Q.1 A) Fill in the blanks (Any Eight)

- 1. Unity and discipline
- 2. Cautionary, executive
- 3. Cadet
- 4. Football
- 5. 180 degrees
- 6. Jana Gana Mana
- 7. Permanent Instructors
- 8. 7 groups
- 9. 30 inches
- 10. Tiger

Q.1 B) State the following sentences are true or false (Any Seven) (7)

- 1. True
- 2. False
- 3. False
- 4. True
- 5. False
- 6. True
- 7. True
- 8. True
- 9. True
- 10. False

Ans 2) a) There are various incentives offered by the central government

- > NCC uniform.
- ➤ DMS.
- Various camps which develops cadet's skills.
- It also provides the SAHARA scholarship witch help student in their educational development.
- > They provides some job opportunities in defense services as well as in civil life.
- They arrange various camps which include ATC, RDC, TSC, Trekking camps, NIC and Firing camps too without acquiring any cost.

(8)

Ans 2) b) Swaccha bharat abhiyan introduce in 2015 by PM Modi.

- > By this abhiyan PM modi wants to make Indian People discipline
- > He also participated in this abhiyan to encourage people for Swaccha abhiyan.
- Initially he includes some NCC cadets in this abhiyan.
- He appeals to keep your surrounding neat and clean simultaneaously our Nation will get cleaned.
- For maintain good physical and mental health cleanliness of ownself and our surrounding
- Swaccha Bharat Abhiyan trying to enrich the benefits of cleanliness.
- Because of this abhiyan some people stops to throw garbage on the road.
- > NCC cadets can perform street plays to support this abhiyan by doing Jan Jagruti.

Ans 3) a) Various principles of drill

- > Steadiness
- > Smartness
- > Co-ordination
- > Continuity
- > Sharp & Active

Ans 3) b) National Integration helps in survival of nation by the following means:

- Maintainence of sovereignity and territorial integrity of the nation
- Maintainence of peace and harmony
- Growth and Development of the nation
- Eradication of poverty and illiteracy
- Internal security and law and order
- Culture and religious development
- Economic and industrial growth
- Attract foreign investment and increase import and export
- Exchange of technological know-how and culture
- Dignity and self respect as a nation
- Welfare and well-being of the people
- Foreign relations and better understanding among the nations of the world.

OR

Ans 3) b) Role of NCC in conservation of Natural resources:

Every cadet can fulfill his obligation towards environment individually or collectively by following means :-

- (a) Avoiding cutting of trees and by Planting more trees.
- (b) Not polluting water sources like river, ponds, sea.
- (c) Avoiding use of plastic.
- (d) Avoiding noise pollution.
- (e) Recycling natural resources to ensure their efficient sustainable use.

Using renewable sources of energy like solar and wind power.

Ans 4) a) Effective Communication involves:-

(a) <u>Verbal Communication</u>. One person talks and others listens to be able to react. The conversation can be informative, in the form of questions, a negotiation, and statement or open ended questions, instruction, etc. And the situation can be formal or informal.

(b) **Non-Verbal Communication**. Non verbal communication is that gives meaning to what is said and may communicate both appreciation and rejection. It includes such things as tone of voice, a nod of head, using silence.

Ans 4) b) The traits of leadership are:

- Alertness
- Bearing
- Courage
- Justice
- Loyalty
- Self-confidence
- Maturity
- Endurance
- Patience
- Truthfulness
- Knowledge

OR

Ans 4) a) The factors that causes 'communication gap' are many. They include:-

- (a) The hierarchy (not able to question higher authority for clarification.
- (b) Conflict of interest (e.g. personal interest versus the parental expectations).
- (c) The level of motivation that one holds. (e.g. I do not care, things can wait).
- (d) Perception (e.g. nobody understands me).
- (e) Psychological factors (e.g. fear of authority and power, anger about following rules).

Ans 4) b)

> Advantages of line communication

<u>Simplicity</u>—It is the simplest of all types of organisations. It can be easily established and easily understood by the workers.

<u>Clear-cut division of authority and responsibility</u>—The authority and responsibility of every person is clearly defined. Everyone knows as to whom he can issue orders and to whom he is accountable. Further it is easier to fix up the responsibility if there is any lapse anywhere in the performance of activities.

<u>Strong Discipline</u>—Because of direct authority—responsibility relationships, discipline can be maintained more effectively.

Disadvantages of line communication

<u>Heavy Burden of work</u>—Since the departmental head has to look after all the activities of his department, he is over burdened with work. He may neglect some of the duties and there may be inefficiency in management.

<u>Concentration of Authority</u>—It is dictatorial in nature as all important powers are concentrated in the hands of a few top executives. If they are not able the enterprise will not be successful. <u>Lack of specialisation</u>—Line organisation suffers from lack of specialised skill of experts. It is extremely difficult for one person to handle activities of diverse nature.

Ans 5) 1) Ranks in Army.

- Lt. Genral
- Maj. General
- Brigadier
- Colonel
- Lt. Colonel
- Major
- Captain
- Liutenent

- Sub. Major
- Subedar
- Nb. Subedar
- RHM
- BHM
- CHM
- CQMH
- Havildar
- Naik
- Lance Naik

Ans 5) 2) Types of communication

Communication is done between more than one person. There are types of communication as follow,

Verbal communication:

Non-verbal communication:

Ans 5) 5) Characteristics of wireless technologies.

- Unmatched mobility
- Unmatched elasticity
- It's convenient and can be use everywhere
- > More faster
- > More secure

Navy

Ans 5) 3) Ranks in NAVY.

- Admiral of the fleet
- Admiral
- Vice Admiral
- Rear Admiral
- Commodore
- Captain
- Commander
- Lieutenant Commander
- Lieutenant

- Sub-Lieutenant
- Ensign
- Midshipman

Ans 5) 4) History of Indian Navy.

- HarrappaRig Veda Atharva Veda Varuna Devas Danavas Aditi KashayapaChandragupta Aryabhatta Vijaynagaram Kalinga Portuguese Vasco da GamaMoghuls Shivaji HMS Hindostan Cornwallis Bombay Dock.
- India'smaritime history predates the birth of western civilisation. Theworld's first tidal dock is believed to have been built at Lothalaround 2300 BC during the Harappan Civilisation, near the present dayMangrol harbour on the Gujarat coast.
- Malanni pothi. 19th century Kutchi mariner's log bookThe Rig Veda, writtenaround 2000 BC, credits Varuna with knowledge of the ocean routescommonly used by ships and describes naval expeditions which usedhundred-oared ships to subdue other kingdoms. There is a reference toPlava, the side wings of a vessel which give stability under stormconditions: perhaps the precursor of modern stabilisers. Similarly,the Atharva Veda mentions boats which were spacious, well constructed and comfortable.

Ans 5) 5. Principles of ship modeling.

- > Nurbs curve
- > Spline
- Grid of lines on hull surface
- Not correct patches splitting in case of using "Cross sectional design"
- > Frame sections local modification by control point
- correct surface subdivision
- Not well faired surface
- Frames radii of curvature visualization
- Inflection lines visualization for frames waterlines and buttocks

AIR

Ans 5) 1) Circuit Procedure.

• The **upwind side** is the area on the opposite side of the landing runway from the downwind leg. Approach should be made into this area at or above circuit height.

- The **circuit joining crosswind** is a corridor, lying within the airspace between the centre of the landing runway and its upwind end, linking the upwind side and the downwind leg.
- The **downwind leg** is a flight path,opposite to the direction of landing,which is parallel to and at a sufficient distance from the landing runway to permit a standard rate –one turn to the base leg.
- The **base leg** is a flight path at right angles to the direction of landing and sufficiently downwind of the approach end of the landing run-way topermit at least a ¼ mile final approach leg after completion of a standard rate –one turn to final approach.
- The **final approach leg** is a flight path in the direction If landing, commencing at least ¼ mile from the runway threshold, wherein an airplane is in line with the landing runway and descending towards the runway threshold.

Ans 5) 4) History of Indian Air Force.

| George Cayley laid the foundation for the field of Ariel Navigation, Balloonswere tried |
|---|
| Lilienthal discovered gliders |
| Wright flier 111 was developed |
| Roe's bi- plane appeared |
| Rolls –Royce engine was developed |
| Hele-Shaw –Beachan propeller was designed |
| Whittle W-1Turbo Jet was developed |
| Germans V-2Rocket engine |
| Bristol centaurs engine was designed |
| Rolls- Royse Vertical test rig was developed |
| |

Ans 5)5) Ranks in Air Force.

- Marshal of the Air Force
- Air Chief Marshal
- Air Marshal
- Air Vice Marshal
- Air commodore
- Group Captain
- Wing Commander

- Squadron Leader
- Flight Lieutenant
- Flying Officer
- Master Warrant Officer
- Warrant Officer
- Sergeant
- Corporal
- Leading Aircraftsman
- Airman