MARKING SCHEME 2023-24

National Cadet Corps (076)

CLASS X 2023-24

One Theory Paper – 3 hours **Total Marks – 70**

1.	**SECTION A**	
i)	d.	**1**
ii)	a.	**1**
iii)	d.	**1**
iv)	b.	**1**
v)	a.	**1**
vi)	a.	**1**
vii)	b.	**1**
viii)	a.	**1**
ix)	b.	**1**
x)	d.	**1**
xi)	c.	**1**
	SECTION B	
2.	INR 6000, 1000 cadets (OR) INR 5, 00,000/- in case of Permanent Disability & up to INR 1, 75,000/- in case of temporary disability.	**2**
3.	Poverty, Unemployment, Inequitable Growth, Increasing Communal Divide, Governance Deficit, Increasing Caste Tensions, Regionalism, Languages etc. (Any 4) (OR) Communalism, Casteism, Regionalism, Lack of Education, Linguistics Fanaticism, Political Motives etc.	**2**
4.	43”, 2.78 kg. (6 pound and 2 ounce)	**2**

	(OR) 2700’ per second, 25 yards	
5.	The collective pattern on projectile impacts on a target from multiple consecutive shots taken in one shooting session. (OR) A group is a collection of shots fired at the same point of aim with minimum disturbance to the firing position.	**2**
6.	Economic factors, Social factors, Religious factors, Economic Inequality, Increasing Unemployment of Males, Parental Compulsions, Divine Sanctions etc.	**2**
7.	One-way (Principal declares Saturday as Holiday) and Two-way (A family plans holiday after discussion with each other)	**2**
8.	Protection of Children from Sexual Offences Act, 2012. This is a Special Law brought by the Government of India to deal with child sexual abuse cases.	**2**
9.	Traffic Control Group, Relief Group, Shelter Management Group, Evacuation and Rescue Group, First-Aid/Medical Group, Sanitation Group, Carcass Disposal Group (With Explanation) (OR) Natural Disasters: Wind Related, Water Related, Earth Related Man-made Disasters: Accident, Fire, Industrial Mishaps, Poisoning, Contamination, Terrorist Activities, Warfare, Ecological etc.	**4**
10.	‘Line tor’- Falling out does not signify the end of the parade, but only a break in it. It is different from Visarjan in the following points: Salute is not given, Cadets falling out, should not to leave the vicinity of their place of parade or lines of March. ‘Visarjan (Dismiss): 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. (OR) Ans: Loudness, Clarity, Pitch, Timing (with explanation)	**4**
11.	• Keep toilet items handy; • Carry all possible essentials; • Carry sleeping mattress for night halts; • Carry adequate woolen clothes:	**4**

	• Take off shoes during drink and lunch halts; • Take small steps when ascending up slope; • Consume plenty of water; • Carry essential medicines etc.	
12.	Hereditary, Self-Development, Environment, Education, Life Situations, Past Experiences, Dreams and Ambitions, Self-Image, Values etc. (With Explanation	**4**
	SECTION C	
13.	• (A) Surrounding • (B) biotic and abiotic; • (C) Environment	**2**
14.	• UNO • Patanjali • Great saints and Sages • Modern Medical Science • Hinduism, Buddhism, Jainism, Sikhism	**6**
	(ARMY WING)	
	SECTION D	
15.	i) b) Paramvir Chakra ii) (a) Magnetic Variation iii) (c) Temple iv) (d) Dead Ground v) (a) Both A & R are true and R is the correct explanation of A.	**5**
	SECTION E	
16.	Its role is to close in with the enemy and destroy him or capture his territory. (OR) Army Medical Corps, Army Dental Corps, Army Pioneer Corps, Army	**2**

	Ordinance corps Etc. (Or any other)	
17.	Line Communication, Radio Communication, Wi-fi, Mobile, Walky-Talky, etc.	**2**
18.	• When to fire; • Which weapon to be used; • Can indicate targets to other men in his section; • Can pass accurate information when acting as an observer. (OR) Single file, file, arrow head. Spear head, Diamond, Extended line.	**2**
19.	Flags, Mercury-coated Mirror, Smoke, Hurricane Lamp, Flashing Torch used as Morse Code, Applying various colours/ signs on forehead and arms.	**2**
20.	True North, Grid North, Magnetic North (With explanation); True North (OR) • Col or Saddle: A narrow ridge of high land joining up to higher hills. • Knoll: A small isolated hills. • Plateau: A table land, an elevated region of considerable extent generally of same level. • Spur: A piece of high ground jutting out of range of hills into lower ground.	**4**
	SECTION F	
21.	a) Winter b) 1998 c) Lahore Summit d) Kargil	**4**
	(NAVY WING)	
	SECTION D	
15.	• (D) Lieutenant • (D) Give way together • (A) Both assertion and reason are true and reason is the correct explanation of assertion	**5**

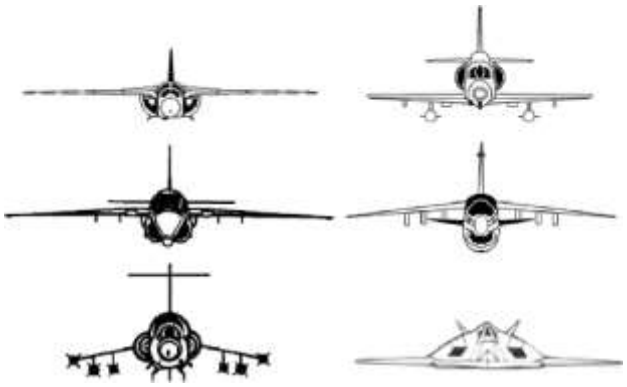
	• (B) I, II and III • (A) Tango	
	SECTION E	
16.	• Western Naval Command (WNC), Mumbai, FOCINC (W) • Commanded by a Vice Admiral designated as the FOC- in-C West • Eastern Naval Command (ENC), Visakhapatnam, FOCINC (E) • Commanded by a Vice Admiral designated as the FOC- in-C East	**2**
17.	• AS – Wait • AR - End of transmission (OR) Semaphore is a visual means of communication which provides a rapid means for passing messages over short distances during daylight. The different semaphore signs are made by moving one or two hand flags so that they form various angles with the perpendicular. It is essential that each angle be formed correctly, as good communication depends upon accuracy in this respect.	**2**
18.	Types of navigational aids are: • **RADAR:** Radio aided Direction and ranging i.e. with the help of radio waves, the direction and range of objects are obtained. The radar plays a very important role in Navigation and Directions. • **RACON:** Radar responders, or radar transponder beacons, are receiver/ transmitter transponder devices used as a navigation aid, identifying landmarks or buoys on a ship board marine radar display. A RACON responds to a received radar pulse by transmitting an identifiable mark back to the radar set. The displayed responds has a length on the radar display corresponding to a few nautical miles, encoded as a Morse character beginning with a dash for identification. • **RAMARKS**: They are radar beacons, which transmit independently without having to be triggered by the ships RADAR. A RAMARK response on a radar display gives no indication of distance, but instead extends from the ships position to the circumference of the display. • **Log:** It is used for calculating the speed and distance traveled through the water. • **Echo Sounder:** It is an instrument by which the depth of water can be measured below the keel of the ship. This helps us to prevent the ship from grounding. • **Anemometer:** It is used to find the relative wind speed at sea. The modern anemometer gives both relative and true wind speed. • **GLOBAL POSITIONING SYSTEM :** GPS is one of the most	**2**

	important modern Navigational Aid. These help us to locate our position to the accuracy of a few hundred meters. Modern navies even use GPS for accurate launching of ballistic and continental missiles.	
19.	• Frigates - Frigates are smaller than Destroyers. These are basically escort ships, and are equipped with guns, missiles, torpedoes etc. They are classified as Anti-aircraft Frigate, Anti-submarine Frigate, Multipurpose Frigate etc. based on their function and equipment carried onboard. • Cruisers - They are ships of surface action. They carry heavy guns, long range missiles, anti-submarine weapons, helicopters etc. Presently there are no cruisers in the Indian Navy. (OR) **NAVAL CUSTOMS** • **Commissioning Pennant**: This pennant is hoisted on the main mast on the day of Commissioning of the ship and is not struck down till the ship is decommissioned. • **Colors**: This is a general term describing the 'National Flag' and the "Naval Ensign' flown on ship between colors (0800 hrs.) To sunset in harbor only. • **Illuminating Ship**: Ships are illuminated by flood lights or illuminating circuits on special occasions/ ceremony of festivity as and when ordered by Naval Headquarters/ Administrative Authorities. • **Crossing the line Ceremony**: Whenever Indian Naval Ships cross the Equator, this ceremony is observed. The ship goes out of routine and all officers and sailors join the Ceremony. • **Piping the Side**: Except for foreign Naval Officers, for whom the side is piped for all times, the side is only piped to the following persons, and only between the times of colors and sunset. • **Salutes between Warships**: When a warship passes another in harbor/ sea they exchange salutes. It may include parading of guard and band or by sounding the alert on the bugle or piping the still. At sea, salutes are exchanged by pipe only. • **Sunset:** This is a ceremony where, the national Flag and the naval ensign is lowered during Sunset. • **Dressing ship**: The Ship is dressed overall on special occasion like as Independence day, Republic day, National Maritime Day and Navy Day. • **OOG**: When a ship visits a foreign port, an officer of the executive branch is detailed as officer of the Guard. • **Man and Cheer Ship**: The Ships Company man the ship standing on the catwalks from foxle to Quarter deck facing towards the Ship which boards the dignitary.	**2**

	• **Ringing in the New Year**: During the midnight 0001 hrs. On 01 Jan every year, the ships bell at gangway is rang eight times to mark the New Year. • **Reception of Officers**: The officers are received on different ceremonial occasions in the Navy as a tradition. • **Launching Ceremony**: This ceremony is conducted whenever the keel of a ship is launched for construction at shipyards. • **Entering/ Leaving a Boat**: All officers when getting into or leaving a boat are saluted by the coxswain. Officers enter boat seniority wise, the senior most enters last and leaves first. • **Boat Hailing:** The coxswain of the boat while passing the warship or the boat carrying flag officers give the proper mark of respect after asking the identification being carried by saying boat hails.	
20.	**Chart Scales -** Charts are generally published in three different scales, they are:- • **Small scale charts.** These are charts covering a very vast area and the information such as sounding; lights etc. are not given in detail. These charts are generally used for passage planning and never should be used for navigation. • **Medium scale charts:** These charts are used for passage. The information for navigation including dangers is clearly shown on these charts. These charts cover a general area of about 50 – 70 NM. • **Large scale charts:** These charts are generally of harbors and their approaches. These charts contain all information's required for precise navigation. These charts cover an area of 5 – 7 NM. (OR) **CHART PROJECTIONS** • **Mercator projection.** The main properties of a Mercator Chart are:- i) A Rhumb line on the Earth appears as straight lines on the chart. ii) The Equator appears as a straight line. iii) The parallel of latitudes appear as a straight line. iv) All Meridians appears as straight line perpendicular to the equator. • **Gnomonic Projection.** In order to assist the navigator in finding the great circle track between two places, charts are constructed so that any straight line drawn on them shall represent a great circle. These charts are known as Gnomonic charts and they are formed by projecting the Earth's surface from the Earth's centre on to the tangent plane at any convenient point. It is so constructed that:- i) Great circles appear as straight line and rhomb line appears curved. ii) Meridian is curved converging to the poles	**4**

	iii) Parallel of latitude is also curved	
	SECTION F	
21.	i) Ancient Greece and Egypt ii) Ships carried great significance expressed partly through the creation of boat and ship models. iii) Archaeologists can calculate these estimates of size by employing a series of assumptions about the distance between rowers and the maximum draft of the vessels iv) In the early part of the 20th century, models comprised a combination of wooden hulls and cast lead for anchors, deadeyes, and rigging blocks.	**4**
	(AIR WING)	
	SECTION D	
15.	• (C) Helicopter • (A) 15 degree Celsius • (A) Control Line fighter model and control line speed model • (B) Both assertion and reason are true but reason is not the correct explanation of assertion. • (B) I, II and III	**5**
	SECTION E	
16.	Mountains, hills, coast lines and other natural features are valuable landmarks for navigation purpose. Relief is indicated on maps and charts in one or more of five different ways:- • Spot heights or depths. • Contours and form lines • Layer tints • Hachures • Hill shading	**2**
17.	Aeromodelling is the activity involving design, development and flying of small air vehicles. The following are the different type of Aero models:- • **Static Models**. These are the miniature replicas of original aircrafts. The following aircrafts can be prepared as static models.	**2**

	(i) Fighter aircraft models. (ii) Transport aircraft models. (iii) Helicopter models. • **Gliders**. These are the different types of gliders:- (i) Chuck Glider. (ii) Catapult Glider. (iii) Towline Glider. (iv) Free-flight Glider. • **Control Line Models**. The following are the different types of Control Line model**:-** (i) Control Line Aerobatic Model. (ii) Control Line Speed Model. • **Radio control Models**. The following are the different types of Control Line model**:-** (i) Radio Control Power. (ii) Radio Control Glider. (iii) Radio control Helicopter. (iv)Jet Powered Model.	
18.	The atmosphere is a mixture of gases that surrounds the Earth. The composition of dry air by volume is as:- • Nitrogen 78.09 % • Oxygen 20.95 % • Argon 0.93 % • Carbon dioxide 0.03 % (OR) The most widely used atmosphere for reference purposes is the one defined by ICAO, known as International Standard Atmosphere (ISA) whose specifications are:- • (a) Mean Sea level temperature - 15°c. • (b) Mean Sea level pressure - 1013.25 mb. • (c) Surface density - 1225 g/m3. • (d) Acceleration due to gravity - 980.665 cm / sec2. • (e) Rate of fall of temp with height up to 11 km 6.5°c /km (1.98°c / 1000 ft.	**2**
19.	Operation ‘Safed Sagar’ was the code name assigned to the Indian Air Force's strike to support the Ground troops during Operation Vijay that	**2**

	was aimed to flush out Regular and Irregular troops of the Pakistani Army from Indian Positions in the Kargil sector along the Line of Control. It was the first large scale use of air power in the Jammu and Kashmir region since the Indo-Pakistan War of 1971. (OR) Indo-Pak war 1971 commenced on 03 Dec 1971. It was for a short span of fourteen days. IAF gained complete air superiority. Gnats and MIG-21s flown by the best professionals totally outclassed the adversary. Darkness had just fallen on the evening of 3rd December 1971 when air raid alert was sounded at 6 PM in most of the cities in India. The Pakistani Air Force and ground troops following the Israeli type pre-emptive strike had launched a massive attack on the Western front stretching from Jammu & Kashmir to Rajasthan. In addition to air raids by the Pakistani Air Force the ground forces also launched a massive attack on our border posts.	
20	There are various methods used to identify the aircraft:- (a) Wing position  (b) Shape of canopy  (OR) • Fighter Aircraft – Rafael, MIG-29 • Transport Aircraft – IL-76, C-17 • Helicopters – Chetak, Cheetah	**4**

	SECTION F	
21	• D) MIG-21 • Indian Air Force • Dacca • Western Front	**4**