



Series €FGHE



Set-4

प्रश्न-पत्र कोड  
Q.P. Code **42**

रोल नं.

Roll No.

परीक्षार्थी प्रश्न-पत्र कोड को उत्तर-पुस्तिका के मुख-पृष्ठ पर अवश्य लिखें।

Candidates must write the Q.P. Code on the title page of the answer-book.

## राष्ट्रीय कैडेट कोर NATIONAL CADET CORPS (NCC)

निर्धारित समय : 3 घण्टे

अधिकतम अंक : 70

Time allowed : 3 hours

Maximum Marks : 70

- कृपया जाँच कर लें कि इस प्रश्न-पत्र में मुद्रित पृष्ठ **23** हैं।
- प्रश्न-पत्र में दाहिने हाथ की ओर दिए गए प्रश्न-पत्र कोड को परीक्षार्थी उत्तर-पुस्तिका के मुख-पृष्ठ पर लिखें।
- कृपया जाँच कर लें कि इस प्रश्न-पत्र में **18** प्रश्न हैं।
- कृपया प्रश्न का उत्तर लिखना शुरू करने से पहले, उत्तर-पुस्तिका में प्रश्न का क्रमांक अवश्य लिखें।
- इस प्रश्न-पत्र को पढ़ने के लिए 15 मिनट का समय दिया गया है। प्रश्न-पत्र का वितरण पूर्वाह्न में 10.15 बजे किया जाएगा। 10.15 बजे से 10.30 बजे तक परीक्षार्थी केवल प्रश्न-पत्र को पढ़ेंगे और इस अवधि के दौरान वे उत्तर-पुस्तिका पर कोई उत्तर नहीं लिखेंगे।
- Please check that this question paper contains **23** printed pages.
- Q.P. Code given on the right hand side of the question paper should be written on the title page of the answer-book by the candidate.
- Please check that this question paper contains **18** questions.
- Please write down the serial number of the question in the answer-book before attempting it.**
- 15 minute time has been allotted to read this question paper. The question paper will be distributed at 10.15 a.m. From 10.15 a.m. to 10.30 a.m., the candidates will read the question paper only and will not write any answer on the answer-book during this period.



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P.T.O.



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### General Instructions :

Read the following instructions carefully and follow :

- (i) *The question paper consists of two Sections.*
- (ii) *Section – A is compulsory for all.*
- (iii) *Section – B shall be attempted as per the chosen wing.*
- (iv) *All questions are compulsory. However, internal choices are given.*
- (v) *The paper consists of 1, 2, 4 and 6 mark(s) questions.*
- (vi) *The answer to 2 mark questions should not exceed 50 words.*
- (vii) *The answer to 4 mark questions should not exceed 150 words.*
- (viii) *The answer to 6 mark questions should not exceed 250 words.*

### SECTION – A (Common Subject)

(49)

1. Choose the correct answer.

- (i) Which of the following leader had founded Indian National Army ? 1
  - (a) Lala Lajpat Rai
  - (b) Subhash Chandra Bose
  - (c) Jawaharlal Nehru
  - (d) Bhagat Singh
- (ii) Static drill does not need : 1
  - (a) Arms
  - (b) Instructor
  - (c) Band
  - (d) Marching

### OR

- Which of the following term is the Hindi translation of 'Mark Time', drill word of command ? 1
- (a) Tol Shastra
  - (b) Line Ban
  - (c) Salami Shastra
  - (d) Kadam Taal
- (iii) **Assertion (A) :** On receiving word of command 'Dahine Dekh', all officer in contingent salute and remainder turn their heads to the right. 1

**Reasoning (R) :** However, the guide looks to his/her front and marches on to keep direction.

- (a) Both (A) and (R) are true and (R) is correct explanation of (A).
- (b) Both (A) and (R) are true and (R) is not correct explanation of (A).
- (c) (A) is true, but (R) is false.
- (d) (A) is false, but (R) is true.





- (iv) What is the effective range of the 7.62 mm SLR ? 1
- (a) 500 yards (b) 300 yards  
(c) 600 yards (d) 800 yards
- (v) As weapon instructor, which exercise would you make your cadets do for practicing action of index finger ? 1
- (a) Trigger operation exercise No. 3  
(b) Trigger operation exercise No. 4  
(c) Trigger operation exercise No. 1  
(d) Trigger operation exercise No. 5
- (vi) What do you mean by “Turning a Shot” ? 1
- (a) Take strong hold  
(b) To fire the first round after taking aim  
(c) Take correct position  
(d) Have a correct aim
- (vii) Select the appropriate fire extinguisher for fighting fire on an electrical panel ? 1
- (a) Soda acid (b) Foam type  
(c) Water (d) Carbon dioxide
- (viii) The drugs which alter perception are called : 1
- (a) Hallucinogens (b) Painkillers  
(c) Depressants (d) Stimulants
- (ix) **Assertion (A) :** The problem of drug addiction is closely associated with families having domestic problems, such as separation of parents. 1  
**Reasoning (R) :** Seventy eight percent drug addicts come from the families with domestic problems.
- (a) Both (A) and (R) are true and (R) is correct explanation of (A).  
(b) Both (A) and (R) are true and (R) is not correct explanation of (A).  
(c) (A) is true, but (R) is false.  
(d) (A) is false, but (R) is true.



- (x) Water from unreliable source can be made fit for consumption after : 1
- (a) Filtering
  - (b) Keeping it for some time
  - (c) Boiling for 30 min at 100 degree Celsius
  - (d) Can be consumed straight away.

**OR**

- Which of the following the 'Schaefer's Method' is associated with ? 1
- (a) Artificial respiration (b) Drill
  - (c) Weapon firing (d) Safe driving
- (xi) Which of the following causes dental decay ? 1
- (a) Excessive consumption of sugary food
  - (b) Deficiency of vitamin C and D
  - (c) Poor oral health
  - (d) All of the above
- (xii) What are the wind speed restrictions with regards to parasailing ? 1
- (a) Wind velocity should be zero.
  - (b) Wind velocity should not be more than 25 knot.
  - (c) Wind velocity should not be more than 15 knot.
  - (d) Wind velocity should not be less than 20 knot.
- (xiii) 'Egyptian Bridging' is a kind of \_\_\_\_\_ 1
- (a) First aid method (b) Drill movement
  - (c) Dance rhythm (d) Rock climbing technique

2. Read the paragraph and answer the questions given below :

- (a) The Maternal Mortality Ratio (MMR) is defined as the number of maternal deaths during a given time period per lakh live births. As per the Registrar General of India a significant decline in the MMR has been achieved in the country. As per the statistics India has witnessed a progressive reduction in MMR from 130 in 2014-2016, 122 in 2015-17, 113 in 2016-18, 103 in 2017-19 and to 97 in 2018-20.

Thus, India has met the National Health Policy target for MMR of less than 100 per lakh live births and is hopeful of achieving the Sustainable Development Goal (SDG) target of MMR less than 70 per lakh live births by 2030.

Eight Indian states, Kerala (19), Maharashtra (33), Telangana (43) Andhra Pradesh (45), Tamil Nadu (54), Jharkhand (56), Gujarat (57) and Karnataka (69) have already achieved the SDG target.

Since 2014, under the National Health Mission, the government healthcare schemes to provide accessible maternal and newborn health services to minimize preventable maternal deaths have borne results.





- |  |   |
|--|---|
| (i) Define the Maternal Mortality Ratio.                                     | 1 |
| (ii) What was the Maternal Mortality Ratio during the year 2016-18 ?         | 1 |
| (iii) Which state in India has the lowest MMR ?                              | 1 |
| (iv) In relation to MMR, what is the Sustainable Development Goal's target ? | 1 |

**OR**

- (b) In 1945, the Labour Party formed government in Britain, headed by Clement Richard Attlee. A Cabinet Mission was sent to India in March 1946, which proposed formation of an interim government and convening of a Constituent Assembly. An interim government headed by Jawaharlal Nehru was formed, but the Muslim League opposed the Cabinet Mission and demanded a separate state. Lord Mountbatten, the Viceroy of India presented a plan for the division of India into India and Pakistan.
- |  |   |
|--|---|
| (i) Who was the Prime Minister of Britain when the Cabinet Mission was sent to India ? | 1 |
| (ii) What did the Cabinet Mission propose for India ?                                  | 1 |
| (iii) Who was the Prime Minister of the interim government in India ?                  | 1 |
| (iv) Who had demanded Pakistan ?   | 1 |
3. December 1, 2022 is an important day as India assumed the G20 Presidency from Indonesia and will convene the G20 Leaders' Summit for the first time in the country in 2023.
- The Group of Twenty (G20) was founded in 1999. It is an inter-governmental forum comprising 19 countries and one regional group of countries i.e. European Union. The G20 consists of two parallel tracks: the *Finance Track* and the *Sherpa Track*.
- India holds the presidency of the G20 from December 1, 2022 to November 30, 2023. The 43 Heads of Delegations-the largest ever in G20-will be participating in the final New Delhi Summit in September next year. The theme of India's G20 presidency is "Vasudhaiva Kutumbakam" or "One Earth. One Family. One Future", India will host over 200 meetings in over 50 cities across the country to showcase the rich cultural heritage of India to G20 delegates and guests.
- |  |   |
|--|---|
| (i) Which regional group of countries is the member of G20 ? | 1 |
| (ii) What is the theme of India's G20 Presidency ?           | 1 |
| (iii) From whom India assumed G20 Presidency ?               | 1 |
| (iv) When was G20 founded ?                                  | 1 |
4. Explain two-way communication with example. 2



5. (a) You have to train teenagers of your colony on fire safety. What points would you include in your talk ? 2
- OR**
- (b) You work in an office. You notice a fire is starting on a stack of files. What would you do to fight the fire ? 2
6. (a) What is the 'Skewed sex ratio' ? What are its causes ? 2
- OR**
- (b) What are the forms of child exploitation and abuse ? 2
7. You are trained in first aid. You find a person in the park who is unconscious. How would you provide him first aid ? 2
8. (a) What is bio-medical waste ? 2
- OR**
- (b) Identify the various types of municipal solid waste material that is generated in a city. 2
9. (a) You are a guard mounting NCO. How will you mount the guard ? 4
- OR**
- (b) How Visarjan and Line Tor are different from each other ? 4
10. (a) You have to conduct 7.62 mm Rifle Firing Course for Senior Division cadets on the long range. Answer the following : 4
- (i) Type of practice
- (ii) How many rounds a cadet would get ?
- (iii) Position for the firing practice
- (iv) HPS for the practice
- OR**
- (b) What is the system of scoring on a 1' × 1' target ? 4
11. You are asked by your battalion commander to fix a Zig-Zag balance obstacle for training at the camp location. What stores would you need to fix obstacle ? What are the safety precautions that you will ensure during the obstacle course training ? 4
12. What are the forms of inter-personal relationship ? Discuss the essential factors required for inter-personal relationship to grow. 6



# **SECTION – B**

## **Specialised Subject (Army)**

(21)

13. Choose the correct answer.



OR

Which is the highest peace time gallantry Award of India ?






**Reasoning (R) :** The infantry prepares field defences to survive and fight in such environment.

- (a) Both (A) and (R) are true and (R) is correct explanation of (A).
  - (b) Both (A) and (R) are true and (R) is not correct explanation of (A).
  - (c) (A) is true, but (R) is false.
  - (d) (A) is false, but (R) is true.



14. Read the passage below and answer the questions given at the end.

The Agni missile system is a family of medium to inter-continental range ballistic missiles developed by Defence Research and Development Organisation, India. Agni-I is a short range ballistic missile having a range of 700 km and payload capacity of 1,000 kg. Agni-II, a medium range ballistic missile, which can carry similar payload and reach up to 2,500 km. Agni-III has a range of 3,500 km. It carries a warhead weighing 1,500 kg. Agni-III is considered to be a very accurate ballistic missile in the world. With a warhead of 1,500 kg, Agni-IV can strike targets up to 4,000 km. Agni-III and IV are intermediate range ballistic missiles.

Agni-V is an inter-continental ballistic missile. It can carry a warhead of 1,500 kg up to 5,000 km. Agni-V can reach entire Asia as well as some regions in Europe. All missiles are capable of carrying a nuclear warhead. Agni-I to Agni-IV are deployed under the control of Strategic Forces Command of India.

- (i) Which are the intermediate range ballistic missiles of the Agni series ? 1  
(ii) Which organization controls the Agni missiles in India ? 1  
(iii) Which organization has developed the Agni missile system ? 1  
(iv) Which missile can target some parts of Europe ? 1

15. (a) While indicating difficult landmarks, what is the correlation between the direction and degrees ? 2

**OR**

- (b) Enlist the non-gallantry/distinguished service awards given to the armed forces. 2

16. What is the requirement of using various section formations ? 2

17. You are a platoon commander in an infantry company. An inter-company camouflage competition is being held in your battalion. How would you train your platoon for the competition ? 4

18. (a) We are witnessing a computer revolution in the armed forces. Discuss its advantages and disadvantages. 4

**OR**

- (b) Enlist the capabilities of an infantry battalion. What are the vulnerabilities of infantry in today's battle field ? 4



# **SECTION – B**

## **Specialised Subject (Navy)**

(21)

13. Choose the correct answer.

- (i) INS Vikrant belongs to which class of warship ? 1  
(a) Destroyer (b) Nuclear submarine  
(c) Aircraft carrier (d) Frigate

(ii) Where is headquarters of the Southern Naval Command located ? 1  
(a) Mumbai (b) New Delhi  
(c) Port Blair (d) Kochi

(iii) On what occasion the ship's bell at gangway is rang eight times ? 1  
(a) On fire (b) New year  
(c) On foreign ports (d) Before the gun salute

(iv) Which of the following is a Close in Weapon System on a warship ? 1  
(a) 40/60 Bofors gun (b) RGB 60  
(c) 4.5 inch gun (d) P22

(v) When a National flag is flown on a warship at sea ? 1  
(a) When the President is embarked  
(b) When escorting President's ship  
(c) When engaged in war  
(d) All of the above

OR

What is the standard unit for measuring speed in navigation ?      1



14. Read the passage below and answer the question given at the end.

INS Arihant, India's first indigenous nuclear submarine was commissioned in August 2016. India has now joined countries like Russia, the US, China, France and the UK who possess Nuclear Ballistic Missile Submarines (SSBN). An SSBN can carry ballistic missiles with nuclear warhead. India's experience with nuclear submarines dates back to 1988 when it took and operated a submarine (INS Chakra) on lease from erstwhile Soviet Union. INS Arihant's design is based on Russian Akula class submarines.

INS Arihant is a 6,000 tonne nuclear propelled submarine. It has 83 megawatt pressurised water reactor for its power requirements. It can travel at the speed of 24 knots under the water. Being a nuclear submarine, its range is unlimited except for food supplies. INS Arihant is armed with four K-4 Submarine Launched Ballistic Missile (SLBM) with a range of 3,500 km or 12 K-15 missiles with a range of 750 km. It will carry a complement of 95-100 officers and sailors on board. An SLBM was successfully launched from INS Arihant on October 14, 2022, thus completing India's nuclear triad i.e. capability of firing nuclear weapons from land, air and sea.

(i) What is an SSBN ?	1
(ii) What is the speed of INS Arihant ?	1
(iii) What is the range of K-4 SLBM ?	1
(iv) What do you understand by the term 'Nuclear Triad' ?	1

15. Enlist the possible underwater attacks that can be launched on the ships in harbour. 2
16. (a) Explain 'Zulu' Control Marking Condition. 2  
**OR**  
(b) Enlist the types of steel wire ropes. 2
17. (a) What are the responsibilities of the gunnery officer ? 4  
**OR**  
(b) Explain how an anchor works. 4
18. Write short notes on the following : 4  
a. Variation  
b. Deviation



## **SECTION – B**

### **Specialised Subject (Air Force)**

(21)



14. Read the passage below and answer the question given at the end.

Requirement of a Light Combat Helicopter (LCH) was felt during the Kargil War, as the Indian Air Force (IAF) lacked a suitable combat helicopter capable of operating in the high-altitude. In 2006, the Hindustan Aeronautics Limited (HAL) launched a LCH development programme. The LCH is an indigenous multi-role, light attack helicopter designed and manufactured by the HAL.

Its empty weight is 2,250 kg and maximum takeoff weight is 5,800 kg including 1,750 kg of weapons. The LCH can attain a maximum speed of 275 km/h and fly up to the range of 500 km, loaded with weapons. Its endurance is in excess of 3 hours and attains a height of 5,490 m, which is the highest for any attack helicopter. Armed with a 20 mm cannon, LCH can carry four rocket pods carrying 12 rockets each or eight Mistrel air-to-air missiles.

On 3 October, 2022, the LCH was formally inducted into the IAF and named Prachand. Indian Army has deployed its LCH near the Line of Actual Control in the East. In future, the Indian Army and IAF will have 95 and 65 LCH respectively.

- |   |   |
|---|---|
| (i) What is the maximum speed and ceiling height of the LCH ? | 1 |
| (ii) Which air-to-air missile does the LCH carry ?            | 1 |
| (iii) What short coming was noticed during the Kargil War ?   | 1 |
| (iv) How many LCH the IAF will have in future ?               | 1 |

15. Write a short note on the clouds with vertical development. 2

16. (a) How many types of landing gear are there in aircrafts ? 2

**OR**

- (b) Describe various strokes of the Four Stroke Cycle. 2

17. (a) Write a short note on Pilot Aptitude Battery Test. 4

**OR**

- (b) Write a short note on pilot pressure. 4

18. What is the safety codes related to the flying of radio-controlled models ? 4