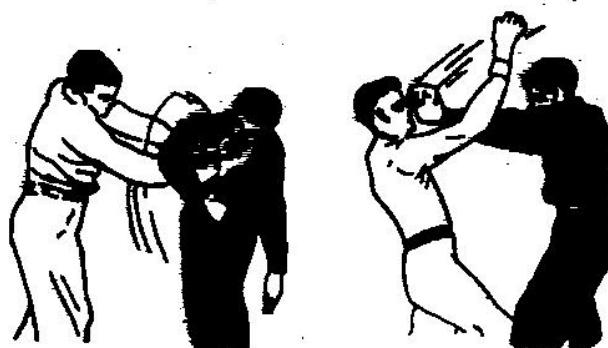


Fig. 23

Fig. 24

19. Counter attacks to rear strangle holds (Fig- 25 and 26).

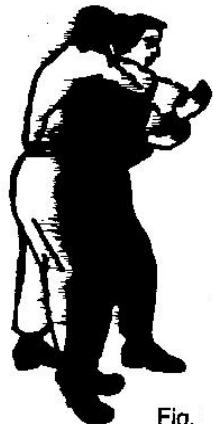


Fig. 25

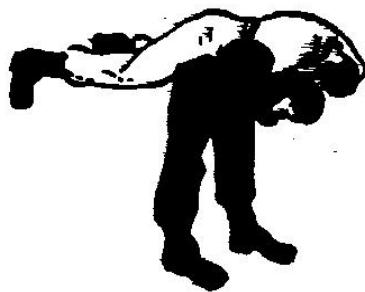


Fig. 26

## **CHAPTER-XII**

### **POSTURE TRAINING**

<b><u>INDEX</u></b>	
<b>CHAPTER-XII POSTURE TRAINING (ONLY FOR SD/SW)</b>	
SECTION-1	Aim and Principles of Posture Training and its Importance
SECTION-2	Anatomy and Relationship of Body Segments
SECTION-3	Analysis of Good Posture
SECTION-4	Causes of Bad Posture, Remedial and Preventive Measures
SECTION-5	Balanced Alignment and Exercise
SECTION-6	Balanced Diet
SECTION-7	Correct Standing and Exercises
SECTION-8	Correct Walking and Exercises
SECTION-9	Correct Use of Body in Motion

## **SECTION-1**

### **AIM AND PRINCIPLES OF POSTURE** **TRAINING AND ITS IMPORTANCE**

#### **Introduction**

1. A well poised body means better health through improved organic functions. The resultant, better work and increased physical and mental powers give greater strength and endurance which are helpful towards the building up of self-reliance, necessary for initiative in any field. Suffice to say that considering the objectives of NCC and the bearing of correct physique and self-confidence, posture training has taken an added significance.

#### **Object**

2. The main objects are to:-

- (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.

3. A study of these objects shows that a great deal of emphasis is laid on development of personality, physique and self-reliance. It, therefore, follows that the training programme for cadets should be so designed that these objectives are achieved to the maximum limit possible. Good posture and deportment being essential in the development of personality and physique, it becomes necessary that elementary training in these is imparted to the cadets. Correct posture not only gives a distinctive touch to deportment, but also is a basic requisite to the efficient functioning of the human body both physiologically as well as psychologically. Hence the improvement in physique.

#### **The Need for Good Posture**

4. Grace and poise are the hallmark of an individual's personality which can not be attained without developing a good posture.

5. Poise and graceful carriage may not come naturally to all of us but the smooth coordination of various sections of the body can be cultivated by correct training to acquire these elements of one's personality.

6. Most of us receive no training in carrying out domestic chores with unstrained postures and body movements. We fail to drift into a room with poise, sit properly or execute a tennis stroke with grace. Incorrect movements are both inefficient and unattractive and leave us tense and fatigued long before the day has run out. They also

wear out our organs and tissues faster, very much in the manner of an improperly driven car that soon rattles and collapses.

7. Hence from scientific and aesthetic view points, it is essential that we learn and understand the correct use of the body which would avoid strain and at the same time effect appearance and general bearing. The basic factor to understand is that the human body is a machine and considering it as such, we find it is made up of various segments whose movements should be smoothly co-ordinated.

## **SECTION-2**

### **ANATOMY AND RELATIONSHIP OF BODY SEGMENTS**

1. Posture is a problem to human beings because the skeleton is fundamentally unstable in the upright position. The two legged human body presents a continuous problem in maintaining balance at the feet which provide a very small base of support. To add to this, the trunk, head and arms are supported from the hips upward by a one legged arrangement of the spine. The body is composed of a large number of segments and these must be held together at all joint contacts and must be controlled and moved by many muscles arranged around the joints. Fig. 1.

2. The major joints, their location, direction of their movements and their functions are given below:-

S.No.	Type	Where Joined movements	Directions of	Functions
(a)	Ball & Socket	Hip Shoulder Trunk sideways	Forward Backward and rotation	Bending, straightening, 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

### **Muscles**

3. The force of gravity continuously exerts the force on all parts of the human body. If a person does not unconsciously use muscles, one cannot stand erect against this force of gravity yet one is seldom aware of this muscle contraction under the force of gravity, the body tends to collapse forward, especially if muscle control is inadequate. Since the

body is flexible and symmetrical, the job of keeping it erect falls greatly on certain muscle groups which are called antigravity muscles.

4. When muscles are continuously stretched by habitually poor posture, they lengthen and their tone diminishes. General fatigue also diminishes the muscle tone. When the antigravity muscles are fatigued or stretched, desirable postures can no longer be maintained. It is, therefore, essential that the anti-gravity muscles should be strong and well co-ordinated to maintain good body mechanics.

5. It is necessary to understand the vital functions of the antigravity muscles in order to attain and work for better posture. We shall start from the foot muscles and work upward.

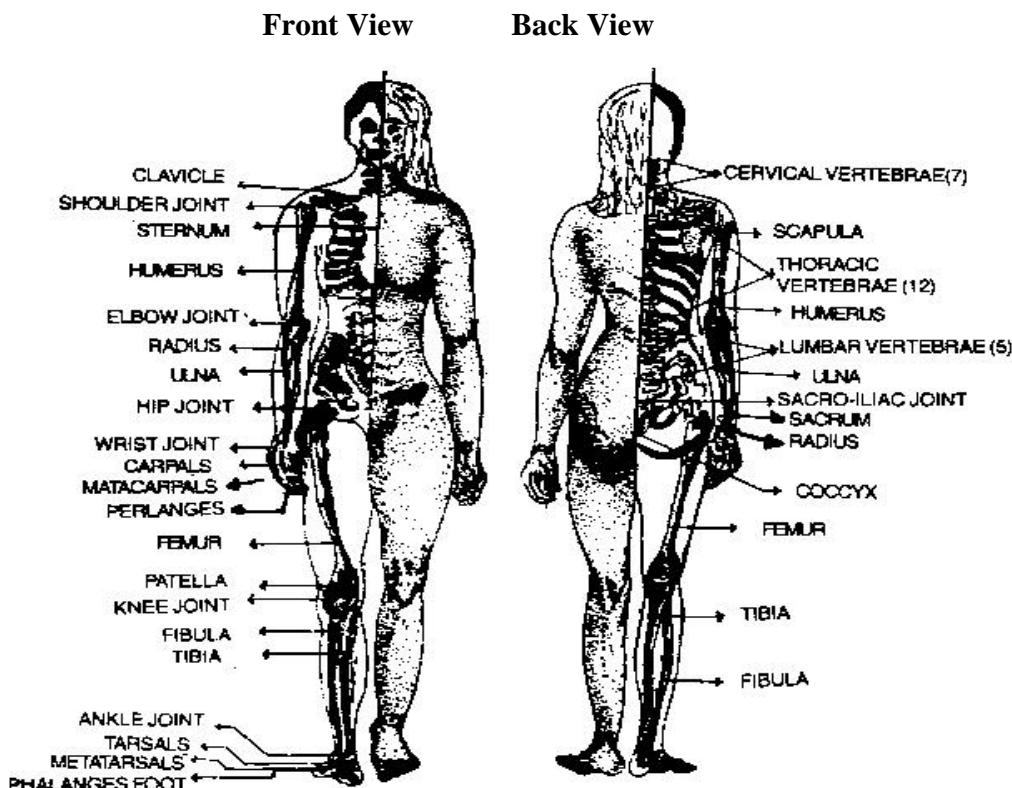


Fig. 1

### **SKELETON STRUCTURE & BODY FORM**

#### **Foot**

6. The sole of the foot is heavily supplied with ligaments and muscles which act as buttresses to enable a person withstand the strain. The strain of standing tends to lower the arch of the foot. When the arches drop, one becomes flat footed.

### **Ankle**

7. The body sways forward and backward over the feet, with the movement taking place at the ankle joint. The leg is attached to the ankle joint. The leg is attached to the foot much more towards the heel than the centre of the foot and hence the body must normally be balanced slightly forward of the ankle in order to centre its weight over the length of the feet. This means that the muscles of the calf of the leg, which are attached to the bone of the heel, should be strong.

### **Knee**

8. At the knee position, the leg can be bent only in the backward direction. When the body weight sways backwards, gravity causes the knee to bend, unless the muscles of the thighs are contracted. These muscles are essential for keeping the legs straight.

### **Hip**

9. The hip muscles are called into play to hold the trunk and the upper legs erect against the forward bending force of gravity without leaning on the ligaments.

### **The Trunk and the Pelvis**

10. The spine acts as support for the trunk, head and arms. Because of its location more towards the back, the entire trunk has a tendency to fall forward. This becomes all the more increased by the fact that most of our daily activity is concentrated in front of the body under focus of the eyes. To control this forward drooping of the trunk the entire back muscles are called in to play. But some of the muscles are seldom required to work very hard and thus are poorly developed, as such they do the job of supporting the trunk indifferently.

11. Muscles are further weakened by prolonged stretching. Habitually poor postures expose the antigravity muscles of the back, abdomen and shoulders to prolonged stretch as the upper back is rounded, the chest sinks, the muscles of the back are stretched around the out side of the increased back curve. This rounding of the back is accompanied by a forward droop of the shoulders which in turn stretches the muscle fibres from the spine out to the shoulder blades. As the chest sinks, it carries the heart, lungs and the blood vessels downward pressing on the contents of the abdominal cavity. These then are pressed down and forward against the abdominal muscles. This places a stretch on the entire abdominal muscle walls, weakening it and causing bad body mechanics.

## **SECTION - 3**

### **ANALYSIS OF GOOD POSTURE**

1. We constantly adjust ourselves to eight segments of the body which are as under :-
  - (a) The bones of feet acting as means of locomotion and a base for supporting the entire super imposed weight of the body.
  - (b) The bones of lower legs, jointed for freer movement.
  - (c) The bones of upper legs, offering full and varied movement at the hips.
  - (d) The pelvic or hip girdle, the position of which is fundamental to the support of the upper body.
  - (e) The bones of the trunk, the spine with its normal curves, with chest and abdomen providing ample room for vital organs.
  - (f) The bones of the shoulder girdle.
  - (g) The bones of the neck.
  - (h) The head with eyes level-crowns the highest part.
2. When these segments are held one upon another in the best possible manner, that posture is good. When they are moved in poised and unstrained manner, the body moves efficiently. This may need more clarification. Take five boxes of the same size or different sizes and place them all on top of each other as shown – Fig. 2. Take another set of five boxes and place them on top of each other as shown in Fig.3. The results are obvious.
3. Likewise the segments of the body act, if held in one line. They ensure economy of effort, strength, balance and proper support. In case where these segments get out of alignment they involve more strain and convey an unaesthetic and weak position.

4. Fig. 2 shows head straight, chest up forward, abdomen in and back with



Fig. 2



Fig. 3

the usual curves. It also shows that all the segments are placed in one line and therefore convey correct position of the body. Fig. 3 shows head forward, abdomen protruding, back with curves exaggerated. It shows that segments of the body are placed in a zigzag manner and therefore the body is held in an incorrect position. The correct posture would mean:-

- (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.

5. The above position is maintained with relative ease if :-

(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. That is, there must be sufficient flexibility and normal range of movements. It must be possible to stretch to proper position the shortened parts and shorten the over stretched parts.

(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.

6. An incorrect body posture is more fatiguing as more energy is required to maintain the physical equilibrium. There is generally a very wrong notion about changing a habitually defective posture to a correct one. People think that changing to the correct posture would make one more tired. However as per the principles of correct body mechanics the various parts of the body are so aligned that they do not require much muscular support and can very easily fall into the correct position.

7. An improperly aligned body structure is generally due to a wrong postural habit. Establishing a new habit is at first fatiguing and it becomes difficult to get rid of a wrongly formed physical posture. However, once efforts are made to correct it, the alignment is set automatically.

## **SECTION-4**

### **CAUSES OF BAD POSTURE REMEDIAL AND PREVENTIVE MEASURES**

1. The following are the causes of bad posture:-

- (a) **Due to Muscular and Organic Defects.** Sometimes bad posture is due to poor development of muscles. The back muscles are weak and the abdominal muscles get relaxed. Hence the whole muscular system becomes loose and sagging. All efforts to balance the body correctly fail because of a defective body framework.
- (b) **Lack of Nourishment.** Children who do not get proper nourishment develop defective body mechanics.
- (c) **Fatigue Due to Over Work.** Bodies get deshaped due to overwork. Under nourished children struggling under heavy school schedules develop poor body movements.
- (d) **Due to Illness and Infections.** Illness and infections result in fatigue and the body slumps out of shape. Wariness leads to overstrained muscles and ligaments and the consequent body deformity. Due to the warping of the body framework there is a deformed posture. Sometimes faulty body mechanics are due to injuries also.
- (e) **Due to Bad Habits.** Bad habits of sitting, standing and walking in wrong postures due to shyness or inferiority complex result in a deformed posture unless persistent efforts are made to improve them.
- (f) **Due to Poor Hygiene.** Neglect of the principles of hygiene such as proper bathing, eating, sleeping and relaxing and taking of exercises result in poor body mechanics.

## **SECTION-5**

### **BALANCED ALIGNMENT AND EXERCISE**

#### **General**

1. These techniques are designed for the primary purpose of improving your muscle sense or keen aesthetic perception of the balanced position of the total body. The goal is to consciously achieve a balanced position so that when you assume any other position, you will be uncomfortable. A description of balanced position when standing seems in order at this time. They 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 within 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.

2. Specific techniques to aid you in attaining balanced alignment are prescribed in following paragraphs.

3. Try to find your position of balance by feeling it, seeing it, and holding it for a few seconds. Relax, then see if you can find this position. Again repeat.

4. See it, work in front of a mirror and try to visualize the balanced position of your body segments, the total line running through the centre of weight of each body segment and falling slightly in front of the outer ankle bone. Feel it.

5. When you find this position, become aware of the position of the body parts, the sense of weight on the feet, the free and easy position of the knees, the balance of the pelvis, the position of the trunk and the chest, the free and easy balance of the shoulder, and the feeling of the head and chin.

6. If you have difficulty in finding the balance of your body parts, test yourself against a wall or door, stand with the back against the wall or door. Heels, hips and head touching the wall. Stretch tall and easily, keep waistline in, shoulders balanced and easy, arms relaxed at the side, head straight, chin horizontal and chest held in mid position. The space between your lower back and the wall should be at a minimum, just enough to feel the pressure on your fingertips, if you tried to slide your hand through.

7. If you are still having difficulty in developing the balanced feeling by this exercise then stand with the hips supported against the wall, several inches from the wall, body bent forward at the waist. Gradually bring the body to an extended position by first pressing the lumbar region of the spine to the wall and then attempting to touch each segment of the spinal column to the wall.

8. One good exercise that brings about the feeling of the balanced position and at the same time, assists in developing the muscles necessary to maintain this balanced position is to stand with the back against a wall. Heels about 3 or 4 inches from the wall, feet straight ahead and 2 inches apart, knees easy. Place the hands up beside the head with elbows touching the wall by pulling up and in, with the power of abdominal

muscles. Hold head straight and the chin level, stretch tall in this position. Tighten muscles on inner side of feet, rolling weight, slightly towards outer borders of the feet and rotate legs slightly out ward with knee caps facing straight ahead by tightening the buttock muscles. Hold this position about 3 counts. Relax, repeat exercise 3 times per day. You may occasionally stretch the arms up over head, keeping them in contact with wall.

9. If this exercise is difficult for you, try it on the floor, then try it up on a stool with the knees bent at right angle and feet flat on the floor. Then proceed to stand position.

10. Once you achieve the sense of balance in the standing position with concentration, your next step is to practice. Relax, balance, relax. Repeat the procedure about 3 times per day. Continue as long as necessary so that during the day without a mirror, you can check yourself.

11. To become more consciously aware of your balanced position in the upright position, utilize the following procedure:-

(a) Balance yourself in front of a mirror. Walk away from the mirror and then return. Are you in balanced position? If not find your balanced position and repeat the exercise. Repeat until you can come back and be in a balance position.

(b) After you can do this, increase the frequency of the exercise. Don't just walk, but stoop, lift, carry objects, climb stairs and change the height of your heels. When you can achieve the balanced position with concentration then you are ready for the next step.

### **Balanced Exercise**

12. Keeping the correct balance is important in posture training. All remedial exercises should be carried on from basically correct positions due to the prevalence of faulty foot and leg position. Walking on a straight line, narrow beam or even on the flat floor places undue stress on groups of balance muscles that are not developed symmetrically. For this reason a tilted board balance is devised in which the treads are started outwards at about 15 degrees. Standing on these treads, the leg is rotated outwards and the feet are thrown into a wild universion state which corrects the position. In this position there is a taking up of a slack of the stretched muscles and a lengthening of the shortened muscles every time one foot is raised.

13. The effort to keep the balance, or to maintain stability is being done by the opposite leg body or arm. Something else, gives a powerful stimulus to all the muscles.

### **Equipment**

14. The suggested equipment for these exercises is given below:-

(a) Full length mirror – located in conveniently accessible place.

- (b) Hanging apparatus/Beam/Bar.
- (c) Visual aid – postures and charts.
- (d) Balance boards, raised brick bund approx 40 feet length.
- (e) Sand bags – varying in weight from one to five Lbs. Use these for balancing on the head.

## **SECTION-6**

### **BALANCED DIET**

#### **General**

1. The major components of food are **Carbohydrates, Proteins, Fats, Vitmins and Minerals**. These are called **Nutrients**. Besides these, water is an important constituent of our food and makes up for two - thirds of our body weight. Our diet usually contains all the nutrients in varying amounts. Rice or roti gives us energy. Dal, eggs and meat give us protein, and so on. A diet is **Balanced** if it contains all the nutrients in the correct amount. Carbohydrates and fats provide energy for the body. Proteins provide materials for growth and repair of cellular constituents. Minerals and vitamins are needed to aid vital reactions in cells and tissues and also to regulate body functions. Water plays an important role in cellular reactions, and other life processes such as digestion, excretion and transport. Alongwith all these, a certain amount of **Roughage** is needed for proper digestion. Roughage largely consists of the indigestible plant **Cellulose** which helps retain water, adds bulk to the food and prevents constipation.

#### **Individual Body Need**

2. Again, a balanced diet is related to the state of one's age, health and occupation. For example, a 12-15 years old girl needs daily about 10300 kilojoule of energy from oxidation of carbohydrates and fats and 50 grams of vegetable protein. The requirement of protein is not the same for all adults, for example, some need only about one gram per kilogram of body weight. It is high for growing children and pregnant women. Can you reason why? A man doing hard work may not need large amounts of protein in his food, but he does require food of high calorific value, i.e., high content of carbohydrates and fats. The body also needs small amounts of vitamins and minerals. So , in order to design a diet which will take care of your body's requirement and satisfy your food habit, you will have to know the nutritive value of various items in your food. Inaccurate and misconceived information about the nutritive value of certain food items(such as, 'grapes are best for health', or 'an apple a day keeps the doctor away') can lead to wasteful expenditure without ensuring good food value.

### **Recommended Diet**

3. Almost all foods contain all the nutrients in varying amounts-some more, others less. A meal can be carefully chosen so that all the requirements of the body are met. The recommended dietary requirements are given in the chart.

#### **Recommended Dietary Requirements in Gram**

Food items	Adult man			Adult woman			Children		Boys	Girls
	Sedentary	Moderate	Heavy work	Sedentary	Moderate	Heavy work	1-3 yrs	4-6 yrs	10-12 yrs	10-12 yrs
Cereals	460	520	670	410	440	575	175	270	420	380
Pulses	40	50	60	40	45	50	35	35	45	45
Leafy Vegetables	40	40	40	100	100	50	40	50	50	50
Other Vegetables	60	70	80	40	40	100	20	30	50	50
Roots and Tubers	50	60	80	50	50	60	10	20	30	30
Milk	150	200	250	100	150	200	300	250	250	250
Oil and fat	40	45	65	20	25	40	15	25	40	35
Sugar and Jaggery	30	35	55	20	20	40	30	40	45	45

### **SECTION-7**

#### **CORRECT STANDING AND EXERCISES**

##### **Correct Standing**

1. Correct Standing means that the weight of the body should be on both feet; knees should be relaxed. Line of abdomen should be almost straight; pelvis should be held squarely over the base of support, chest over pelvis, shoulders resting easily over rib cage, head over shoulder and chin should be parallel to feet.

##### **Exercises**

2. Following exercises help in gaining muscle control and in correct standing:-

- (a) Walk, run, walk run - - -  
repeat.
- (b) Skip - - -  
repeat.
- (c) Review your standing position and find out and correct fault such as :-

- (i) Forward head.
- (ii) Tilted shoulders.
- (iii) Round back.
- (iv) Round shoulder.
- (v) Protruding abdomen.

(d) Short stride standing position and find out and correct fault such as arms over head, shoulders relaxed :-

- (i) Start slow ‘pinwheeling’ over left foot.
- (ii) Continue slow ‘pinwheeling’ over right foot.
- (iii) Lift trunk, twist to left, bend with a strong trunk extension with shoulders relaxed.
- (iv) Begin ‘pinwheeling’ over left foot.  
Repeat

(For flexibility of trunk and shoulder girdle and strong spinal extension).

(e) Back lying arms relaxed at side:-

- (i) Lift trunk and legs forming ‘V’ with the ankles. Forward reach of both arms will help balance pull up.
- (ii) Touch outside of knees but do not hold on or hold breath.
- (iii) Return, bend knees and slide down.  
Repeat.

(For strengthening of abdominal and spinal muscles).

(f) Standing – Easy knee and arm swings keeping trunk erect over the base as the knees dip easily. Heels slightly off the floor, begin with a slight bend, increase the depth from one swing to four swings.

Repeat

(For flexibility and strengthening of knee and hip joints).

(g) Back lying, knee pulled to chest and held : Roll forward and back and from side to side.

Repeat

(For strengthening of lower back).

(h) Back lying:

- (i) Inhale as fully as possible.
- (ii) Exhale.
- (iii) Relax.

Repeat  
(For relaxation).

## **SECTION - 8**

### **CORRECT WALKING AND EXERCISES**

#### **Walking**

1. While walking, heel should be in contact with the ground, weight of the body should be transferred to the balls of feet, inner line of feet should be straight, there should be no body bulge in front, heel cord seen in rear view is straight, not bent inward at ankle level, relaxed arm swing, feet swing forward parallel and body alignment is good.

#### **Exercise**

2. Following exercises will help in improving use of legs and in correct walking :-

- (a) Skip high , skip low.
  - Repeat.
- (b) Practice correct walking as explained below:-
  - (i) Heels in contact with the ground first.
  - (ii) Weight of body transferred to the ball of feet.
  - (iii) Toes used in definite push off action at each step.
  - (iv) Legs swinging forward and parallel.
  - (v) Feet swing forward parallel.
  - (vi) Relaxed arm swing.
  - (vii) Good body alignment.
- (c) Walk run, walk run : Repeat until you feel difference in the push off.
- (d) Run in slow long stride, run with arms swinging strongly forward and back in opposition.

Repeat.

(e) **Standing Arms Relaxed at Sides.** Pedal weight on right foot and left toes, change weight distribution with tall push up through spine, up toes of both feet before alternate heel is dropped.

Repeat

(For improving the use of legs and feet in motion)

(f) **Standing with Hands on Hips.** Alternate leg swing forward and backward first with heel on floor then with lifted heel. Once the movement is started continue with complete swing with little effort. Swing sixteen times on each side before changing.

(i) Repeat running and walking with emphasis on relaxed easy legs drive and arm swing forward and backward.

(For improving the use of legs and feet in motion).

## **SECTION - 9**

### **CORRECT USE OF BODY IN MOTION**

1. The body goes through innumerable motions all the time. But the most vital ones which we must learn to execute correctly are as under:-

(a) **Sitting.** Back should be straight, weight of the upper portion of the body should be over pelvis, feet and legs should be in easy relaxed position.

(b) **Lifting Objects with One Hand.** In order to pick up an object, place one foot nearest to the objects close to it and as near its centre of weight as possible, with the other foot slightly ahead. Then, bending knees, with the trunk leaning slightly forward, grasp object and lift it in line with the body as the trunk, hips, and knees extend back to normal erect alignment. This method is correct for lifting light and heavy objects which can be moved with one hand, such as objects with handle, suit cases, packages, a book etc.

(c) **Lifting Objects Requiring Use of Both Arms and Hands.** A tray of dishes, a bag of groceries a baby from the floor etc. stand close to the objects, with feet slightly apart, bend knees to required depth keeping pelvis and weight of trunk over the feet. When contact is established with arms or hands lift the object to desired carrying position. This position should be as nearly over the body's centre of gravity as possible or parallel to its line of gravity.

(d) **Pushing or Pulling Heavy Objects.** In pushing, stand as close to the object as necessary. (The heavier is the object, the closer one should stand). Apply the push in the desired direction and through the object's weight centre. Lean

forward bracing your hands against the object to be moved. In pulling, lean in the direction of the pull to increase the horizontal component of the leg thrust.

(e) **Lowering Weight with One Hand.** Bend the trunk slightly forward with knees and hips flexed. Place the foot nearest to the object slightly back to receive the weight of the body. Place the opposite foot forward to balance, increase knee and hip bend to required level. Slowly lower the object to the receiving surface.

(f) **Lowering Weight with the Use of Both Arms and Hands on a Table or Raised Surface.** Place the foot nearest to the object as far under receiving surface as possible or close to it and parallel to its edge. With a slight bend of the trunk forward, bend knees slowly at the same time as the lowering of the weight.

(g) **Lowering Weight to the Floor.** Place one foot slightly forward. Bend knees as far as necessary and trunk slightly forward as object makes contact with the floor.

(h) **Lifting and Carrying Objects from Floors in Pairs.** Bend knees and hips as deeply as possible. Each cadet should grasp an object at an end with strong extension of the legs. Lift together and carry to the new position. (Lowering to its new location involves the reverse of lifting.)

(j) **Skipping and Running.** End with skipping and running.

## **MISCELLANEOUS**

### **CHAPTER-XIII**

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<b>CHAPTER-XIII MISCELLANEOUS</b>	
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SECTION-3	Traffic Rules and Road Signs

## **SECTION-1**

### **CAREER OPTION IN SERVICES: ARMY, NAVY & AIR FORCE**

#### **ARMY**



**INDIAN ARMY**      **A CAREER IN THE ARMY MEANS A WINNER FOR LIFE**

Type of Entry	Month of Starting of Course	Age at the Time of Joining	Educational Qualification	Mode of Selection	How to Apply
1. National Defence Academy, Pune	Jan & July	16 ½- 19yrs	12 <sup>th</sup> standard of 10+2 System of Education or equivalent	NDA Exam by UPSC & SSB interview	Apply in response to advertisement in March/April & Oct/Nov
<b>2. Indian Military Academy</b>					
A) Direct Entry	Jan & July	19-24 yrs	Degree or equivalent at the time of joining the course	Combined Defence services Exam (CDSE) conducted by UPSC and SSB interview	Apply in response to advertisement in March & Oct/Nov
B) Engineering Graduate	Jan & July	20-27 yrs	Engineering Degree in notified disciplines	Direct SSB interview	Apply to Dte. Gen of Recruiting (TGC Entry), Army HQ, West Block III, R.K.Puram, New Delhi - 110 066 in response to advertisement in March/April & Oct/Nov
C) University Entry Scheme	July	19-25 yrs 18-24 yrs	Final and Pre-final year students of an Engineering degree course	Campus interview and SSB interview	Apply in response to detailed advertisement in July.
D) 10 + 2 TES	Jan & July	16 ½-19 ½ yrs	10 + 2 Pass with 70% aggregate in PCM.	Apply directly to the Recruiting Directorate	Apply in response to advertisement in May and November
<b>3. Officers Training Academy, Chennai</b>					
A) Short Service Commission (Non- Tech)	May & Oct/Nov	19-25 yrs	Degree or equivalent at the time of joining the course	CDSE conducted by UPSC and SSB Interview	Apply in response to advertisement in March/April & Oct/Nov.
B) Short Service Commission (Technical)	May & Oct/Nov	20-27 yrs	Engineering Degree in Notified discipline	Direct SSB Interview	Apply in response to advertisement in Mar/Apr and Oct/Nov.
C) Short Service Commission (NCC Special Entry Scheme)	May & Oct/Nov	19-25 yrs	Graduate with 50% aggregate marks with NCC 'C' Certificate	Direct SSB Interview	Apply in response to advertisement in Oct/Nov.
D) Women Special Entry Scheme (Officers)	March & Sep	19-27 yrs	Graduate/Post Graduate/LLB/ Professional Engineering Graduate	Direct SSB interview	Apply in response to advertisement in June/Dec.

## NAVY


**INDIAN NAVY**      **A CAREER IN THE NAVY MEANS LOOKING FOR CHALLENGE**

Type of Entry	Educational Qualification	Age Limit (Years)	Remarks
A) Cadet Entry (10+2) Naval Academy, Goa (Through UPSC)	10+2 or equivalent with Physics & Maths	16 ½ - 19	For Men only
B) Cadet Entry (NDA) (Through UPSC)	10+2 or equivalent with Physics & Maths	16 ½ - 19	For Men only
C) Graduate Special Entry, Naval Academy, Goa (Through CDSE)	B.Sc (Physics & Maths) or BE	19 - 22	For Men only
D) NCC Special Entry Naval Academy, Goa	B.Sc (Physics & Maths) or BE, with Naval Wing Senior Div NCC 'C' Certificate	19 - 24	For Men only
E) Direct Entry Naval Armament Inspection Cadre	A Degree in Electronics/Elect/Mech Engg or Post Graduate Degree in Electronics or Physics	19 ½ - 25	For Men only
F) Direct Entry Law Cadre	A Degree in Law qualifying for enrolment as an Advocate under the Advocates Act 1961 with minimum 55% marks	22 - 27	For Men only

**SHORT SERVICE COMMISSION**

Type of Entry	Educational Qualification	Age Limit (Years)	Remarks
Law Cadre	A Degree in Law qualifying for enrolment as an advocate under the Advocates Act 1961 with minimum 55% marks	22 - 27	For Men & Women
Logistics Cadre	BA (Economics) II Div. Or B.Com II Div, or B.Sc (Physics and Maths) II Div. or B.Tech/BE or Graduation in any subject with Degree/Diploma in Material/Financial Management	19 ½ - 25	For Men & Women
ATC (Air Traffic Control)	B.Sc I Div or M.Sc II Div	19 ½ - 25	For Men & Women
Hydro Cadre	B.Sc I Div or M.Sc II Div or BE	19 ½ - 25	For Men only
General Service	B.Sc I Div or M.Sc II Div or BE	19 ½ - 25	For Men only
Logistic (Catering)	Degree in Hotel Management or equivalent with minimum 50% marks in aggregate	19 ½ - 25	For Men & Women

## **AIR FORCE**

 <p><b>INDIAN AIR FORCE</b></p> <p>A CAREER IN THE AIR FORCE MEANS READY TO FACE CHALLENGES</p>			
<b>Branch/Type of Entry</b>	<b>Educational Qualification</b>	<b>Age Limit (Yrs)</b>	<b>Advertisement Schedule</b>
<b>FLYING BRANCH</b>			
(a) National Defence Academy For Men only	10+2 with Physics & Maths	16 ½ - 19	Mar/Oct
(b) Combined Defence Services Examination For Men only	Graduate with Physics & Maths at 10+2 or BE	19 - 23	Apr/Sep
(c) NCC Special Entry (Through CO Unit/DG NCC) For Men only	Graduate with Physics & Maths at 10+2 or BE & NCC Air Wing Sr. Div. 'C' Certificate	19 - 23	Apr/Oct
(d) Short Service Commission For Women only	Graduate with Physics & Maths at 10+2 or BE	19 - 23*	May/Nov
* Upper age limit relaxed to 25 years for holders of Commercial Pilots Licence (CPL)			
<b>TECHNICAL BRANCH</b>			
(PC for Men / SSC for Women) **			
(a) Aeronautical Engineering (Electronics)	First Class degree in Engineering Electronics/Mechanical/ Allied subjects as per advertisement	18 - 28	Apr/Oct
(b) Aeronautical Engineering (Mechanical)			
<b>SSC for Women</b>			
(c ) Same as above			Oct
<b>GROUND DUTIES BRANCH</b>			
(PC for Men/ SSC for Women)**			
(a) Administration	First Class Graduate or PG in subjects as per advertisement	20 - 23	May/Nov
(b) Logistics		20 - 25	
(c ) Accounts		20 - 25	
(d) Education	PG in subjects as per advertisement	20 - 25	
** PC - Permanent Commission / SSC - Short Service Commission			

## **SECTION-2**

### **SELECTION PROCESS : WTLOs**

1. Selection process for the Whole Time Lady Officers is given in the succeeding paragraphs.

2. **WTLOs.** The Direct Entry Whole Time Lady Officers are selected through an open competition by the Union Public Service Commission as and when vacancies arise . A limited percentage of vacancies is also reserved for ‘C’ Certificate holders of NCC , subject to fulfilling other conditions .

(a) **Eligibility Conditions – Direct Entry**

- (i) **Age** - 21 -25 Years
- (ii) **Qualification** - Degree of a University or equivalent
- (iii) Must be medically fit for active service.
- (iv) Must fulfil the following physical standards:-
  - (aa) **Heights** - 145 Cms
    - Relaxation in Height Standards - For Gorkha/ Garhwali/ Kumaoni/ Dogra /Maratha ladies -2 cms, Adivasis – 3 cms
  - (ab) **Weight** - According to height but not less than 42 Kgs
  - (ac) Should not have knock –knee or or flat foot.
  - (ad) **Eyesight** (with or with out glasses)
    - Distant Vision - 6/6 in one eye and 0.8 in other eye.
    - Near Vision - 0.6 in one eye and 0.8 in other eye.
- (v) **Desirable**
  - (aa) 2 years experience as ANO or GCI in NCC or equivalent rank in Police Force.
  - (ab) NCC ‘C’ Certificate holder.

## **SECTION-3**

### **TRAFFIC RULES AND ROAD SIGNS**

#### **General**

1. Roads are made for human-beings and all types of transportation but to avoid chaos on the roads, there are certain traffic rules and laid down set road signals. These have to be followed strictly for safety of everyone. Certain important points are discussed in detail in succeeding paragraph.

#### **Crossing of Roads**

2. Pedestrians are the high-risk group on roads. Most of the accidents and accidental deaths involving pedestrians are the direct result of their errant behaviour, specially while crossing roads. They are least bothered about the right of vehicles on roads and scuttle across roads amidst heavy traffic without giving due respects to road safety norms. The first right on the roads is that of vehicles, hence give way to them. Utilise zebra crossings, subways and foot over bridges to cross roads instead of cutting it in the middle. Pedestrians should keep the following in mind :-

(a) **Zebra Crossings.** Every pedestrian must have seen a group of white lines as those on a zebra near intersections where vehicles stop at red light. These are exclusively meant for pedestrians for their safe crossover. They should cross the road by walking over it. Only when the traffic signal for vehicles is green do vehicles drive over zebra crossing.

(b) **Subways.** Technology tunnels involving great engineering skills and expenditure are built underneath roads to enable pedestrians cross busy roads safely without confronting heavy onrush of traffic on roads. It is not only safe to cross roads using a subway it is fun too. For you can have a leisure walk without any botheration for traffic.

(c) **Overhead Bridges.** On certain busy roads wherein construction of subway is not feasible overhead bridges are built across road edges to enable pedestrians' safe crossover. Again, using these bridges to cross roads would be safe as well as fun. For you are quite above from the realities on roads.

#### **Safety Rules to be Followed, While Walking to School**

(a) Always walk on the footpath only. On roads without footpath, walk on the extreme right hand side of the roads. Do not be impatient on the road. Do not rush or run on the road.

(b) Cross only at zebra crossings, traffic signals, subways, foot over-bridges. Where such facilities do not exist, look for a safe place to cross.

(c) At the signal lights, cross only on a clear green signal. If an intersection is controlled by a policeman, traffic warden or RSP cadets, cross only when he signals you to do so.

(d) When crossing between vehicles parked on the side of the road, remember that you are not visible to the moving traffic (because the parked vehicles may be higher than you). Stop as you appear from behind the vehicle and look for a safe gap before crossing. Remember, drivers need plenty of time to see you and to slow down and stop.

(e) While crossing wide road that have central islands, always cross in two stages. Cross to the Central Island, stop, and cross when the next section is clear.

(f) While crossing one-way streets, remember that the traffic will usually be moving in a number of lanes and at higher speeds. Do not cross unless all lanes are clear.

(g) Never cross a road at a corner, as the motorist taking the turn will not be able to see you on time.

(h) Running across the road is a bad idea, as you may slip and fall.

### **3. Safety Rules to be Followed, While Going by Bus**

(a) Leave home well in time, so that you won't have to run to catch the bus.

(b) At the bus stand, always follow the queue. Board the bus only after it has come to the proper stop, without rushing in or pushing others.

(c) While in the bus, shouting or making a noise is definitely bad manners. Such behaviour can also distract the driver.

(d) Do not board or alight at a bus stop other than the one decided by the school. Never board and alight at a red light crossing or unauthorized bus stop.

(e) Always hold onto the hand-rail if standing in a moving bus, especially on sharp turns.

(f) Do not sit, stand or travel on the footboard of the bus.

(g) Do not put any part of their body outside a moving or stationary bus.

(h) Always adhere to the bus safety rules.

### **Use of Helmets**

4. It is necessary to wear helmet while driving for ones own safety. Helmet save us from brain-injury if accident occurs. As brain is the most important part of our body, in case injury occurs in brain one can die or lose his memory or may become paralysed. So to avoid this, simply 'WEAR HELMET WHILE DRIVING'. Main points to be taken into consideration, regarding helmet:-

- (a) Wear only driving-helmet.
- (b) Helmet string should not be of poor quality.
- (c) Helmet string should be tied properly.
- (d) Helmet should have I.S.I Mark.

### **Use of Mobiles**

5. While driving / riding switch off your mobile and put it on voice mail. If you talk while steering you can be fined or face imprisonment. If you talk while driving your concentration gets reduced and can cause an accident..

### **Effects of Alcohol**

6. Alcohol reduces the ability to drive in a proper and sane manner, which may result in disaster on roads. Alcohol has following effects:-

- (a) Slows down the mental process.
- (b) Incapacitates the brain to take a rational decision.
- (c) Gives strong but false sense of confidence, which in turn affects performance.
- (d) Renders the brain incapable of controlling and coordinating body movement.
- (e) Impairs the ability to judge speed and distance.
- (f) Impairs the ability to judge speed and distance.
- (g) Impairs vision and hearing.

### **Punishment**

7. If any of the above happens while you are driving, accident is sure to follow. Further you will fall prey to end number of legal complications. Driving with an alcohol content of more than 30 mg per 100 ml of blood is a punishable offence and a court challan is issued to the offender.

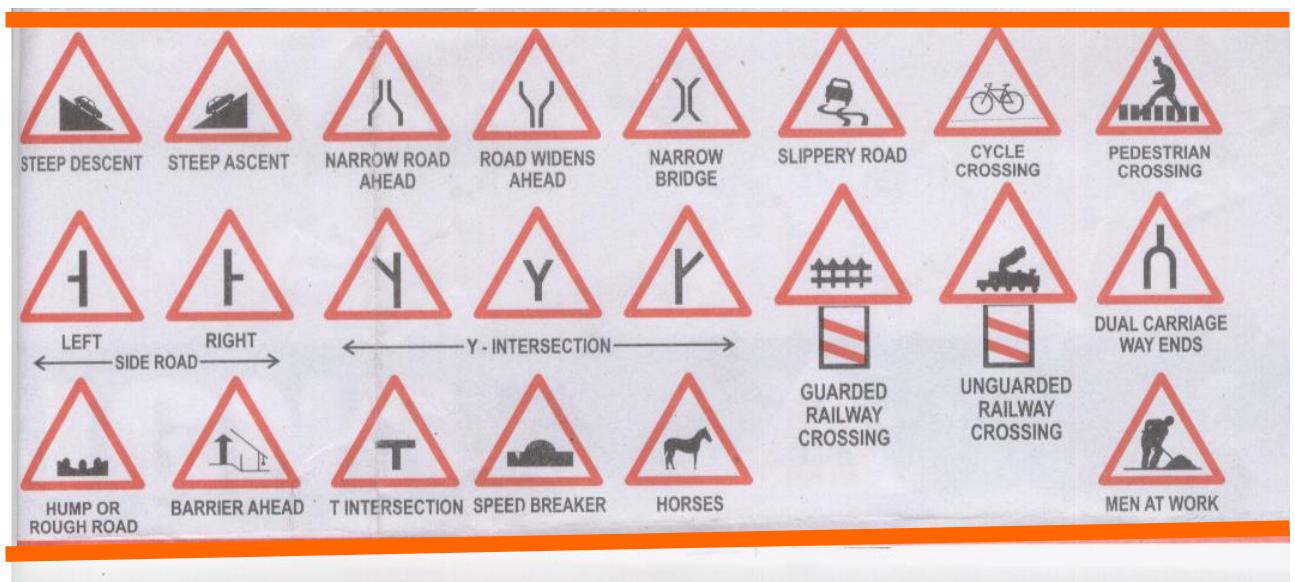
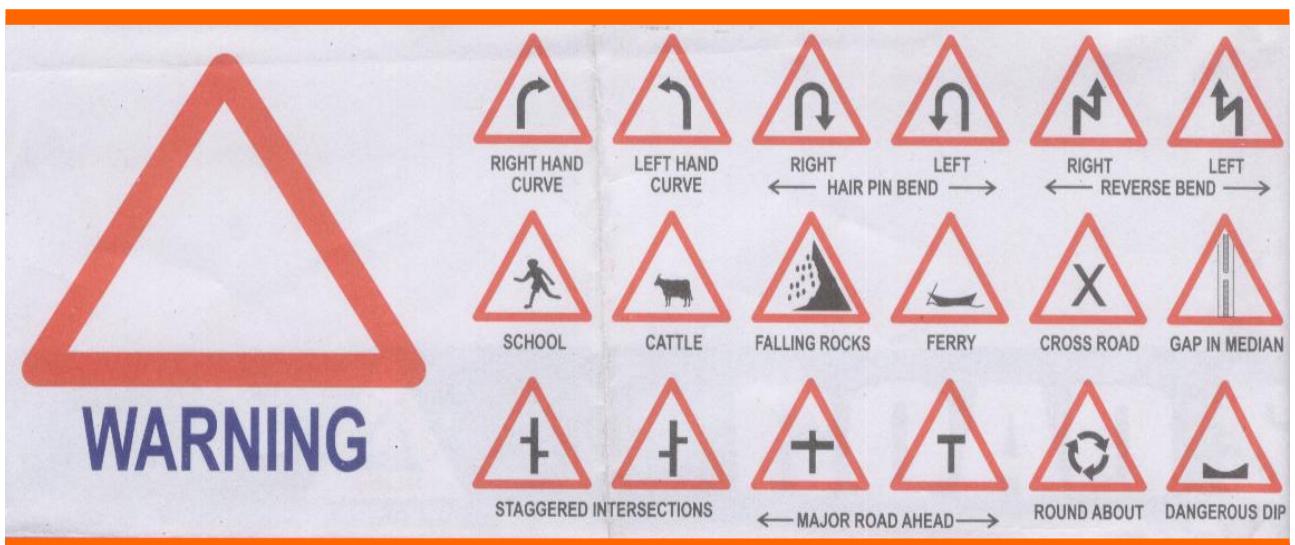
- (a) **Punishment for the First Offence.** Imprisonment for a term which may extend up 6 months or a fine of Rs 2000/- or both.
- (b) **Punishment for the Subsequent Offence.** For an offence committed within 3 years of the previous offence, the offender may be imprisoned for a maximum period of 2 years or charged a fine of Rs 3000/- or both.

8. **Precaution to be Taken.** After a drink party the host should make his inept guest stay at his place or else hire a driver to ensure safe transportation of his guest back home. Also the youngsters must be told that it is not smart to drink and drive. It is essential for the parents to instill in the minds of their children a sense of responsibility towards the society.

### **Road Signs**

9. These are of three types i.e. Mandatory, Warning and Informatory signals





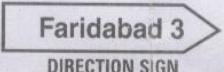
# INFORMATORY



ADVANCE DIRECTION SIGN



DESTINATION SIGN



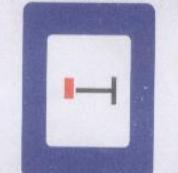
DIRECTION SIGN



RE ASSURANCE SIGN



PLACE IDENTIFICATION SIGN



NO THROUGH SIDE ROAD



1 Km  
PUBLIC TELEPHONE



PETROL PUMP



EATING PLACE



LIGHT REFRESHMENT



HOSPITAL



FIRST-AID POST



PARK THIS SIDE



PARKING  
BOTH SIDES



SCOOTER & MOTOR  
CYCLE STAND



AUTO  
RICKSHAW STAND



RESTING  
PLACE



NO THROUGH  
ROAD



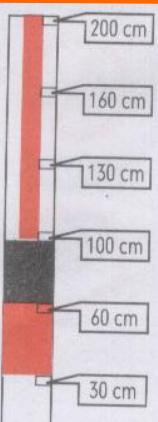
CYCLE STAND



TAXI STAND



CYCLE RICKSHAW STAND



FLOOD GAUGE