



N-ACST-2022

CLASS – VIII: - (Mental Ability, Mathematics & Science)
(Class VII Moving to VIII)

[SET-1]

N-ACST (12-06-2022)

Time Duration: 1 Hour

Maximum marks: 140

Please read the instructions carefully. You are allotted 5 minutes specifically for this purpose.

INSTRUCTIONS:

1. This question paper contains 35 questions: Mental Ability (Q. No. 1 to Q. No. 7), Mathematics (Q. No. 8 to Q. No. 14), Physics (Q. No. 15 to Q. No. 21), Chemistry (Q. No. 22 to Q. No. 28) & Biology (Q. No. 29 to Q. No. 35)
2. There will be individual qualifying cut-offs for all sections.
3. **For Each correct answer 4 marks will be awarded. No Negative Marking.**
4. Use OMR-Sheet for answering
5. Use HB Pencil / Pen to darken the circles.
6. If you wish to change your answer, erase the already darkened circle completely and then darken the appropriate circle.
7. Use of a calculator and mobile phone is strictly prohibited during the exam.

TO BE FILLED IN CAPITAL LETTERS

NAME OF THE STUDENT : _____

FATHER'S NAME : _____

CONTACT NUMBER: _____ **SCHOOL NAME :** _____

ROLL NO. : _____ **TEST CENTRE :** _____

I have read all the instructions and shall abide by them

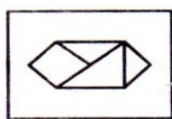
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Signature of Candidate

I have verified all the information filled in by the Candidate

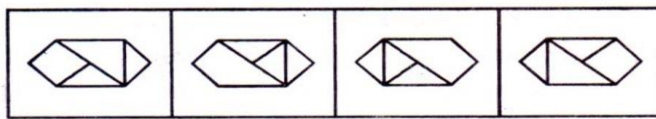
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Signature of Invigilator

MENTAL ABILITY (MAT)

1. A child is looking for his father. He went 90 meters in the east before turning to his right. He went 20 meters before turning to his right again to look for his father at his uncle's place 30 meters from this point. His father was not there. From there, he went 100 meters to the north before meeting his father in a street. How far did the son meet his father from the starting point?
(A) 80 meters (B) 100 meters (C) 140 meters (D) 260 meters
2. Count the number of triangles and squares in the given figure.
(A) 44 triangles, 10 squares (B) 14 triangles, 16 squares
(C) 27 triangles, 6 squares (D) 36 triangles, 9 squares
3. Which fraction comes in (?) the given sequence $\frac{1}{2}, \frac{3}{4}, \frac{5}{8}, \frac{7}{16}, ?$
(A) $\frac{9}{32}$ (B) $\frac{10}{17}$ (C) $\frac{11}{34}$ (D) $\frac{12}{35}$
4. The next term in alpha-numeric series is Z1A, X2D, V6G, T21J, R88M, P445P?
(A) N2676S (B) N2676T (C) T2670N (D) T2676N
5. Ajay ranked sixteenth from the top and twenty-ninth from the bottom among those who passed an examination. Six boys did not participate in the competition and five failed in it. Number of boys were there in the class is
(A) 40 (B) 44 (C) 50 (D) 55
6. Choose the correct mirror image of the figure (X) from the four alternatives (A), (B), (C), and (D) given along with it.



(X)



(A)

(B)

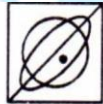
(C)

(D)

7. Choose the correct water image of the figure (X) from the four alternatives (A), (B), (C), and (D) given along with it.



(X)



(A)



(B)



(C)



(D)

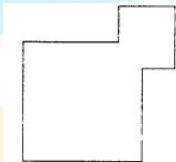
Space For Rough Work

MATHEMATICS

8. A batsman scored the following number of runs in six innings:
35, 30, 45, 65, 39, 20
the mean runs scored by him in an inning is?

(A) 39 (B) 38
(C) 37 (D) 40

9. How many lines of symmetry are there in the following figure?



(A) 1 (B) 2
(C) 3 (D) 4

10. Manish deposits ₹ 2000 in his bank account when his previous balance was ₹ 1000 and withdraws ₹ 1000 from it, the next day. Find the balance in Manish's account after the withdrawal.

(A) ₹ 1000 (B) ₹ 3000
(C) ₹ 2000 (D) None of these.

11. The exponential form of 100000 is?

(A) 10^3 (B) 10^4
(C) 10^5 (D) None of these

12. The ages of father and son are 45 years and 10 years. The ratio of their ages is

(A) 3 : 2 (B) 5 : 2
(C) 9 : 2 (D) 15 : 2

13. The area of a rectangular field is 250 m^2 . If the breadth of the field is 10 m, then its length is

(A) 25 m (B) 50 m
(C) 100 m (D) 125 m

14. The ratio of the measures of the three angles of a triangle is 2 : 3 : 4. The measure of the largest angle is

(A) 80° (B) 60°
(C) 40° (D) 180°

Space For Rough Work

PHYSICS

15. When a switch is in OFF position.
(i) Circuit starting from the positive terminal of the cell stops at the switch.
(ii) Circuit is open.
(iii) No current flows through it.
(iv) Current flows after some time.
Choose the combination of the correct answer from the following:
(A) All are correct (B) (ii) and (iii) are correct
(C) Only (iv) is correct (D) Only (i) and (ii) are correct
16. Image formed by a plane mirror for a Real object is
(A) Virtual and Erect (B) Real and Erect
(C) Virtual and Inverted (D) real and Inverted
17. The numerical value of ratio of displacement to distance.
(A) Less than one (B) Greater than one
(C) Equal to one (D) Equal or less than one
18. The train 'A' travelled a distance of 120km in 3 Hrs. whereas another train 'B' travelled a distance of 180km in 4 Hrs, then which train travelled faster?
(A) Train A (B) Train B
(C) Both are equally faster (D) None of these.
19. The coil of wire contained in an electric heater is known as.
(A) Component (B) Element
(C) Circuit (D) Spring
20. For which of the following process, the rate of transfer of heat is maximum?
(A) Combustion (B) Radiation
(C) Convection (D) Conduction
21. A convex lens is generally in nature when placed in air.
(A) Convergent (B) Divergent
(C) Neither of (A) and (B) (D) Depends on other conditions

Space For Rough Work

CHEMISTRY

22. Products of a neutralisation reaction are always:
(A) An acid and a base (B) An acid and a salt
(C) A salt and water (D) A salt and a base
23. Which of the following set of substances contain acids?
(A) Grapes, Lime Water (B) Vinegar, Soap
(C) Curd, Milk of Magnesia (D) Curd, Vinegar
24. Which one of the following is not a breed of sheep?
(A) Murrah (B) Marwari
(C) Lohi (D) Nali
25. Silk is derived from
(A) Cocoon (B) Pupa
(C) Egg (D) Moth
26. An oxide is acidic and has a pungent odour. It could be
(A) Sulphur dioxide (B) Carbon dioxide
(C) Sodium oxide (D) Nitrogen dioxide
27. The change in which a new substance formed is
(A) In physical change (B) In chemical change
(C) In both (A) and (B) (D) In neither of these
28. Which of the following is a method to prevent rust?
(A) Crystallization (B) Sedimentation
(C) Galvanisation (D) None of these

Space For Rough Work

BIOLOGY

29. The vascular tissue responsible for the transport of water and nutrients in the plant is called.
(A) Xylem (B) Phloem
(C) Tissue (D) Plasma
30. Reproduction through the vegetative parts of plants is known as.
(A) Sexual Reproduction (B) Asexual Reproduction
(C) Vegetative Propagation (D) Pollination
31. The components that are necessary for our body are called
(A) Vitamins-B (B) Pulses
(C) Nutrients (D) Minerals
32. The set of teeth that exists in the mouth during the period from six months to eight years of a human being is called.
(A) Permanent teeth (B) Premolar teeth
(C) Molar teeth (D) Milk teeth
33. Blood carries _____ from lungs to the cells of the body.
(A) Argon (B) Neon
(C) Oxygen (D) Nitrogen
34. From the following animals, the animal living in Polar Regions is
(A) Monkey (B) Donkey
(C) Polar bear (D) Gorilla
35. An adult human being at rest breathes in and out for _____ times in a minute.
(A) 15-18 (B) 20-25
(C) 10-15 (D) 50-60



Space For Rough Work