

**MARKING SCHEME**  
**Subject : NCC (076)**  
**CLASS XII – 2020-21**

Question Number	EXPECTED ANSWER	Marks Distribution
1.	(i) 1961	1
	(ii) Falling Out	1
	(iii) True	1
	(iv) Mean Point of Impact	1
	(v) Two way of communication	1
	(vi) Any two of the following : <ul style="list-style-type: none"> <li>• Muzzle Velocity 2700 per sec</li> <li>• Grooves in the barrel 06</li> <li>• Effective range 25yds</li> <li>• Max Range 1700 yds at 33 degree angle</li> </ul>	$\frac{1}{2} + \frac{1}{2}$
	(vii) All of the Above	1
	(viii) Self Service	1
	(ix) EBSB	1
	(x) Chlorofluorocarbons	1
	(xi) Democratic	1
	(xii) Thomas Method	1
	(xiii) Abiotic	1
2	<p><b>Common Language:</b> National language is a common language which is a driving force behind unity of the nation's people, and makes them distinct from other nations – provided you give your language respect. Giving respect to your national language means that it should be one's primary language, as well as the preferred source of communication at every level.</p> <p><b>Removal of Communalism:</b> Communalism is discriminatory as it endangers the unity of our country. Fundamentalism is the greatest challenge to India's unity. This has to be sternly dealt with. 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 society.</p> <p><b>Removal of Regionalism:</b> India is a vast country with regional diversities. People from different parts of the diversified subcontinent should meet under a common wing of national consciousness, forgetting the regional differences, sharing the feeling of togetherness and take the pride in being an Indian.</p>	1 for each point
3.	<p><b>'Visarjan' (Dismiss):</b> The cadet should 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, the cadet keeps in step until clear off the parade ground.</p> <p><b>'Line tor'</b>- Falling out does not signify the end of the parade, but only a break in it. It is different from <i>Visarjan</i> in the following points:</p> <ol style="list-style-type: none"> <li>a) Salute is not given</li> <li>b) Cadets falling out, should not to leave the vicinity of their place of parade or lines of march</li> </ol> <p>On command '<i>Line tor</i>' (Fall out) the squad should turn right, break off in quick time (or in double time as ordered) counting a regulation pause between each movement.</p> <p>The difference between dismiss and falling out are as follows:-</p> <ol style="list-style-type: none"> <li>a) Falling out</li> </ol>	1 for each

	<p>i) To leave the ranks temporarily  ii) A word of command, to close the drill temporarily is given to a body of cadets required to fall in again after a stipulated period</p> <p>b) Dismiss  i) A word of command is given for closing drill.  ii) Denotes parade is completely terminated.</p>	
4.	<p>1. Only Senior Division NCC cadets of above 18 years of age.  2. Associate NCC Officers.  3. They were not assigned the job of handling law and order situations and active military duty at hotspot.</p>	1x3
5.	<p>Main Components:  (a) Sleep  (b) Bathing  (c) Eating and Drinking  (d) Care and Cleanliness of Skin, Hair and Teeth  (e) Exercise  OR  Articles for Dressing of Wounds:  (a) Antiseptic (A/S) lotion.  (b) Cotton / gauze piece.  (c) A pair of Scissors.  (d) Bandages of different size and band aid plaster. (e) A/S ointment or powder.</p>	½ for naming each point and ½ for its short explanation (One should write at least 3)
6.	<p>a) Aggressive  b) Passive  c) Assertive  OR  (Any Four)  Telephone/Mobile Phone  Visitors  Paper  Lack of Planning  Socializing  Indecision  Television  Procrastination</p>	<p>1 for three styles &amp;  1 for each point explanation</p> <p>1 for each point with explanation</p>
7.	<p>(i) 1-(d)  2-(c)  3-(a)  4-(b)  (ii) Lieutenant  (iii) Defence Secretary</p>	<p>½ x 4=2</p> <p>1  1</p>
8.	<p>Any Four  (a) Bribery  (b) Embezzlement, theft and fraud  (c) Extortion and blackmail  (d) Abuse of discretion  (e) Favoritism and nepotism  (f) Improper Political Donations  OR  (a) Cancellation / permanent termination of the doctor's license who participates in fulfilling a client's demand to do away with her girl child.  (b) Heavy penalty imposed on companies like GE that specialize in marketing medical equipment used for illegal sex determination and abortion in unlicensed clinics and hospitals.  (c) High fines and judicial action against „parents“, who knowingly try to kill</p>	1 for each point with very short explanation

	<p>their unborn baby.</p> <p>(d) Widespread campaigns and seminars for young adults and potential parents to enlighten them about the ill effects of female feticide. Ignorance is one of the major causes for the increase in the selective sex abortion cases. Spreading awareness can go a long way in saving our future sisters, mothers, friends and wives.</p> <p>(e) High incentives for the education of the girl child, employment etc.</p> <p>(f) Equal rights for women in the property of the parents / husband.</p>	
9.	<p>(a) Physical fitness.</p> <p>(b) Agility</p> <p>(c) Mental robustness.</p> <p>(d) Coordination and balance of mind and body.</p> <p>(e) Improves risk-taking ability.</p> <p>(f) Evaluating problem-solving skills.</p> <p>(g) Over all team spirit.</p> <p>Support with examples</p> <p>OR</p> <p>(a) Licensing</p> <p>(b) Established Operators</p> <p>(c) High Winds</p> <p>(d) Visibility</p> <p>(e) Passenger Age and Weight Restrictions</p> <p>(f) Types of Equipment</p> <p>(g) Altitude</p> <p>(h) Ask Questions</p> <p>(i) Release Form</p>	1 for each point (any 6 points) with explanation
10	<p>Any four</p> <p>1) Importance of drill</p> <p>The primary importance of drill is to prepare troops for combat by rapidly carrying out orders. Ceremonies go hand-in-hand with drill. During a ceremony, troops align in various formations and carry out commands with uniform precision.</p> <ul style="list-style-type: none"> <li>• Teach discipline</li> <li>• Control of body</li> <li>• Team work</li> <li>• Correct method of wearing uniform</li> <li>• Taking and delivering command</li> <li>• Duty,</li> <li>• Punctuality,</li> <li>• Orderliness,</li> <li>• Smartness,</li> <li>• Respect for the authorities,</li> <li>• Correct work ethos, and</li> <li>• Self- confidence.</li> </ul> <p>2) Wrong Practices during drill</p> <ul style="list-style-type: none"> <li>• Rolling go eyes</li> <li>• Hopping and jumping</li> <li>• Dragging of foot</li> <li>• Clicking the heel</li> <li>• Moving figures inside the boots</li> </ul> <p>3) Important Characteristics of performing drill</p> <ul style="list-style-type: none"> <li>• Hard work,</li> <li>• Sincerity of purpose,</li> <li>• Honesty,</li> <li>• Ideal of selfless service,</li> <li>• Dignity of labor,</li> </ul>	<p>½ for each point</p> <p>½ for each point (Any four point)</p> <p>½ for each point (Any four point)</p>

	<ul style="list-style-type: none"> <li>• Secular outlook,</li> <li>• Comradeship,</li> <li>• Spirit of adventure and</li> <li>• Sportsmanship.</li> </ul> <p>Or</p> <p><b>Procedure of Ceremonial Drill</b></p> <ol style="list-style-type: none"> <li>1. VIP on arrival will be received by the Senior Officer/ Senior Cadet and taken to the Saluting Dias. The Parade Commander will order `Parade Savdhan` on seeing VIP.</li> <li>2. When VIP is ready to take the salute, the Parade Commander will give the words of command `Parade General Salute, Salami Shastra`.</li> <li>3. Next Command is `Parade Bazu Shastra`. The parade commander marches smartly to the saluting dias and reports the VIP `Parade aapke nirikshan ke liye hazir hai`.</li> <li>4. After the VIPs permission has been obtained to let the parade stand at ease and prior to commencement of the inspection.</li> <li>5. Parade Commander gives the word of command ` _____ Company Khara rahe, Baki Vishram`.</li> <li>6. After inspection is finished and VIP has turned to saluting dias, the words of command will be given for the march past- Parade Savdhan, Parade Nikat line Chal- Bagal Shastra- Parade Samne se Tez Chal.</li> </ol>	
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**ANSWER KEY OF SAMPLE PAPER**

**Special Subject: ARMY WING**

11.	Temple	1
12.	14.2 kg	1
13.	North, South, East and West are known as the cardinal points.	2
14.	<ol style="list-style-type: none"> <li>(a) Radio Set</li> <li>(b) Click by fingers</li> <li>(c) Clicks by using Tongue</li> <li>(d) Whistle by the Mouth</li> <li>(e) Use of line bedding</li> <li>(f) Mini Flare</li> <li>(g) Use of blacked out Torch</li> <li>(h) Firing of Weapon</li> </ol>	½ for each
15.	Calibre- 5.56 Effective range - 400 m	1 for each
16.	<ol style="list-style-type: none"> <li>1. Savitri Khanolkar</li> <li>2. Maj Somnath Sharma</li> <li>3. Any two <ul style="list-style-type: none"> <li>• Circular in shape</li> <li>• Made of bronze</li> <li>• Embossed on the obverse four replicas of "Indra's Vajra"</li> <li>• State Emblem embossed in the centre</li> <li>• Other side, Embossed "PARAM VIR CHAKRA" both in Hindi and in English</li> <li>• Two lotus flowers between the Hindi and the English inscriptions</li> </ul> </li> </ol>	1 for each part
17.	<p>Advantages: 1. Reliable, 2. Relatively secure, 3. More capacity</p> <p>Disadvantages: 1. Vulnerable to physical interference, 2. Take time to construct, 3. Inflexible, 4. Expensive</p>	½ for each point

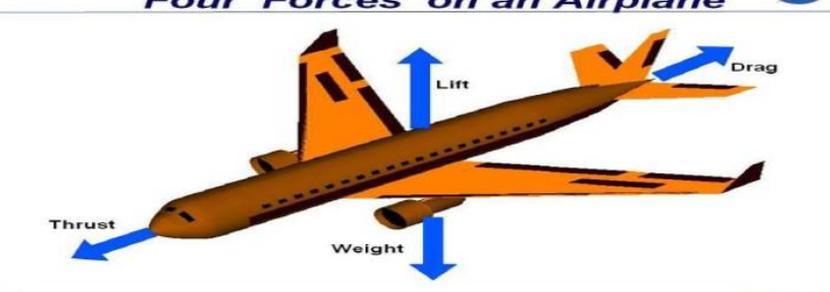
18.	<p>Vacancies per course : 250 (Twice a year)  Notification. In Employment News and leading Daily News Papers. Notified by UPSC under the aegis of CDSE in May/ Jun and Nov/Dec</p> <p><b>Eligibility Criteria</b>  Age: Between 19 and 24 years as on first day of month in which course is due to commence  Qualification : Graduation from recognised University  Marital Status : Unmarried  Likely SSB Date: Jul/ Aug and Mar/Apr  Date of Commencement of Training : Jan and Jul  Training Academy : IMA Dehradun  Duration of Training: 18 months</p>	½ marks for each correct info
19.	<p><b>Methods of Judging Distance.</b> There are six methods of Judging Distance. These are as under:-  (a) Unit of measure  (b) Appearance method  (c) Section average  (d) Key range  (e) Halving  (f) Bracketing  OR  <b>Section Formation</b>  A Section is the smallest sub unit of an Infantry Battalion and is capable of undertaking independent task. It consists of ten persons who are organized in Rifle group and Support Group.  There are 6 type of section formations in Army.  Diamond.  Advantage: (i) Good for all round observation.2. Good for command and control.  Disadvantage: 1.Presents an easy target to frontal fire.2. Vulnerable  Terrain conditions: 1. While negotiating open areas.2. When enemy threat is imminent but the direction is not clear</p>	<p>2 marks for names of methods and 1 for each explanation</p> <p>1 for definition +1 for types + 2 for diamond section formation</p>

### ANSWER KEY OF SAMPLE PAPER

#### Special Subject: AIR FORCE WING

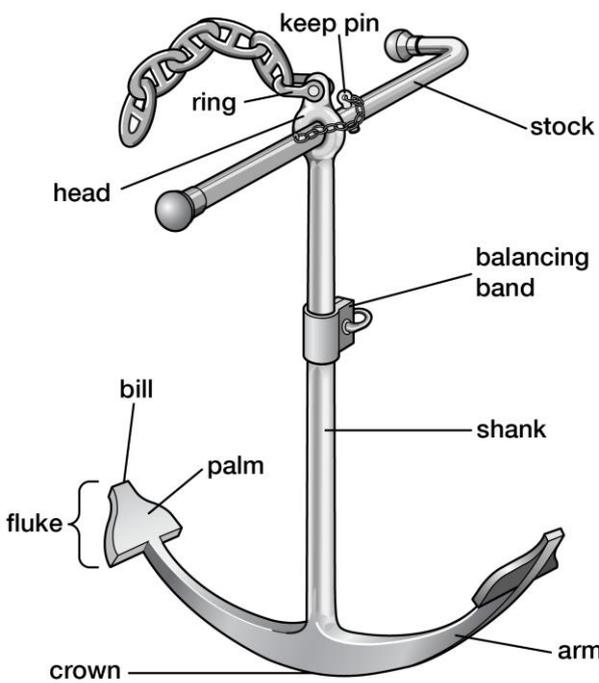
11.	b. Gnats & MIG 21s	1
12.	a. India Air Force	1
13.	(a) Areas will be shown correctly (b) Bearing measurement anywhere on the reduced earth will be identical to the measurement on the earth. (c) Shapes will be correct (d) Distances will be measured accurately by use of a graduated scale which is provided at the bottom of each map	½ + ½ + ½ + ½
14.	(a) Troposphere - Up to about 11-16 km (b) Stratosphere - Up to about 50 km above troposphere (c) Mesosphere - 50 to 85 km (d) Thermosphere - Above 85 km	½ + ½ + ½ + ½
15.	<b>*Any Two</b> a) Light Combat Aircraft (LCA). b) Light Combat Helicopter (LCH). c) Advanced Light Helicopter (ALH) or Dhruv.	1 + 1

16.	<p>Radar is an object detection system that uses radio waves to determine the range, altitude, direction, or speed of objects. It can be used to detect aircraft, ships, spacecraft, guided missiles, motor vehicles, weather formations, and terrain.</p> <p><b>*Any Two</b></p> <p>(a) <b>Primary Radar.</b> Uses the principle of pulse technique to determine the range and bearing of an object. Working on the echo and searchlight principle, a transmitter transmits pulses. All objects in the path of the pulses will reflect and scatter this energy. Some of the reflected energy reaches the receiver. The reflected energy is processed to give the required information. In this radar, the object's cooperation is not required in the entire process.</p> <p>(b) <b>Secondary Radar.</b> A transmitter transmits a group of pulses. An aerial in the path of the pulses receives the signals and passes it to the receiver. If the pulses are identified, then the transmitter gives out a reply. In this radar active cooperation of the other object is also required.</p> <p>(c) <b>Continuous Wave Radar.</b> In this type of radar, both the transmission and the reception take place continuously. This requires a set of two aerials, one for transmission and one for the reception.</p>	1+2
17.	<p>The following are the general safety code to be followed:-</p> <p><b>*Any six</b></p> <p>(a) Not to fly model aircraft in competition or the presence of spectators until it has been proven to be airworthy by having been previously successfully flight-tested.</p> <p>(b) Not to fly model aircraft higher than approximately 400 feet within 3 miles of an airport without notifying the airport operator.</p> <p>(c) Give right of way to, and avoid flying in the proximity of full-scale aircraft. Where necessary an observer shall be utilized to supervise flying to avoid having models fly in the proximity of full-scale aircraft.</p> <p>(d) Where established, abide by the safety rules for the flying site and willfully and deliberately not to fly my models in a careless, reckless, and/or dangerous manner.</p> <p>(e) Only after completed a successful radio equipment ground range check before the first flight of a new or repaired model.</p> <p>(f) While flying the model the initial turn after takeoff away from the pit, spectator, and parking areas, and thereafter perform maneuvers, flights of any sort, or landing approaches over a pit, spectator, or parking area.</p> <p>(g) Complete control system (including safety thong, where applicable) will be inspection and pull test prior to flying.</p> <p>(h) Flying area should be clear of all utility wires or poles.</p>	½ for each point (Any six point)
18.	<p>The following are movement areas in an aerodrome:</p> <p>(a) Runway (b) Taxi track or taxiway (c) Apron (d) Dispersal.</p> <p><b>*Write any two:</b></p> <p><b>Runway:</b> These are paved surfaces intended for take-off and landing run of aircraft. The number and orientation of runways at an airfield will depend upon the volume of traffic, runway occupancy time and climatological data on surface winds</p> <p><b>Taxiway:</b> These are paved surfaces provided for the taxiing of aircraft and intended to provide a link between one part of the aerodrome and another.</p> <p><b>Apron:</b> Means that part of an airport, other than the maneuvering area intended to accommodate the loading and unloading of passengers and cargo, the refueling, servicing, maintenance, and parking of aircraft, and any movement of aircraft, vehicles, and pedestrians necessary for such purposes.</p> <p><b>Dispersal:</b> an area adjacent to an airfield runway connected to the runway by taxi strips and used for parking airplanes in widely separated positions to protect them from enemy air attacks</p>	1 + 2

19.	<p><b>Definition:</b> Air Traffic Control Services provided for the safe and efficient conduct of flight are termed as Air Traffic Services.</p> <p>Objectives of Air Traffic Services are:-</p> <p>(a) To prevent collision between aircraft.</p> <p>(b) To prevent collision between aircraft on the maneuvering area and obstructions in that area.</p> <p>(c) To expedite and maintain an orderly flow of traffic.</p> <p>(d) To provide advice and information useful for the safe and efficient conduct of flights.</p> <p>(e) To notify appropriate organizations regarding aircraft in need of search and rescue aid and assist such an organization as required.</p>	1 + 3
19.	<p>Four force acting on an aircraft in flight:</p> <p>(a) Lift, (b) Weight, (c) Thrust, (d) Drag</p> <p>The four forces acting on an aircraft in flight are:-</p> <p>(a) Lift is a positive force caused by the difference in air pressure under and above a wing. The higher air pressure beneath a wing creates lift and is affected by the shape of the wing. Changing a wing's angle of attack affects the speed of the air flowing over the wing and the amount of lift that the wing creates.</p> <p>(b) Weight is the force that causes objects to fall downwards. In-flight, the force of the weight is countered by the forces of lift and thrust.</p> <p>(c) Thrust is the force that propels an object forward. An engine spinning a propeller or a jet engine expelling hot air out the tailpipe are examples of thrust. In bats, thrust is created by muscles making the wings flap.</p> <p>(d) Drag is the resistance of the air to anything moving through it. Different wing shapes greatly affect drag. Air divides smoothly around a wing's rounded leading edge and flows neatly off its tapered trailing edge, this is called streamlining.</p> <div data-bbox="304 1128 1166 1473" style="border: 1px solid black; padding: 5px;"> <p style="font-size: small; margin: 0;">National Aeronautics and Space Administration</p> <p style="text-align: center; font-weight: bold; margin: 0;">Four Forces on an Airplane</p>  <p style="text-align: right; font-size: x-small; margin: 0;">www.nasa.gov</p> </div>	1 + 2 + 1

## ANSWER KEY OF SAMPLE PAPER

### Special Subject: NAVY WING

11.	(3) 6 MEN	1
12.	(2) 5 OARS	1
13.	<p>Labelled diagram of an Anchor</p> 	1 (DIAGRAM) +1(Labelling)
14.	<ul style="list-style-type: none"> <li>• Carelessness with naked lights and cigarettes left about</li> <li>• Clothes hung to dry on a hot surface</li> <li>• Paint and oil splashes in contact with heat</li> <li>• Cooking oil in the galley, if left unattended on the stove for a long time</li> <li>• <b>Any other correct answer</b></li> </ul>	½ x4
15.	<ol style="list-style-type: none"> <li>1. Polythene dust covers are to be used to cover machines and tools</li> <li>2. The user should be instructed to clean the tools and machine parts after use with a hand brush</li> </ol>	1+1
16.	<ul style="list-style-type: none"> <li>• Colours: The ceremony of hoisting the Naval Ensign and the National flag at the ensign and jack staff respectively 0800 hours on board ship in harbour is called colours.</li> <li>• Sunset: The ceremony of hauling down the national flag and the naval ensign at the time of sunset is called sunset.</li> <li>• Dressing Ship Overall: Ships are dressed overall on the days of national celebrations such as independence and republic day by hosting signaling flags and pennants from jack staff to the foremost to the mainmast into the ensign staff.</li> <li>• Piping the Side: This is a mark of respect accorded to the President, Governors, Defense Minister, Flag officers, Commanding officers, and to all foreign Naval officers in uniform when they to ship.</li> <li>• Launching Cceremony: After the construction of the hull on a ship is launched for the first time into the sea, it is customary to break a coconut on the bow of the ship.</li> </ul>	1 for each

	<ul style="list-style-type: none"> <li>• Crossing the Line: This is an unofficial ceremony of initiating the new recruits into brotherhood of seas and as subjects of Lord Varuna's oceanic majesty. This ceremony is conducted when crossed the equator.</li> </ul>	
17.	<p>After the submarine has been detected and its exact position located. It is attacked with antisubmarine warfare (ASW). These are:</p> <p>1) Depth charge: The depth charge is a large explosive charge fitted in barrel like cylinders and designated at a predetermined depth.</p> <p>2) Torpedo: torpedo is an underwater weapon fired from the ship or submarine to hit, an enemy ship or submarine. Main components of the torpedo body are engine, depth keeping mechanism, gyroscope and tail section.</p>	1+2
18.	<p>Flag position (any three)</p> <ol style="list-style-type: none"> <li>B: I am taking in or discharging explosives.</li> <li>E: I am altering my course to starboard.</li> <li>H: I have a pilot onboard.</li> <li>O: Man overboard</li> <li>R: I have received your last signal</li> <li>W: I require medical assistance</li> </ol>	1+1+1
19.	<ul style="list-style-type: none"> <li>• Nautical mile: For purpose of navigation. The distance on the Earth surface which represent 1 minute of latitude is as standard measurement at sea and is called a nautical mile (6080 feet).</li> <li>• True course: The angle between fore and aft line and the meridian through the position is called true course.</li> <li>• Knot: The speed of one nautical mile per hour is called a knot.</li> <li>• Pilotage: It is an art of conduction of a ship in the neighbourhood of dangers such as rocks and shoals and in the narrow waters such as harbour channels and canals.</li> <li>• Meridian: These are semi great circle joining the poles and are perpendicular to the equator.</li> <li>• Latitude: The latitude of a place is the angular distance of the place North or South of the equator.</li> <li>• Navigation: It is the art of finding the position of a ship at sea and conduction her safety from one place to another.</li> <li>• Equator: The great circle midway between the poles is known as the equator. Every point on the equator is therefore 90 degrees from the poles.</li> </ul>	1 for each

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