B.com Semester - II

Soft - Skill

Sub - National Cadet Corps

- NCC - 2

(English medium)

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Unit-1 Introduction to MAP READING

Introduction :-

In the Army, the map reading has got special importance. In the battle field the map is the true friend of the soldier as the operation depends on this.

Following information can the drawn from the map.

+ your and enemy position on the ground.
+ Distence from one place to other and direction.
+ various sign on the ground and problems related with them.
+ To choose correct route for march.
+ Visibility of two locations.

Definition of map :

The map is a proportionate graphical representation of surface of the earth on plain surface. It represents the part of the earth as is visible to a pilot from the plane.

Types of maps :

1) Geographical
2) political
3) Economical
4) statistical
5) military maps.

Limitation of map :

Map is only sketch and not photograph Therefore it can not depict every thing on the earths surface. The map is subject to change and therefore never upto-date.

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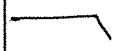
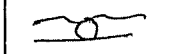
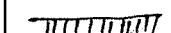
3 Water features

Sr.No	Details	Sign	Sr.No	Details	Sign
1	Lined well	●	6	Canal	
2	Unlined well	○	7	Distributory	
3	Stream		8	River with island and rocks	
4	Spring	+	9	Dam	
5	Tank with water	■			

4 Vegetation

Sr.No	Details	Sign
1	Tree	
2	palm Tree	
3	Banana Tree	
4	Grass	

5 Land features

Sr.No	Details	Sign	S.No	Details	Sign
1	Contour lines		4	Spot height	0
2	Form lines		5	Relative height	0
3	Trigono		6	Bench mark	0

6 Boundaries

Sr.No	Details	Sign	Sr.No	Details	Sign
1	Defined International boundary		4	Underline state boundary	
2	Underline International boundary		5	District boundary	
3	Defined state boundary		6	Tehsil boundary	

7 Other

S.NO	Details	Sign	S.NO	Details	Sign
1	Grave		4	waterpipe	
2	Battle Field	X	5	oil well	
3	Electric		6	mines	

Scale and Grid System

Scale

The preportion between distance of two places shown on the map and the distance of the same places on the ground.

Kinds of scale:

There are three ways for showing the scale on the maps.

a) By statement in words: This is expressed in words like 1"-1 mile. It means that in case the distance between two places is 1" then real distence of the ground will be 1 mile. This scale is simple but can not be used every where.

b) Representative fraction: In this the scale is given in a vulgar fraction of 1/100000. Which implies one unit of the map represent 100000 units on the ground. For example 1/63360 i.e 1 inch of the map represents 63360 inches or one mile on the ground.

$$\text{Formula} = RF = \frac{\text{Distance in map}}{\text{Real distance}}$$

c) Graphic lines: In this technique the scale is dipicted a line which is divided in equal parts. This line is drawn in any length. on the division points of this line numbers are written.

These numbers dipict the distance of a part on the ground on graphic line two types of equal division are marked. The distance between two places shown in a map can be found out immediately without any calculation. Therefore this is also known as Simple scale.

Grid System : The maps prepared by the Survey of India for the Army are covered with a net work of purple lines which run from west to east and from south to north. These lines are known as 'Grid lines'. The grid lines are drawn parallel to each other and these lines are two types ie. Easting and Northings.

Topographical Forms : Different names given to natures shapes on the ground are known as topographical forms. They are given below.

1) Mountains: This is highest elevated wide area on the ground. The height of such area should be above 1000 meters.
2) Hill - This is narrow elevated area on the ground. its height is less than 1000 meter.
3) plateau - A vast streteh feirly leveled ground on a hill is known as plateau.
4) Knoll - It is a low isolated hill. Its area and height are very less.
5) Spur - A piece of elevated ground projecting out from a range of hills into lower ground.
6) Re-entrant: Two spurs separated by a narrow valley, closed at one end.
7) Col and saddle: A narrow ridge of high land joining up two higher hills. When the height of such land is quite less than it is known as saddle.

8) pass and defile: A passage between two hills when a pass become too narrow then it is known as defline.

9) cliff: steep climb is known as cliff. To dipict this on a map, many contour lines join at this point.

10) Gorge: Extremely narrow vallies which are quite deep and their side slopers are steight.

11) Escarpment: It is steep non-negofiable slope of a hill.

12) crest: It is the heighest part of a hill or a mountain range.

* Relief and Contours

The ground is not leveled. At some places mountains and at others contours. valley and rivers are there. This undulating feature of the land is known as relief. The relief can be dipicted on the map by following ways

1 By contours - The imaginary lines joining places of equal vertical heights. In the map they are shown as thin and grey lines. On contour lines numbers are written in the same colour as that of lines.

2 By spot height - In this a spot is made on the map and height is recorded on it.

3 By Trigonometrical height: In this a triangle is made on the map and height is mentioned on this.

4 By relatives height - By this way the broken lines are shown on the map which indicates height of a place.

5 By bench mark - On railway stations, road and on canal the exact height from sea level is dipicted on stories, marked BM with the height on survey map.

6 Hauchures: These are used to show minor formation omitted by contours ie cuts of formation omitted by contours ie cuts of ravines etc. For steep slope thicks and near lines are used. But by these lines height of a place is not known.

7 By hill shading - The ground height and depressions are shown by use of colours. The deep slope are shown by dark colour and gentle slopes are shown by light colour.

Gradients -

It is slope of a hill, expressed as a Fraction. The ratio between vertical interval and horizontal equivalent are expressed as a fraction VI/HE. The vertical interval is defined as the vertical height of two successive contours whereas horizontal equivalent is distance between two adjecent contours.

Cardinal points

North, South, East and West are known as cardinal points, Besides this South-east, South-west and north-east are small cardinal points. if '0' is taken as north then east will be 90° to north and south will be 180° and west will be 270°

Types of North / Bearing :

There are three types of North / Bearing

a) True North - The direction of north pole from the observer

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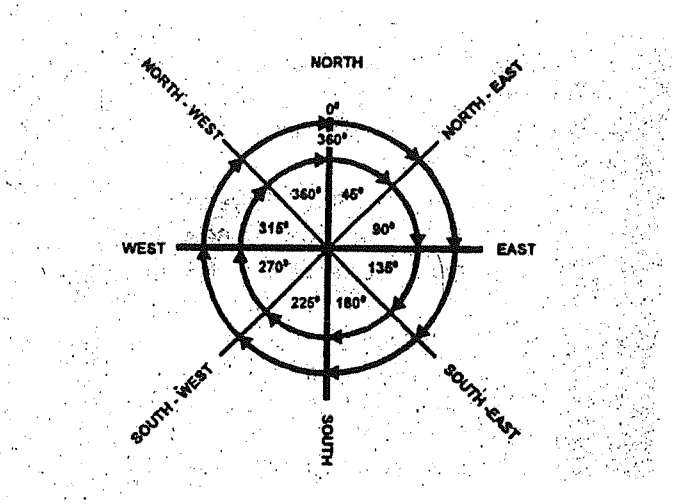

True north is constent. The angle between observer and north pole is known as true bearing. True bearing is calculated by finding out the relation of True North and Grid North/magnetic North.

b) Magnatic North - The needle of compass always shows the direction towards north and it is known magnetic north. The angle between observer and magnetic north is known as magnetic bearing.

c) Grid North -
The easting lines on the map which indicates direction towards up side is known as grid north. The angle between observer and direction is known as grid bearing.

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Unit - II

Civil Defence and Disaster management.

Civil Defence:

It is measure of self adopted by the civilian population, government local bodies and voluntry organisation during war Inshort. It is a defence of a citizen by the citizen. Civil defence is generally organised on voluntery basis except for small nucleus of paid staff and establishment which augumented during emergencies.

Aims of Civil Defence

1. To save life
2. To minimise damage to property
3. To maintain continuity of industrial production in the event of an attack
4. To up hold the moral of the people
5. To maintain internal security.

Civil Defence measures:

1 Preventive measures: The measures which may be taken before an attack. Flood / fire such as shifting of population and industries. camouflage preparation of shelter. warming and training etc.

2 Control measures - The measures taken immediatly after he air raid / Flood etc. such as recce, reporting of damages and unexploded bombs. rescue of casualties.

3 Restorative measures - The measures which come necessary after an air raid/natural clamities include Feeding. clothing sheltering salvage of property and disposal of dead and wounded.

Various Civil Defence services are:

1 Head quarter service
2 Warden Service
3 Fire fighting services
4 Casualty services
5 communication service
6 Rescue services
7 Training
8) Welfare Service
9) Transport service
10) Supply Service
11) Store Service
12) Corpse Disposal services
13) To Salvage service.

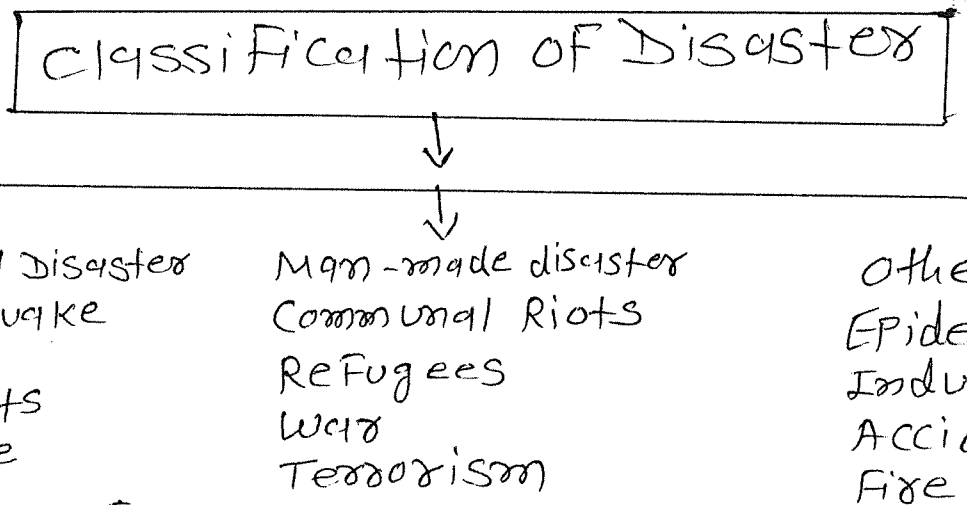
Disaster management:

Introduction -

The Tsunami disaster has played havoc in Asian countries killing more than 1,50,000 people within minutes and rendering lacs and lacs of people homeless. How can we forget the natural disaster of earthquake in Gujarat. which killed thousands of people? surat can never forget natural disaster of unprecedented floods of 1959 and 1969. cyclones, another natural disaster have rained and are frequently ruining thousands of families over coastal region of Saurashtra, Andhra pradesh, Tamilnadu and orissa. Disasters are an unpleasant subject. Disaster come in any form and have a variety of causes. Its impact on man worldwide is increasing at an alarming rate. The term 'disaster management' encompasses the complete area of disaster related activities. Traditionally people think of disaster management only in terms of the postdisaster actions like relief and reconstruction.

Classification of Disaster

Disaster can be classified into three categories as below:



NATURAL DISASTERS:

Commonly referred to as 'acts of God', Natural disasters involve physical, biological, environmental and ecological changes in the world around us. They are caused by earthquakes, Floods, cyclones, droughts. etc.

1. **Earthquake -**

Earthquakes are one of the most powerful natural forces that can disrupt our daily lives. Earthquake damage varies with the magnitude, location and depth of the shock.

2. **Floods:**

It is rightly said that natural disasters are very horrifying. Natural disasters like Floods disrupts the usual civic life. Floods are a dreadful event. It usually occurs from large-scale weather systems generating heavy rainfall.

3. **Drought :**

Drought is defined as water shotage caused by deficiency of rainfall and differs from other natural disasters. Droughts like other natural disasters affect the economic development of the society and national at large.

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4 Cyclone:

Cyclone is a natural disaster which affect people leaving around costal areas. The disaster cannot be prevented and cannot be controlled but proper planning and management can reduce its impact. many parts of the world are experiencing cyclone.

B Man-made Disasters:

Man-made disasters occur as a result of deliberate or accidental action by a member of society. There are many types of man-made disasters.

1 Communal Riots:

India is a democratic and secular country where people of different religions live Definitely each religions has is own ideology and this results into different opinions, which lead to incidents like communal riots.

2 Refugees:

Refugees means people migrated from other regions of the world in order to save themselves from threats. Almost each country is accomodating such refugees. India itself is facing many refugees from the neighbouring countries like pakistan, nepal etc. In 1947, lacs and lacs of people had come to India as refugees from pakistan due to partition.

3 War:

War is man-made horrible disaster. which has a dangerous impact on the life of the people, environment and social structure as well as on the economy of the nation. Kargil war. many soldiers lose their lives.

C Other Types of Disasters:

1 Industrial Disaster:

Due to fast industrial development in all countries of the world and due to use of complicated machineries using dangerous gases chemicals etc. Industrial accidents have become very common. control the industrial disaster many steps are taken by the Government. The Government has passed different Acts like pollution control Act, etc.

2 Epidemics:

Epidemics may take place due to natural or man-made disasters. Epidemics area development of some infections particle, which causes disease and spread to different areas. Some of the diseases are plague, influenza, cholera, polio, malaria, dangue etc.

3 Fire:

Lighting, high winds, earthquakes, volcanoes and floods can trigger fires. Lighting is the most significant natural contributor to fires. Buildings with roof-top storage tanks for inflammable liquids are particularly susceptible. It may be man-made or natural arising out of other natural calamities.

4. Accidents:

The number of accidents has increased from thousands to lakhs around the globe. This is because of increase in the number of vehicales due to economics development talking place. The number of road accidents in India are highest in the world.

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Unit-III

Natural - man-made Disaster and Fire services.

Natural Disaster:

commonly referred to as 'acts of God' natural disasters involve physical, biological, environmental and ecological changes in the world around us. They are caused by earthquakes, Floods, cyclones landsliders etc. Natural disasters are not within the control of mankind but proper planning can minimise its adverse effects.

Floods:

It is rightly said that natural disasters are very horrifying. Natural disasters like floods disrupts the usual civic life. Floods are a dreadful event: Floods can be slow or fast rising but generally develop over a period of days. It usually occurs from large-scale weather systems generating heavy rainfall. Damage due to flood tends to increase with increasing development in river basins, whereas population pressure in flood prone areas also increases the possible of flood. India is no exception to this India has also faced number of floods.

Many efforts are made by the government to reduce the damages and risk that arises to floods.

Earthquake:

Earthquake are one of the most powerful natural forces that can disrupt our daily lives. An earthquake is a sudden and rapid shaking of the Earth caused by the breaking and shifting of rock beneath the Earth's surface. The underground point of origin of an earthquake.

The shaking can come severe damages.

buildings, bridges and dams to collapse, disrupts gas, electric and phone service and sometimes trigger landsliders, fire floods and original changes in water hydrology. Earthquake can occur at any time of the year.

Accidents:

The number of accidents has increased from thousand to lakhs around the globe. The number of road accidents ~~take place in the world~~. in India are highest in the world. According to one estimate seven lakh accidents take place in the world, of which 10% take place in India. This is due to great indiscipline of Indian people while driving.

Fire

Lighting, high winds, earthquake, volcanoes and floods can trigger fires. Lighting is the most significant natural contributor to fires. Buildings with rooftop storage tanks for inflammable liquids are particularly susceptible. It may be man-made or natural arising out of other natural calamities. The factors responsible for such disasters are the increase in population in the cities, absence of safty measures, carelessness of the human beings.

Fire Fighting

During war due to heavy bombing fire occurs on large scale. Therefore it is duty of every citizen to undergo training of fire extinguishing following three things help in buring fire (a) inflammable material (b) oxygen (c) To rais sufficient temperature of inflammable material to its burning point.

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Fire Figluting equipments :

(a) Soda or acid fire extinguisher (b) Foam equipment (CTC) equipment (c) CTC CO_2 and dry chemicals fire extinguisher (d) Hand axis (e) Fire beater / Hooks (f) Tin / bucket (g) water and sand buckets.

Extinguishing of fire : To overcome fire Following action be taken

The burning matter be divided in small heaps and on these heaps put sand. dry soil and water if possible then separate burnt portion of matter from unburnt on fire carbon dioxide gas should be spread

The Fire figluting party is divided in three as per their nature of work.

a) Fire picket party : The main function of this party is to surround fire place and carry out security duties.

b) Fire figluting party : The main function of this party is to extinguish fire.

c) Fire salvage party : The main function of this party is to remove matter which is surrounded by fire.

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Man-made Disasters:

man-made disasters occur as a result of deliberate or accidental action by a member of society. man-mad disasters like communal riots, war and refugee problem.

1) Communal Riots: India is a democratic and secular country where people of different religions live Definitely each religion has its own ideology and this results into different opinions, which lead to incidents like communal riots. Indian people have faced many communal riots, before and after independence. During the demolition of Babri masjid there were communal riots of many places in India, when many people lost their lives. The need of the hour is to eliminate the discrimination of caste and religion and this is possible by the effort of the human beings.

2) Refugees: Refugees means people migrated from other regions of the world in order to save themselves from threats. Almost each country is's accomodating such refugees. India itself facing many refugees from the neighbouring countries like pakistem, nepal etc. In 1947, lacs and lacs of people had come to India as refugees from pakistem due to partition.

3 War: war is man-made horrible disaster. which has a dangerous impact on the like of the people, environment and social structure as well as on the economy of the nation. kargil war. many soldiers lose their lives. which affects their family members. This affects the mental peace of the people and it takes time to come out from such shocks.

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HYGIENE AND SANITATION

Personal hygiene - Every person should keep mentally, Physically and socially healthy and then he gives good service to society and to nation. This can be achieved by man by giving them training of personal hygiene and cleanliness. For personal hygiene following should be kept in mind.

1. Cleanliness of body - India is a tropical country where people sweat in summer. Due to this the body of a person becomes dirty and emits obnoxious odour. Dust also settle on the body and this closes pores of skin and therefore the body can not eliminate waste products through skin. Due to this, lungs and kidney have to function more to eliminate waste products of the body. Due to accumulation of dust on body, a number of bacteria multiply and produce diseases like boils, abscess, ring worm and scratching. Therefore, the body should be cleaned regularly by daily bath. In winter one should take bath with hot water, prior to bath, one should clean teeth, nose, eyes, ears and nails and should wear clean cloths. For internal cleaning of body, following actions be taken:

A. Neti - This is done for cleaning upper part of the throat Neti cleans nose and remove cough. It also improves eye sight and keep away diseases of throat, ears, nose. In this water and sut Neti are main.

(a) Sut Neti - This is done after cleaning throat and teeth. In this action a catheter is used for cleaning. By doing Neti, cough and cold are removed and it improves vision and bearing. The catheter and a cord of cotton is passed through nose to throat and by push in and push out action the nasal passage and throat are cleaned. Thereafter, the catheter is removed and mouth is rinsed with water.

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(b) Water Neti - This should be done after sut neti. The water is poured in the menasal passage with the help of a bucket having a tap. The same process is repeated in the other nasal passage. The mouth should be kept open so that breathing be done through mouth during water neti. The water used for neti should be lukewarm and should contain 0.85% sodium chloride.

B. Dhoti Kriya - This action removes cough from stomach. It helps in recovery cough from bronchitis, asthama, headach, fever, jaundice, gas and other diseases of gastrointestine tract. For doing this kriya, 3" wide and 7 meter long muslin cloth is needed and thus taken and slowly by chewing and swallowing action it is taken in the stomach. Then after opening mouth the cloth is taken out. Dhoti kriya is practiced slowly and to start with only 1 ft cloth is swallowed on first day.

C. Kunjal Kriya - In this kriya lukewarm water is taken and then vomited. By doing this kriya, cough, blood pressures, skin diseases, lack of appetite and dysentry are kept away and this kriya also helps in cleaning stomach. This kriya is done by of drinking 3-4 Lits luke warm water in sitting position. Thereafter, stand and slightly lean forward. Then fingers are put in the mouth on tongue for vomiting so that complete water comes out.

D. Basti Kriya (Enema) - Due to long stay of faeces in the large intestine (colon and rectum) the faeces starts fermenting and this may cause diseases. To overcome this, enema should be taken once a month to remove faeces. This Kriya helps in removal

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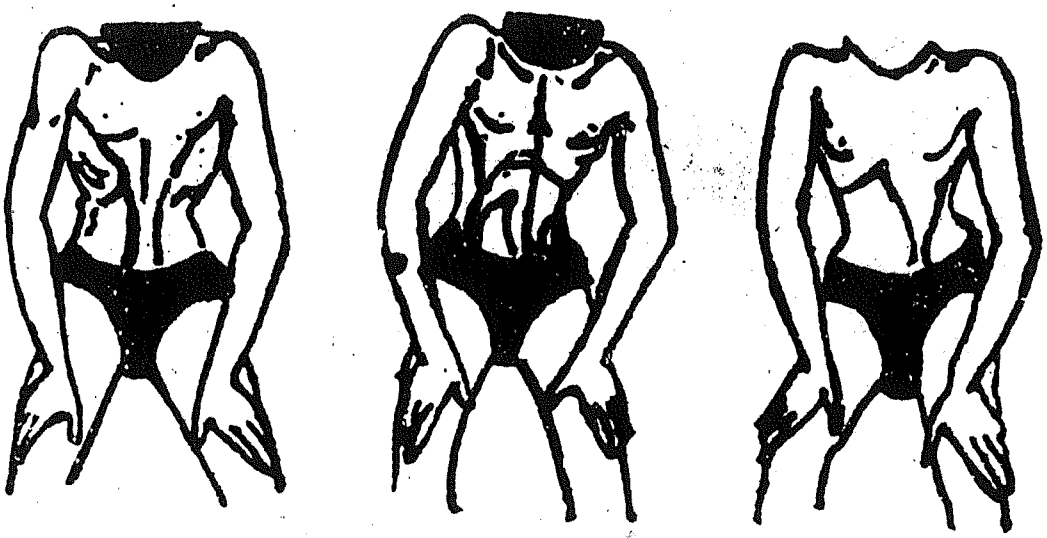
of gases, lack of appatite, cough and other diseases of stomach.

E. Naul Kriya - This kriya helps in removal of eye discharge,



Nouli

constipation, removal of fat from abdomen and lack of appetite. Beside this, it also affects functions of liver, spleen and pancrease.

For doing this kriya keep distance in both the feet of 12"-18". Then bend the body forward and keep hands on tigh. Then move the abdominal muscles. Then bring abdominal muscles in the centre and then withhold breathing for a short time. Repeat this process for 3 to 5 times and then take rest. This abdominal muscles activity can be done by giving muscular pressure to left (Bam Naul) and to right (right naul).

2. Nutritious diet - For individuals health nutritious diet is essential. The food should be balanced and be prepared cleanly and be taken happily. Such food improves the health.

3. Exercise of the body - Exercise helps in whole development of the body. Therefore every human being including children should excercise regularly to keep body fit.

4. Rest and sleep - To keep body fit prope rest and sleep are essential. Therefore one should sleep early in night and getup in early morning. A healthy person should sleep for 7-8 hours every

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day. The sleeping place should be clean and ventilated.

5. Pleasant environment - A man spend most of time in the family. In case the family environment is not pleasant, then it affects the body adversely. Therefore the family atmosphere should be pleasant.

6. Carefree life - A person should not worry as it affects the health. A worried person can not enjoy good health. Therefore, one should control worries as it is not solution to any problem.

7. Good habit - Individual health has closed correlation with good habits. These habits are to getup early morning, early sleep, cleaning of teeth, taking bath daily, eat good clean food and wearing of clean cloth. One should not use others comb, brush, clothes soap including under garments.

8. Intoxicants - Intoxicants like liquor, opium, cigarettes, Bhang, bidi have harmful effects on the body. Therefore one should not consume them.

Classification of diseases

As per mode of spread diseases have been classified as given below :

1. **Diseases spread by food and drinks** - Diseases like dysentry, cholera, typhoid and intestinal parasites spread by contaminated water and food. The contamination is by flies and by men.
2. **By air** - Small pox, measles, pneumonia, diphtheria and chronic bronchitis spread by air.
3. **By insects** - Mosquito spread malaria, dengu fever and filaria, flies spread dysentry, diarrhoea, rat flea spread plegue, louse spread typhus fever.
4. **By contact** - Syphilis, gonorrhoea and other skin diseases.
5. Besides above, diseases also spread from animal to man by fomites which come in contact of patients.

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Dog Bite / Snake Bite / Insect Bite

In the snake bite the person is injected by the snake through a pair of fangs. Majority of bite are on exposed parts like legs and hand. First aid - (a) converse the patient in such a way so that the patient should not fear for death (b) Immoblise the bitten part. (c) Tie arope of tourmiquet above the place of bite lightly (d) wash the bite spot with soap and water (e) take patient to hospitell

In case of scorpion bite. the above mentioned First ~~and~~ aid be provided.

In dog bite clean and wash the infected area with soap and water. Find out the possible details about the dog and circumstences of bite. Take the patelint to hospital.

In case of bee and wasp bites (a) Remove the sting (b) Reassure the patient (c) Bee bites are acidic so washed the spot with alkali such as washing soda. (d) Give Aspiesin and AVIL.

Fracture:

Fracture is a discontinuity or break in a bone. A Fracture is broadly classified into the followings.

1. Simple or closed Fracture: The broken bones are covered with skin.
2. Compound or open Fracture: when there is a wound leading down to the broken bone.
3. Complicated Fracture: In this fracture the broken bone damages the underlying structures like blood vessels, nerves lungs brain liver etc.
4. Comminuted Fracture: when the bone is broken in to several parts.

Wounds

Any cut of the body causing discontinuity in skin and bleeding is called a wounds.

Types of wounds

1 Incised wounds - These are caused by sharp instrument. There is profuse bleeding in case of these wounds.

2 Confused wounds - These are caused by blunt instrument causing bruising tissure.

3 Lacerated wounds : These are caused by teeth, ~~or clau cause by thursting of a sharp pointed instrument.~~ or clause animals machinary or shelfs.

4 punctured wounds : These are quite deep and are cause by thursting of a sharp pointed instrument.

First aid : 1) wash the skin around the wound with clause water. (2) Remove foreign materials, if any. From the wand (3) stop bleeding direct pressure should be laid on the wound a direct pressure on the nearest pressure point. 4) Cover wound with clean bandage.

First AID -

In case of acident the medical aid given to a patient prior to arrival of DOCtor or evacuation to a hospital is known as first aid. Followings are essential for first aid.

a) First of all the patient be taken to a secure place.

b) For first aid use essentially required items.

c) Despatch the patient to a hospital as early as possible.

d) Do not attempt too much. Do minimum that is essential to save the patients life.

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During battle every Jawan has following for dressing and bandaging.

First aid equipment - First aid out kit. normally contains the following.

1) First Field dressing and two full bandage alongwith gauge 2) cetavlon tube. 3) Safty pins. 4) Adhesive tape 5) Blade 6) morphine ampoule 7) Spirit 8) Asprin tablets 9) Paraffin 10) Tourniquet 11) Elastoplast bandage.