

- (v) Battery gauge indicator facility is provided.
- (w) Accessory connectors is provided with radio set.
- (x) Provision of DTMF key pad (Dual Tone Mute Freq).
- (y) Clock and alarm is provided.
- (z) Time out timer facility is provided.
- (aa) Provision of battery saver.
- (ab) Power level can be adjusted.
- (ac) Provision of MDC-1200 signalling encode/decode (Motorola digital code).

Ques 2 – What is the weight and frequency range of Radio Set GP 338 Motorola?

Ans - (a) Weight and Measure

- (i) Weight and measure of this radio set is as follows:-
- (ii) Dimension with Ni-MH high cap battery - 137 x 57.5 x 37.5 mm.
- (iii) Wight with Ni MH high cap battery - 420 gms.

(b) Frequency Range Frequency of this radio set is as under:-

- (i) 136 MHz to 174 MHz on VHF mode.
- (ii) 403 MHz to 470 MHz on UHF mode.

Ques 3 – What is the communication range and name of power supply of Radio Set GP 338 Motorola?

Ans - (a) Communication Range Communication range of this radio set is 4 to 5 Km and 20 to 40 Km with repeater.

(b) Power Supply Power supply can be provided to this radio set by the following batteries.

- (i) Ni MH high cap 7.2 volt.
- (ii) Ni MH ultra high cap 7.2 volt.
- (iii) Ni Cd High cap FM 7.2 volt.

- (iv) Ni Cd High cap 7.2 volt.
- (v) Lithium 7.2 volt.

### SECTION -7

### LINE COMMUNICATION

Ques 1 – What are the basic functions of telephone sets 'L', 'F', 'J', 'EE, 8B'?

- Ans - (a) It works on magneto signalling.
- (b) Calling is done by magneto.
- (c) CB calling and clearing is done.
- (d) It provides speech communication.
- (e) It works in all weather conditions

Ques 2 – What are the facilities if Switch Board Telephone 15 Lines?

- Ans - (a) 15 Lines can be provided.
- (b) Can work with either magneto, CB, CBS or auto exchanges.
- (c) Has got both internal and external ringer.
- (d) Two exchanges can be linked up to provide 30 line facility.
- (e) A lamp indicator has been provided to warn the operator about an incoming call.
- (f) A ringing visual indicator has been provided.
- (g) Facility exists for night alarm.
- (h) Apart from the dry battery, power source can be provided by secondary battery also.
- (j) Lighting facility for the switch board is provided by means of specially designed lighting unit.

Ques 3 – What are the advantages and functions of Telephone Set 5A/5B?

Ans - The telephone set Field 5A/5B has the following functions and advantages:-

- (a) Facility exists for installing a autodial and hooking with an auto exchange.
- (b) Facility for line test exists.

- (c) A device has been installed in the micro phone for noise cancellation.
- (d) In 'H' position the range of the telephone is increased considerably.
- (e) Facility exists on the both 5 A/5 B for remote operating.
- (f) Made of superior magneto and can function with CB/CBS exchanges.

Ques 4 - What is the [power supply and consumption of the Telephone Set 5A/5B?

Ans - It is powered by 2 X 1.5 Volt No 3 cells or 3 V external batteries and the power consumption of set 5 A is 20 mA and set 5 B is 15 mA. It can receive and sent signal waves with a bell due to generator

Ques 5 -What is the main difference between Telephone set 5 A and 5 B?

Ans - Telephone Set 5 A

Telephone Set 5 B

- |  |                                       |
|--|---------------------------------------|
| (a) Small in size                        | Large in size                         |
| (b) Light in weight                      | Heavier                               |
| (c) Auto call can be attached            | Auto call can not be attached         |
| (d) Bell is tubular type                 | Bell is Gong type                     |
| (e) CB Loop resistance is 200, 250, 300. | CB Loop resistance is from 200 to 350 |
| (f) TRL switch exists                    | TRL switch does not exists            |
| (g) Threaded type of line terminal       | Push type line terminal               |

Ques 5 - What are the important phrases used while operating the exchange?

- Ans - (a) " Number please , Sir".
- (b) " You want number ..... Sir".
- (c) " Sorry , Sir Number is engaged , Sir".
- (d) " I will ring you back , Sir".
- (e) " Call for you from ..... Speak up, please".
- (f) " Have you finished . Sir".

SECTION -8LATEST TRENDS AND DEVELOPMENTS

Ques 1 – What are the latest trends in communication?

Ans - These are as under :-

- (a) Tropo-scatter
- (b) Modem
- (c) Fax
- (d) Telex
- (e) Satellite
- (f) Optic fiber communications
- (g) Computer system
- (h) Internet
- (i) Cell phone
- (j) Multimedia
- (k) Videophone

Ques 2 - Name various types of satellites?

- Ans -
- (a) Weather Satellite.
  - (b) Scientific Satellite.
  - (c) Communication Satellite.
  - (d) Navigational Satellite
  - (e) Military Satellite.

Ques 3 – What are the advantages and disadvantages of optic fiber communication?

Ans – (a) Advantages

- (i) It has wide band width carrying different types of info from low speed voice signal to high speed computer data.
- (ii) Less power requirement.
- (iii) Small cable size.
- (iv) No repeater station required.
- (v) No electromagnetic interference.

(b) Disadvantages

- (i) Jointing problem.
- (ii) Channel dropping not possible.

(iii) More expensive.

Ques 4 - What are the advantages and disadvantages of Computer system?

Ans - (a) Advantages

- (i) Speed of process and calculations.
- (ii) Accuracy of process and calculation once the programme is proved.
- (iii) Persistence - It will continue on the same job until the end, always working in the same way, each and every day.
- (iv) Mass storage of data.
- (v) The ability to handle large volume of data.

(b) Disadvantages

- (i) Data loss if machine malfunctions.
- (ii) Back up hard data still required to be maintained.
- (iii) Constant power source is required.

Ques 5. What are the advantages of cell phone?

Ans - (a) More subscriber and traffic capability.

- (b) No perceptible difference between mobile and fixed subscribers.
- (c) Better quality of service.
- (d) Miniaturization using very large scale integration (VLSI) technology which enables ever decreasing size and weight of the hand set.
- (e) Higher speed of data exchange.
- (f) Can be used in an integrated mode with computer network.

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CHAPTER-VII

OBSTACLE TRAINING

SECTION-1

OBSTACLE COURSE

Ques 2 – What is the importance of obstacle training for NCC cadets?

Ans - Obstacle training inculcates self-confidence & team spirit and infuses courage, patience & makes them physically fit.

CHAPTER-VIIIHOME NURSINGSECTION -1INTRODUCTION TO HOME NURSING

Ques 1 – What are the qualities of a good nurse?

Ans - A good nurse must possess the following qualities:-

- (a) Honesty and Truthfulness. A nurse should be honest to her profession. She should confess her mistake and not risk the life of the patient by hiding it.
- (b) Sympathy and Understanding. A good nurse should deal with the patient with understanding and compassion. She must appreciate the pain and suffering of the patient.
- (c) Cheerfulness, Gentleness and Willingness. A cheerful nurse reduces the sufferings of the patients to half. Her gentleness reduces their pain and discomfort. "A warm smile may be more therapeutic than a dose of medicine".
- (d) Obedience and Discipline. A nurse should have self discipline and should obey the orders of the doctor and carry them out without argument.
- (e) Observant. A Nurse should observe the minutest details of the patient's condition. If there is the slightest change in the patient's condition, she should immediately report it to the Doctor.
- (f) Tact and Sense of Humour. A tactful nurse can deal easily with the irritable patients. Her sense of humour helps her to bear the hardships of profession cheerfully.

SECTION -2THE ROLLER BANDAGE AND ITS APPLICATION

Ques 1 – What are the sizes of various bandages?

- Ans -
- |     |                          |   |         |
|-----|--------------------------|---|---------|
| (a) | Bandage for Finger       | - | 1" wide |
| (b) | Bandage for Head and Arm | - | 2 ½"    |
| (c) | Bandage for Trunk        | - | 6"      |
| (d) | Bandage for Leg          | - | 3 ½"    |

Ques 2 – What are the general rules of bandages?

- Ans (a) Face the causality.
- (b) Hold the head of the bandage in the right hand.
- (c) Apply the outer side of the free end to the part and where possible lock it in position by a superimposed turn.
- (d) Bandage firmly from below upwards and from within outwards over the front of the limb.
- (e) Apply the layer of the bandage so that it covers neither too tight nor too loose.
- (f) When completed secure the bandage by a safety pin or adhesive strapping.

### SECTION -3

#### THE SICK ROOM: PREPARATION, CLEANING, LIGHTING AND VENTILATION

Ques. 1 – What points should be borne in mind while cleaning the sick room?

- Ans (a) All cleaning work should be done without disturbing the patient after the toilet is over and the bed remade.
- (b) Light furniture should be removed before the room is swept and dusted. After dusting, each piece should be wiped with a weak solution of disinfectant and then polished with dry cloth.
- (c) Dusting should be done with a damp cloth. The floor should be cleaned after scattering damp tea leaves so that dust does not rise.
- (d) At night, flowers should be removed from the vases and fresh flowers arranged in the morning.

Ques. 2 Define Sick Room?

ANS: The sick room should be that room of the house which is away from all noise and through which there is no passage. However, it should have a bathroom and lavatory close by. It should face South or South-West.

Ques. 3 Define Sick Room?

- Ans (a) Preparation
- (b) Cleaning
- (c) Lighting
- (d) Ventilation
- (e) Cross Ventilation

- (f) Wide Streets with Open Spacing.
- (g) Cleaning of Air Through Trees
- (h) Effects of Heat

#### SECTION -4

#### PULSE, RESPIRATION AND TEMPERATURE TAKING AND RECORDING

Ques 1 – Define respiration?

Ans - The inhalation and exhalation of a person is called respiration

Ques 2 – What is the pulse rate of various ages?

- Ans
- (a) Infants 30-40 per minutes.
  - (b) Children 24-28 per minute.
  - (c) Adults 15-20 per minute.

Ques 3 – Define body temperature?

Ans Temperature. The normal temperature of a man is between 97° and 99° F. There is slight  $\frac{1}{2}$  ° F variation between the daily temperature in the morning and evening. The lowest temperature is between 2 AM and 4 AM.

Ques 4 – What is the method of taking temperature?

Ans - Keep the bulb of the thermometer pressed under the armpit or beneath the tongue or in the groin for 2 minutes.

Ques 5 – Define pulse?

Ans - The pulse is the heart beat and is most commonly felt at the radial on the point of the wrist. The average pulse rate is 72 beats per minute. In case of infants, is 100 to 140 beats per minute and in case of children 90 to 100 beats per minute.

#### SECTION -5

#### OBSERVATION OF THE SICK: SIGNS AND SYMPTOMS TO BE NOTED

Ques 1 – What important points should be observed in a patient for proper treatment?

Ans - These are as under: -

- (a) Appearance of the Patient

- (i) The colour of the skin whether pale, flushed blue or yellow.
  - (ii) Whether moist or dry, hot or cold, smooth or rough, covered with rashes, bruises or discolored.
  - (iii) If any swelling or edema.
  - (iv) If pain, its place and duration.
  - (v) Facial expression and other signs of discomfort.
- (b) Temperature, Pulse and Respiration. Take temperature, pulse and respiration twice a day or four times a day or eight time a day, as desired by the doctor and maintain TPR Chart.
- (c) Stools
- (i) Frequency and whether it shows constipation or diarrhoea condition.
  - (ii) Colour
    - (aa) Normal brown.
    - (ab) Clay coloured which shows obstructive jaundice.
    - (ac) Black shiny which shows bleeding from the stomach or duodenum.
    - (ad) Full black which shows effect of medicines like iron.
  - (iii) Composition. Presence of abnormal material as blood, pus, gall stones, worms, undigested food. Specimen of stool is to be left for the doctor to see in a well covered container.
- (d) Urine. In case of urine the following should be observed:-
- (i) Frequency. Increased frequency is due to inflammation of the bladder.
  - (ii) Quantity
    - (aa) Urine output is reduced in fever, in conditions of dehydration and in a acute nephritis.
    - (ab) Urine quantity is increased in case of diabetes and inflammation of the kidneys.

(iii) Colour Abnormalities

- (aa) Red – Due to presence of a lot of blood.
- (ab) Dark Greenish Brown – Due to presence of bile.
- (ac) Smoky – Due to some blood being present.
- (ad) Orange, Green or Blue – Due to presence of some drugs.

(iv) Deposits. If the urine is allowed to stand, the following may be observed:-

- (aa) A sandy deposit white or pink.
- (ab) A whitish cloud showing mucous.
- (ac) A thick greenish deposit due to pus.

( Early morning specimen should be kept in a clear, covered , glass bottle).

(e) Cough and Sputum. Report on it must state:-

- (i) Amount.
- (ii) Colour.
- (iii) Whether expectorated easily or with difficulty.

(f) Vomit

- (a) Quantity.
- (b) Time in relation to food.
- (c) Whether it causes pain or relieves it.
- (d) Material vomited such as blood.

SECTION -6-FEEDING A HELPLESS PATIENT

Ques 1 – What are the important precautions to be taken while feeding a helpless patient with fluid diet?

- Ans – (a) The mouth of the patient should be washed and wiped.  
(b) If the patient can sit up, the fluid can be given in a cup or in a glass.

- (c) If the patient wants to take fruit juice with a straw he/she should be provided that.
- (d) If the patient can not sit up, he/she should be fed with a feeding cup or a feeder.
- (e) The bed clothes should be protected by placing a clean napkin beneath the patient's mouth.
- (f) The nurse should place her left arm, under the first pillow to raise the patient's head slightly.
- (g) The flow of the fluid should be regulated so that too much of it does not flow into the patient's mouth.
- (h) One mouthful should be given at one time pausing to allow her time for chewing. Feeding can be done with a tea spoon also.
- (i) In case of jaw injuries, a small rubber tube is attached to the spout of the feeding cup and then put between the teeth.
- (k) The patient should be given small quantity to swallow at one time.
- (l) After feeding the patient, lips should be wiped with a clean towel.

Ques 2 - What are the important precautions to be taken while feeding a helpless patient with solid food?

- Ans
- (a) Food should be served in an attractive manner arranged attractively on a side table.
  - (b) One dish should be brought at one time.
  - (c) The food should be served hot. It should be put in a plate in the kitchen before bringing to the patient.
  - (d) Patient should be fed with a spoon.
  - (e) As soon as food is finished the plate should be removed.

### SECTION-7

#### MEDICINES AND THEIR ADMINISTRATION

Ques 1 -What precautions should be taken while administering the liquid medicines to patient?

- Ans -
- (a) Check the label with the prescription. If handling a new medicine read the instructions carefully.
  - (b) Shake the medicine well.
  - (c) Put your thumb near the correct marking of dosage on the medicine glass. Hold the glass in level with the medicine bottle. Pour away from the label so that it does not become illegible. Replace the cork immediately.
  - (d) Read the instructions once again before actually giving the medicine to the patient.
  - (e) Take the medicine on a tray with a glass of water and spoon in case the medicine requires stirring. If the medicine has a bitter taste, give the patient some sweet drink.

- (f) Put the medicine bottle in the correct place.
- (g) Never pour back any unused medicine, throw it away.

Ques 2 -What precautions should be taken while administering the other medicines to patient?

- Ans
- (a) In case of pills, tablets, capsules and powder, remember that a pill has a sugar coating and a capsule has a gelatine coating and hence can be easily swallowed with water.
  - (b) Tablets if not swallowed by the patient may be crushed and put on the back of the tongue for swallowing.
  - (c) Powder must be poured at the back of the patient's tongue and water poured in his mouth.
  - (d) Iron mixture should be given with straws so that the teeth are not stained.
  - (e) If the patient is not too weak, he/she should be asked to clean his/her teeth.

### SECTION -8

#### FEVER, INFECTION, DISINFECTION AND SPECIFIC INFECTIOUS DISEASES

Ques 1 -What is fever?

Ans - Whenever there is an inroad of disease germs in the body, due to some infection, it raises its temperature to put up a fight against the invasion. The state of more than normal temperature is called 'Fever'.

Ques 2 -What are various names of fevers considering the temperature?

- Ans
- (a) The normal temperature of the body is 97° F to 99° F.
  - (b) The temperature above 99° causes pain, restlessness, headache and body ache.
  - (c) Moderate temperature from 99° F to 103° F is called Pyrexia.
  - (d) High temperature from 103° F to 105° F is called High Pyrexia.
  - (e) Very high temperature over 105° F is called Hyper-Pyrexia.

Ques 3 -What are various types of fevers as per severity?

- Ans
- (a) **Constant.** In this the temperature remains the same all the 24 hours as in pneumonia and scarlet fever.
  - (b) **Intermittent.** The temperature rises very high and falls very low. It appears when there is severe infection.

(c) Remittent Fever. This is a very high fever. It rises more than  $1^{\circ}$  during 24 hours. It is found in case of tuberculosis and sepsis.

(d) Irregular. It has no set pattern of rise and fall of temperature.

Ques 4 Define infection?

ANS: The spreading of germs of a disease from a sick person to a healthy person is called infection.

Ques 5 - What are the media of infection?

ANS: (a) Through Air. Disease germs spread from a sick person to a healthy person when the sick person breathes out foul germs and fit person inhales it. The germs are harboured by the healthy person till they multiply and become strong enough to show symptoms of the disease. Diseases like tuberculosis and influenza spread in this manner.

(b) Through Water. Water gets contaminated when patients of a disease wash into it their faeces, urine, sputum and vomit. These germs are carried by rivers and streams and sink into wells, ponds and lakes. When this water is used by healthy persons for washing and drinking, the germs remain dormant in his body till his resistance becomes poor and he falls victim to diseases. Cholera, enteric fever, dysentery, typhoid and jaundice spread in this manner.

(c) Through Insects. Germs of various diseases are carried by insects. The anopheline female mosquito, house fly, sand fly, fleas, ticks all act as carriers of disease. The mosquito, sand fly, fleas and ticks bite a patient, take the germs of the diseases in their blood, harbour them till they find a healthy man to bite and pass on the germs into his blood, till after a period, the healthy person also starts showing signs of the disease. Malaria, plague and sand fly fever, all spread like this. Cholera, diarrhoea, dysentery, jaundice, typhoid spread in this manner.

Ques 6 - Define disinfection?

ANS: It means destroying the disease germs through various methods. It is to break the chain of infection. The following are the important disinfectants:-

Ques 7 : what are the physical and the chemical agents of disinfection?

ANS:

(a) Physical Agents

(i) Light.

(ii) Heat - both dry and moist.

(b) Chemical Agents

(i) Gases.

(ii) Liquids.

(iii) Solids.

### SECTION - 9

#### OPERATION: AFTER CARE, DRESSING OF WOUNDS

Ques 1 - Discuss some of the points while dressing the wound of the patient?

Ans - The following should be done to help in quick healing of wounds and keep them from turning septic:-

- (a) The hand should be properly washed.
- (b) Everything that is used while dressing the wound should be properly sterilized so that the wound does not get infected.
- (c) Soiled dressing should be thrown properly in a covered waste bin and not allowed.
- (d) The wound should be cleaned with proper solutions.
- (e) Fresh air and sunshine assist in the quick recovery of a patient.
- (f) There should be no obstruction to the free circulation of blood so that the healing process is not restricted.
- (g) Proper diet should be given to the patient. Sufficient quantity of vitamin C must be ensured for quick healing.
- (h) The patient should be made to feel fit and kept cheerful.

### SECTION -10

#### POISONS AND FIRST AID

Ques 1. What is poison?

ANS: Any substance which, if taken in large quantity causes damage to the human system or may cause death, is called poison.

Ques 2. What are the means of poison intake?

ANS: (a) Poisons can be swallowed by eating or drinking.

- (b) Poisons enter the system by breathing in the form of fumes or smoke.
- (c) Poisons enter the body through injections or through bites such as snakes or rabid dogs.

Ques 3 : What are the types of poison?

- ANS: (a) Corrosive  
(b) Irritants  
(c) Stimulants  
(d) Depressors.

Ques 4: What is the first aid for the patient who has consumed poison?

- ANS: (a) Arrange to remove the patient to hospital immediately.
- (b) Note down the name of the poison if the empty bottle is there. Preserve if there is any remaining portion of the poison.
  - (c) Keep in some container any vomited matter, if it is there.
  - (d) If the patient has not taken any corrosive matter induce vomiting.
  - (e) If he is unconscious lay him with head turned to one side keeping his tongue out. If his respiration is failing, give artificial respiration.
  - (f) If the patient is conscious and the poison which he has taken is known, the following steps may be taken:-
    - (i) If he has taken some acid give him some alkali such as chalk, milk of magnesia and baking soda water.
    - (ii) If it is alkali give him 2 table spoonful of vinegar or lime juice water. Make the patient drink plenty of water or give something to drink such as milk or barley water or raw eggs.
    - (iii) If the patient has taken some disinfectant like cresol, carbolic acid or sleeping tablets like luminal, give two table spoonful of common salt with water or raw eggs.
    - (iv) In case of opium and morphia poisoning, give a few crystals of potassium permanganate in a tumbler of water and make the patient vomit.
    - (v) If there is gas poisoning, move casualty out of the room having gas. If the breathing is obstructed give artificial respiration. The domestic

antidote for poisoning is a mixture of tea powder or burnt toast and milk of magnesia mixed in equal portion.

## CHAPTER-IX

### INTRODUCTION TO INFANTRY WEAPONS

#### SECTION-1

#### CHARACTERISTICS OF 7.62MM SLR, AMN, FIREPOWER, STRIPPING, ASSEMBLING AND CLEANING

Ques 1 - Rif 7.62 mm SLR ka kutar (calibre) kitna hai?

Ans - 7.62 mm

Ques 2 - Bharey huey magazine ke sath Rif 7.62 mm SLR ka wazan kitna hai?

Ans - 5.1 Kg

Ques 3 - Rif 7.62 mm SLR ka kargar range kitna hai?

Ans - 275 meters

Ques 4 - Rif 7.62 mm SLR men kitne round bharey jaatey hain?

Ans - 20 Rds.

Ques 5 - Rif 7.62 mm SLR ka poora naam likho?

Ans - 7.62mm self loading rifle.

Ques 6 - Rif 7.62 mm SLR ke sath ek minute main kitne round fire kar saktey hain?

Ans - 05 Rds

Ques 7 - Rif 7.62 mm SLR ka safai ka saman likho?

Ans - (i) Pull through.

(ii) Oil bottle.

(iii) Combination tool.

(iv) Gas regulator key screw driver.

(v) Cylinder/Chamber cleaning brush.

- (vi) Rifle cleaning brush.
- (vii) Graphite grease tube.
- (viii) Chindi.

### SECTION-2

#### SLR : FILLING, EMPTYING OF MAGAZINE, SIGHT SETTING, LYING POSITION, HOLDING, AIMING AND FIRING

Ques 1 – Rif 7.62 mm SLR ka magazine kitne parkar se bhara jaata hai?

Ans - Do parkar se.

Ques 2 – Rif 7.62 mm SLR ki sight par kon kon se ank khude huey hote hain?

Ans - 3 to 6.

Ques 3 – Ready position par trigger ki position kahan hoti hai?

Ans - 'R' par.

Ques 4 – Rif 7.62 mm SLR se kaun kaun parkar ke fire kiye jaate hain?

- Ans - (a) Deliberate.  
(b) Snap shooting.  
(c) Rapid fire

### SECTION-3

#### CHARACTERISTICS OF 5.56MM INSAS RIF, AMMUNITION, FIREPOWER, STRIPPING, ASSEMBLING AND CLEANING

Ques 1 – 5.56 mm Rifle ka poora naam likho?

Ans - Rifle 5.56 mm Indian Small Arms System hai.

Ques 2 - Rifle 5.56 mm ka kuta (calibre) likho?

Ans - 5.56 mm.

Ques 3 - Rifle 5.56 mm ka wazan likho?

Ans - 3.6 Kg.

Ques 4 - Rifle 5.56 mm ka kargar range likho?

Ans - 400 meters.

Ques 5 - Rifle 5.56 mm ka rate of fire likho?

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

#### SECTION-4

#### CHARACTERISTICS OF 7.62MM LIGHT MACHINE GUN (LMG) AMMUNITION, FIREPOWER, STRIPPING, ASSEMBLING AND CLEANING

Ques 1 - 7.62 mm LMG ka poora naam lokho?

Ans - 7.62 mm Light Machine Gun.

Ques 2 - 7.62 mm LMG ka rate of fire lokho?

- Ans (a) Normal - 28 rds (One mag) per min.  
 (b) Rapid - 112 rds (four mag) per min.  
 (c) Cyclic - 450 - 500 rds per min.

Ques 3 - 7.62 mm LMG ka kargar range lokho?

- Ans (a) On bipod - 500 yds.  
 (b) On tripod - 1000 yds.

Ques 4 - 7.62 mm LMG ke magazine mein kitne roud atey hain?

Ans - 30 Rds

Ques 5 - 7.62 mm LMG kis sidhant ar kaam karti hai?

Ans - Gas

Ques 6 - 7.62 mm LMG ke change lever ki kitnee position hoti hai?

Ans - 3.

SECTION-5TECHNICAL DATA OF INFANTRY WEAPONS

Ques 1 - 84 RL ka kutar kitna hota hai?

Ans - 84 mm

Ques 2 - 84 mm RL ka wazan likho?

Ans - 16.100 Kg

Ques 3 - 84 mm RL se kitne parkar ka ammunition fire kar sakte hain?

Ans - 06 parkar ka.

Ques 4 - 81 mm Mor se kitne parkar ka ammunition fire kar sakte hain?

Ans - Three.

Ques 5 - Hand Grenade No 36 ka killing area kitna hai?

Ans - 8 Mtr raidus.

Ques 6 - Hand grenade No-36 ka fuze kitne second ka hota hai?

Ans - 4 second ka.

Ques 7 - 7.62 mm machine Gun ka rate of fire likho?

- Ans - (a) Normal - 100 rounds per minute.  
(b) Rapid - 200 rounds per minute.  
(c) Cyclic - 600-1000 rounds per minute.

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**MISC****AUTH OF CADET APPTS: NCC UNITS**

(Auth-PE of NCC units &amp; Trg Ests-1979)

SD/SW UNIT- 160 Cdts (Coy – 160 Cadets, with 3 Pls -53, 53, & 54 Cadets)									
Ser No	Unit	Coys /Sqn	SUO	UO	WO	Sgt	Cpl	L Cpl	Total
1.	Inf Unit	Bn HQ	2	0	2	2	2	0	8
		Coy HQ	1	0	2	1	0	0	4
		Pl	0	1	0	1	3	6	11
		5 Coys	7	15	12	22	47	90	193
2.	Girls Pl	Coy HQ	1	0	2	0	1	0	4
		Pl	0	1	0	1	3	6	11
JD/JW TP- 100 Cdts									
Ser No	Troop	CSM	Sgt	Cpl	L Cpl	Total			
1.	Boys Tp	1	2	3	5	11			
2.	First ½ Boys Tp	1	1	1	3	5			
3.	Second ½ Boys Tp	0	1	2	2	6			
4.	Girls Tp	1	3	8	12	24			
5.	First ½ Girls Tp	1	1	4	6	12			
6.	Second ½ Girls Tp	0	2	4	6	12			

**REFRESHMENTS TO NCC CADETS**

1. Refreshments to cadets should consist of following items only: -

- (a) Milk
- (b) Shakarpara biscuits.
- (c) Besan Laddoos
- (d) Bananas
- (e) Buns and butter
- (f) Eggs
- (g) Iddlies made of urad dal and rice
- (h) Masala Dosa
- (i) Vada – Made of chana dal
- (j) Poori and potatoes
- (k) Coffee/tea/cool-drinks
- (l) Kara Bhath
- (m) Kesari Bhath
- (n) Rice puddings

Auth-NCCO-08/67.

### ACR CALENDAR - CHECK LIST NCC UNITS

Ser No	Service	Category	Date			
			Due for initiation	Nominal Roll to reach at Dte	To reach at Gp HQ	To reach at NCC Dte
1.	Army	Col	01 Sep	01 Aug	05 Sep	15 Sep
		Maj to Col (TS)	01 Jun	01 May	05 Jun	15 Jun
		JCOs	01 Jun	-	05 Jun	15 Jul
		Havs	01 Oct	-	05 Oct	15 Nov
		NKs	01 Jan	-	05 Jan	15 Feb
2.	NCC	WT NCC Offrs	01 Jul	15 Jun	05 Jul	15 Jul
		ANOs	01 Jan	-	05 Jan	-
		GCI's	01 Jan	-	05 Jan	25 Jan
3.	Civil Staff	All	01 Apr	-	05 Apr	-

### REVISED WPN/AMN SCALES: NCC UNITS

Applicable wef 01 Apr 2005

AUTH - HQ DG NCC letter No-19404/CS/DGNCC/Lgs (Navy & Eqpt) dt 12 Apr 2005.

Ser No	Wpn	Scale		Remarks
		Wpn	Amn	
1.	.22 Rif (All types)			
	Army SD	02/Coy	20/Cdt	
	Army JD	1/Tp	10/Cdt	
	Air SD	1/Flt	10/Cdt	
	Air JD	1/Tp	10/Cdt	
	Girls SW	6/Bn	20/Cdt	
	Girls JW	1/Tp	10/Cdt	
2.	.22 Imported Rif.			500 Rds of amn per Rif held for the Trg Yr.
3.	7.62 mm SLR.			
	Army SD	2/Coy	12/Cdt	BDR for 10% of Cdt Str
4.	7.62 mm SLR DP			
	Army SD, Air SD & Girls SW	150 per Major Unit & 75 per minor unit		
5.	7.62 mm LMG DP	1/Coy		
6.	7.62 mm LMG			
	Army SD (Inf)	02 per unit	7/Cdt (CTN)	CTN amn for 10% of Cdt str, Tracer-Nil.
7.	Smoke Candle			
	Army SD (Inf)		6/Coy	
8.	Proj Mini Flare-16 mm			
	Army SD	1/Coy	White-9 Red & Green -6	
9.	12 Bore 4 Shot			
	Air SD	2/Sqn	20/Cdt	
10.	Plastic Pigeon			
	Air SD		40/Cdt	

**ANNUAL RANGE COURSE NCC**

As per revised scales of Arms/Armn.wef 01 Apr 2005

<b>The Miniature Rq Course (.22 Rifs)</b>						
This course will be fired by ANOs of Jr Div (Army Wing)						
Practice No.	Practice	Tgt	Rg in Yds	Rds	Instrs	Scoring
1.	Deliberate	1'x1'	25	10	(a) Posn lying with rest. (b) 2 practices of 5 Rds each.	Bull & inner - 3 Pts Magpie - 2 Pts Outer - 1 Pt HPS - 30
<b>The Miniature Rq Course (.22 Rifs)</b>						
This course will be fired by Cdts & ANOs of Sr Div (Army Wing)						
1.	Introductory shoot	1'x1' with white aiming mark	25	5	Posn lying with rest.	Grouping, 2 & 3 rds
2.	Deliberate	1'x1'	25	10	(a) Posn lying with rest. (b) 2 practices of 5 Rds each.	Bull & inner - 3 Pts Magpie - 2 Pts Outer - 1 Pt HPS - 30
3.	Competition	Fig 12	25	5	(a) Posn lying with rest. (b) 5 Rds to be fired at a time each.	3 Pts per hit HPS - 15 Pts
<b>The Miniature Rq Course (.22 Rifs)</b>						
This course will be fired by Cdts of Jr Div (Army Wing)						
1.	Introductory shoot	1'x1' with white aiming mark	25	5	Posn lying with rest.	Grouping, 2 & 3 rds
2.	Deliberate	1'x1'	25	5	(a) Posn lying with rest. (b) 1 Practice of 5 Rds.	Bull & inner - 3 Pts Magpie - 2 Pts Outer - 1 Pt HPS - 15
<b>Long/Short Rq 7.62 mm Rif Course</b>						
This course should be fired by Cdts of Sr Div (Army Wing) during ATC						
1.	Introductory shoot	1'x1'	25	2	Posn lying with rest.	Nil
2.	Deliberate	4'x4'/1'x1'	25	5	Posn lying with rest.	Bull & inner - 3 Pts Magpie - 2 Pts Outer - 1 Pt HPS - 15
3.	Deliberate	4'x4'/1'x1'	25	5	Posn lying without rest.	Bull & inner - 3 Pts Magpie - 2 Pts Outer - 1 Pt HPS - 15
<b>Long/Short Rq Course - LMG</b>						
This course should be fired by Cdts of Inf Units of Sr Div (Army Wing) during ATC						
1.	Deliberate	4'x4'/1'x1'	100/25	7	(a) Practice to be fired from lying posn. (b) 2 Rds single shot, 5 Rds automatic (Two bursts of 2 to 3 Rds each)	Bull and inner - 2 Pts Magpie & outer - 1 Pt HPS - 14 Pts

Saurabh Rn. Behara  
D.N.

SAMPLE QUESTION WITH ANSWER PAPER-BC CDTs

DRILL

Fill in the blanks :-

- (a) In 'Savdhan' the angle formed between the feet is 30°.
- (b) The speed of feet is 120 steps per minute in TEJ CHAL.
- (c) Word of command THAM is given on the left foot.
- (d) In 'Vishram' the distance between heels is 12 Inches.
- (e) Pichhe Mur' (About Turn) is always made Right about.
- (f) The characteristics of a word of command are Loudness, Distinctness, Inflection and snap.
- (g) A command has two parts Cautionary and Execution
- (h) Aim of Drill is to inculcate a sense of discipline, improve bearing, smartness in appearance and turn out, and to develop the quality of immediate and implicit obedience to orders
- (j) In all turns the weight of the body is kept on the forward foot
- (k) Line Tor does not signify the end of parade, but only a break in it.
- (l) The length of one pace in quick time march is 30 inches and the number of paces per minute is 120 which is equivalent to 100 yards
- (m) For turning on the March "Pichhe Mur" word of command is given as the left foot passes the right foot.
- (n) When getting on parade with rifle, the rifle is carried in Tol Shastra
- (o) The length of side pace is 12 inches and side pace is used to move the squad not more than 12 paces to a flank.
- (p) National salute is given to the President of India and Governor's within their own states.
- (q) The strength of cadets for Guard mounting is 2 + 6
- (r) In Guard of Honour, Guard will form up in 2 ranks with a distance of 4 paces between the front & the rear ranks. The Guard Commander will be 8 paces in front of the centre of the front ranks. The distance between cadets will be 24 inches.
- (s) The strength of the Guard of Honour for the President is 150 rank & file
- (t) All Drill movements commence after getting into Savdhan position
- (u) In Salami Shastra the weight of the rifle is supported by the left hand.
- (v) 'Squard Tham' is given when right foot passes the left.
- (w) In Savdhan position the feet are turned out equally forming an angle of 30 degrees.
- (x) In vishram position the distance between the heads is 12 inches.
- (y) In line tor salute is not given (Given/Not given)
- (z) The length of one pace is double time march is 40 inches.
- (aa) The length of side pace is 12 inches and side pace is used to move the squad not more than 12 paces to a flank.
- (ab) The strength of the Guard of Honour for the President is 150 rank & file
- (ac) The length of one pace in double time march is 40 inches.
- (ad) In samiksha Karan (Review order) the parade automatically halts after 14 steps.
- (ae) Line Tor does not signify the end of parade, but only a break in it.
- (af) The length of one pace in slow time march is 30 inches and the number of paces per minute is 70.

Please (✓) mark in the following questions:-

- |   |       |
|---|-------|
| (a) Command VISHRAM is given for temporary break.   | False |
| (b) The strength of Guard of Honour for the President in 150 cadets formed in three equal division. | True  |
| (c) KHULI LINE CHAL command is given while marching.  | False |
| (d) In ARAM SE position we can move our feet  | False |
| (e) General Salute is given to other dignitaries of the rank of Maj Gen and above.                  | True  |

Write the difference between 'Dismiss' and 'Falling Out'?

(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.

What are the salient aspects to be kept in mind while standing in "Savdhan" without weapon?

- (a) Stand straight on both legs, heels joined and toes at 30 degree angle, chest lifted and neck filling the collar.
- (b) Arms straight so that the thumbs are immediately behind the seams of the trousers, back of the hand outwards, hands closed (not clinched) and thumbs straight to the front.
- (c) Head erect and square to the front, chin vertical and eye straight to the front.
- (d) Weight of the body resting equally on the heels and the toe of the feet.
- (e) No movement.

What is the difference between rank & file?

- (a) Cadets standing side by side in straight line makes the rank.
- (b) Cadets standing one behind the other covering the front cadet makes the file.
- (c) Rank and file together make the squad.

What are the benefits of drill?

- (a) Drill inculcates discipline.
- (b) Teaches to obey orders.
- (c) Improves self confidence.
- (d) Improves swiftness of body movements.
- (e) Develops sense of pride.
- (f) Raises morale & develop spirit of unity.

'Inflection' is an important characteristic of a word of command. Explain?

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

What action is taken on the word of command 'Aram Se' during arms drill?

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

Write down the action under taken by a squad during 'Khuli line-chal'?

The front rank shoot the right foot forward one full step and left foot one short step and lift to bring the together, arms to sides throughout. The rear rank conforms to similar movement to the rear.

Explain the action during getting on parade with rifle and Sajna (Dressing)?

When getting on parade with rifle, the rifle is carried in 'Tol Shastra'. As soon as the squad halts, the rifle is placed noiselessly on the ground in the correct position of attention. In dressing, the front rank raises left hand to the head of right and the rifle is again raised to the position of Tol Shastra while moving.

What is the strength of Guard of honour ?

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).

What is the aim of Drill?

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

Squad ko kadd war karne ke liye karwai likho?

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

What are the salient aspects to be kept in mind while standing in "Savdhan" without weapon?

- (a) Stand straight on both legs, heels joined and toes at 30 degree angle, chest lifted and neck filling the collar.
- (b) Arms straight so that the thumbs are immediately behind the seams of the trousers, back of the hand outwards, hands closed (not clinched) and thumbs straight to the front.
- (c) Head erect and square to the front, chin vertical and eye straight to the front.
- (d) Weight of the body resting equally on the heels and the toe of the feet.
- (e) No movement

What is the difference between rank & file?

- (a) Cadets standing side by side in straight line makes the rank.
- (b) Cadets standing one behind the other covering the front cadet makes the file.
- (c) Rank and file together make the squad.

'Inflection' is an important characteristic of a word of command. Explain?

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

Write down the action under taken by a squad during 'Khuli line-chal'?

The front rank shoot the right foot forward one full step and left foot one short step and lift to bring the feet together, arms to sides throughout. The rear rank conforms to similar movement to the rear.

## WEAPON TRAINING

Fill in the blanks :-

- (a) Normal rate of fire of point .22 Rifle is Five (05) rounds per minute.
- (b) Maximum range of point .22 Rifle is 1700 yards.
- (c) One LMG magazine can contain 30 rounds.
- (d) LMG rapid rate of fire is Four (04) magazine per minute.
- (e) Battle effective range of 7.62 MM rifle is 275 (300 Yds) meter.
- (f) The fine art of shooting teaches a person precision, accuracy, co-ordination of body movements, patience and confidence.
- (g) The muzzle velocity of .22 rifle is 2700 m per second.
- (h) Effective range of .22 rifle is 25 yards
- (j) The three basic qualities essential for a good firer are Good hold, Aim correctly and proper trigger operation.
- (k) For grouping fire 1' x 1' target with a white patch in the centre of the bull is used.
- (l) Limber-up assists in co-ordination and tunning up of muscle, eye and brain.
- (m) A red flag displayed on the butt indicates that no firing should take
- (n) The central point of area covered by the group of rounds fired with consistant aim and held at the aiming mark is called MPI.
- (o) An alteration of 100 yards in the sight will rise or drop MPI by 6 inches.
- (p) The safety precautions that will be taken while handling any weapon are inspection of weapon and barrel of the weapon should always points towards the target.
- (q) A Rifle is said to be loaded when there is a round in the chamber.
- (r) The reasons for forming a group and why bullets to not pass through the same hole are variation in contents of the ammunition, weather condition and fault of the firer. (also jump, variation in the temperature of barrel.)
- (s) The basic weapon used by NCC Cadets for firing is .22 rifle.
- (t) Materials used for cleaning a .22 rifle are :-  
(a) Pull through (b) Wire gauge (c) Oil (d) Flannel
- (u) The back sight leaf of .22 rifle has all even numbers from 2 to 20 marked on it.
- (v) To achieve proper trigger operation, perfect co-ordination between eye, brain and operation of the fore finger on the trigger is required.
- (w) The reasons for forming a group and why bullets to not pass through the same hole are variation in contents of the ammunition, weather condition and fault of the firer. (also jump, variation in the temperature of barrel.)
- (x) The safety precautions that will be taken while handling any weapon are inspection of weapon and barrel of the weapon should always points towards the target.
- (y) A Rifle is said to be loaded when there is a round in the chamber.
- (z)(a) CQB means Close Quarter Battle  
(b) Baynet/Pistol/SMC is a CQB weapon.

Please (✓) mark in the following questions:-

- (a) HAT means How Aim is Taken False
- (b) Trigger should be pulled hard while firing. False
- (c) 7.62 MM SLR is an automatic rifle. False
- (d) While firing LMG, both the legs of the firer should be kept wide apart. False
- (e) Battle effective range of LMG on Tripod is 500 Yards. False

What are the essentials of good firing?

- (a) Make comfortable position.
- (b) Firm holding of rifle to gain rock like steadiness.

- (c) Aim correctly.
- (d) Smooth trigger operation.
- (e) Back sight 'U', Fore sight 'T' and the target centre' in one line.

What is MPI?

The central point of area covered by the group of rounds fired with consistent aim and held at the same mark is called the Mean Point of Impact (MPI).

What are the points to be Kept in mind in lying position for firing:-

- (a) Right toe, left hand elbow, rifle and target in one line.
- (b) Flash hider should not touch the ground.
- (c) Body position should be slightly at an angle to the target.
- (d) Legs should be open as per body comfort and inner heels touching the ground.

What are the causes of stoppage in .22. Rifle:-

- (a) Empty magazine.
- (b) Wrongly filled magazine.
- (c) Misfire.
- (d) Non extraction of empty case.
- (e) Broken firing pin.

Elevation is given to counter the force of gravity while the bullet is in flight. The (3) elevation is upon the range of the target. This elevation is given automatically by adjusting the back sight.

The laws of aiming are:-

- (a) Focus the target and get the true centre of the target. Then with the eye focus to the foresight.
- (b) Hold the rifle properly and keep it up right.
- (c) Close the left eye and focus the foresight.
- (d) See the fore sight through the sight U. The fore sight should be seen right in the centre of the U. The lip of the foresight must be aligned in the centre and in level with the shoulder of the U.

Explain the sequence of stripping 7.62 mm SLR:-

- (a) Bayonet
- (b) Sling
- (c) Magazine
- (d) Body cover
- (e) Bolt
- (f) Gas plug
- (g) Piston and spring

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

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

Ser No	Details	Rifle .22 No II MK IV BA	Rifle .22 Deluxe BA
(a)	Length	45"	43"
(b)	Magzine Capacity	10 Rounds	05 Rounds
(c)	Grooves in the barrel	06	06
(d)	Effective Range	25 yds	25 yds
(e)	Max Range	1700 yds at 33 angle	1700 yds at 33 angle

What points must be kept in mind while assembling of Rif .22?

- (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.

What are the three basic essentials of good shooting?

- (a) Position must be comfortable and hold so firm that the rifles gains a rock like steadiness.
- (b) The firer must aim correctly.
- (c) The trigger be pressed in such a way that aim is not disturbed.

What are the characteristics of good lying position?

- (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.
  - (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

What are the laws of aiming?

The laws of aiming are:-

Focus the target so that a clear picture is formed on the retina of the eye and get the true centre of the target. with the eye focus to the foresight.

Hold the rifle properly as has already been taught and keep it upright.

Close the left eye and focus the foresight.

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.

What is the elevation at different ranges?

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

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

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

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

### NATIONAL INTEGRATION

What are the six major religions of our country. Give out their religious books?

<u>Religion</u>	<u>Religious Book</u>
(a) Hindu	The Gita
(b) Muslim (Islam)	The Quran
(c) Christianity	The Holy Bible
(d) Sikh	Guru Granth Saheb

Match the following:-

(a) Bihu	(a) Assam
(b) Baisakhi	(b) Punjab
(c) Kuchi Pudi	(c) Andhra Pradesh
(d) Bharat Natyam	(d) Tamilnadu
(e) Kathakali	(e) Kerala

What are the eligibility conditions for appearing in 'B' certificate examination?

- (a) The cadet must have attended 75% of total training period laid down in the syllabus for the first two years for Senior Div/Wing (All Wing).
- (b) Must have attended one ATC/NIC.
- (c) Cds possessing 'A' Certificate will be awarded 10 bonus marks.
- (d) An Air Wing Cdt must do a minimum of 10 Glide launches.

What are the Aims of Cadet Welfare Society (CWS)?

- (a) To give financial assistance to Cds NOK/Nominee in case of a demise during NCC activity.
- (b) To give financial relief to Cds on sustaining injury/disability during NCC activity.
- (c) To grant Scholarship to academically brilliant students.
- (d) To grant Best and 2<sup>nd</sup> Best Cdt award at Group levels.
- (e) To conduct sports and adventure activities which can not be funded by Public funds.

Two major religions Jainsim and Budhisim which arose in the 6<sup>th</sup> century BC left a lasting influence on life and culture.

Ashoka unified almost the entire country but renounced the use of war as state policy.

Sanskrit was the language of the court in most part of Ancient India.

Chalukyas and Pallavas were famous dynasties/kingdom of ancient India.

The India Nation Congress was established by AO Hume in 1885.

The theory of Hinduism lays stress on Bhakti, Karma and rebirth.

Islam means "submission" or resignation to Allah (God)

The teaching of Islam highlights purity of life, charity to poor and spread of brotherhood.

Christianity was founded by Jesus Christ, Christianity preaches charity, love and peace.

Some of the essentials for national unity are language, castesim, Education, Communalism and nationalism.

The theory of Hinduism lays stress on Bhakti, Karma and rebirth.