



N-SCORE-2022

CLASS – X: - (Mental Ability, Mathematics & Science)
(Class IX Moving to X)

(SET-2) **N-SCORE TEST**

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

.....
Signature of Candidate

I have verified all the information filled in by the Candidate

.....
Signature of Invigilator

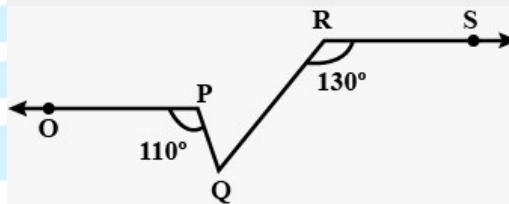
MENTAL ABILITY (MAT)

1. In a certain code language, '@' represents '+', $\oplus$ represents '-', 'a' represents $\div$ and ' θ ' represents ' $\times$ '. Find out the answer to the following question:
8900 a 100 $\oplus$ 5 θ 4 $\oplus$ 121 a 11 =?
(A) 58 (B) 62 (C) 158 (D) 205
2. Fill in the missing number?
3, 7, 17, 31, ?
(A) 37 (B) 43 (C) 51 (D) 53
3. A boat moves from a jetty towards the east. After sailing for 9 nautical miles, she turns towards the right and covers another 12 nautical miles. If she wants to go back to the jetty. What is the shortest distance now from her present position?
(A) 21 nautical miles (B) 20 nautical miles
(C) 18 nautical miles (D) 15 nautical miles
4. In a certain code language 'NARAYANA' is written as 'MZIZBZMZ'. Then how is 'DELHI' written in that code?
(A) MZIBZ (B) ROVKZ (C) WVOSR (D) WOTZB
5. Choose the odd one:
(A) Committee (B) Colony (C) Group (D) Jury
6. Direction: Two statements are given in the following question, followed by two conclusions numbered I and II. You have to take the given two statements to be true even if they seem to be at variance from commonly known facts. Read the conclusions and then decide which of the given conclusions logically follows from the two given statements, disregarding the known facts.
(A) If only conclusion I follows (B) If only conclusion II follows
(C) If either conclusion I or II follows (D) If neither conclusion I nor II follows
- Statements:
All roads are Pens.
No Pen is Home
- Conclusion:
I. Some roads are homes.
II. Some homes are pens.
7. 8573 : 3857 :: 6459 : ?
(A) 6945 (B) 3276 (C) 5496 (D) 9645

Space for Rough Work

MATHEMATICS

8. In a bag, there are 100 bulbs out of which 30 are bad ones. A bulb is taken out of the bag at random. The probability of the selected bulb is to be good is
 (A) 0.50 (B) 0.70 (C) 0.30 (D) None of these
9. If the mean of the observations $x, x + 3, x + 5, x + 7, x + 10$ is 9, the mean of the last three observations is
 (A) $\frac{31}{3}$ (B) $\frac{32}{3}$ (C) $\frac{34}{3}$ (D) $\frac{35}{3}$
10. The range of the data: 25, 18, 20, 22, 16, 6, 17, 15, 12, 30, 32, 10, 19, 8, 11, 20 is
 (A) 10 (B) 15 (C) 18 (D) 26
11. The total surface area of a cone of radius $\frac{r}{2}$ and slant height $2l$, is
 (A) $2\pi r(l+r)$ (B) $\pi r\left(l+\frac{r}{4}\right)$ (C) $\pi r(l+r)$ (D) $2\pi rl$
12. A triangle and a parallelogram are on the same base and between the same parallels. The ratio of their areas is:
 (A) 1 : 1 (B) 1 : 2 (C) 2 : 1 (D) 3 : 1
13. In given figure, if $OP \parallel RS$, $\angle OPQ = 110^\circ$ and $\angle QRS = 130^\circ$, then $\angle PQR$ is equal to

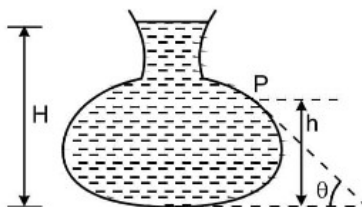


- (A) 40° (B) 50° (C) 60° (D) 70°
14. $(256)^{0.16} \times (256)^{0.09} = ?$
 (A) 4 (B) 16 (C) 64 (D) 256.25

Space for Rough Work

PHYSICS

15. A particle moves with constant acceleration for 6 seconds after starting from rest. The distance travelled during the consecutive 2 seconds interval are in the ratio
 (A) 1 : 1 : 1 (B) 1 : 2 : 3 (C) 1 : 3 : 5 (D) 1 : 5 : 9
16. A body is released from rest from the top of a tower of height $3H$. The ratio of times it takes to fall through equal height H is:
 (A) $1 : (\sqrt{2} - 1) : (\sqrt{3} - \sqrt{2})$ (B) $1 : (\sqrt{2} - 1) : (\sqrt{3} + \sqrt{2})$
 (C) 1 : 1 : 1 (D) 9 : 4 : 1
17. **Statement-1:** According to the newton's third law of motion, the magnitude of the action and reaction force is an action reaction pair is same only in an inertial frame of reference.
Statement-2: Newton's law of motion are applicable in every inertial reference frame.
 (A) Statement-1 is true, Statement-2 is true, and statement-2 is correct explanation for statement-1.
 (B) Statement-1 is true, Statement-2 is true, and statement-2 is not a correct explanation for statement-1.
 (C) Statement-1 is true, Statement-2 is false
 (D) Statement-1 is false, Statement-2 is true
18. In tug of war work done by winning team is:
 (A) Zero (B) positive (C) negative (D) None of these
19. If two bodies of mass M_1 and M_2 are placed a distance r apart they have a force of gravitation F between them. If both of the masses are reduced to half then force of gravitation would be:
 (A) $F/2$ (B) $2F$ (C) $F/4$ (D) F
20. Figure here shown the vertical cross-section of a vessel filled with a liquid of density ρ . The normal thrust per unit area of the walls of the vessel at point P, as shown will be:



- (A) $\rho h g$ (B) $H \rho g$ (C) $(H - h) \rho g$ (D) $(H - h) \rho g \cos \theta$

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21. Infrasonic frequency range is
(A) Below 20 Hz (B) 20 Hz to 20 kHz
(C) Above 20 kHz (D) No limit

CHEMISTRY

22. Which one is a sublime substance?
(A) Table salt (B) Sugar (C) Iodine (D) Potassium Iodide
23. Select the correct order of evaporation for water, alcohol, petrol and kerosene oil :
(A) water > alcohol > kerosene oil > petrol
(B) alcohol > petrol > water > kerosene oil
(C) petrol > alcohol > water > kerosene oil
(D) petrol > alcohol > kerosene oil > water
24. The melting point temperature of the solid state of a substance is 40°C. The freezing point temperature of the liquid state of the same substance will be
(A) 35°C (B) 40°C (C) 45°C (D) can't predicte
25. What mass of carbon dioxide (CO₂) will contain 3.011×10^{23} molecules?
(A) 11.0 g (B) 22.0 g (C) 4.4 g (D) 44.0 g
26. In carbon disulphide (CS₂), the mass of sulphur in combination with 3.0 g of carbon is :
(A) 4.0 g (B) 6.0 g (C) 64.0 g (D) 16.0 g
27.

Column I (Chemical compound)	Column II (Formula)
(1) Ferric sulphate	(p) FeSO ₄
(2) Ferrous sulphate	(q) NaHCO ₃
(3) Sodium bicarbonate	(r) Na ₂ CO ₃
(4) Sodium carbonate	(s) Fe ₂ (SO ₄) ₃

(A) 1 – (s), 2 – (p), 3 – (r), 4 – (q) (B) 1 – (r), 2 – (p), 3 – (q), 4 – (s)
(C) 1 – (s), 2 – (p), 3 – (q), 4 – (r) (D) 1 – (p), 2 – (s), 3 – (q), 4 – (r)
28.

Column I	Column II
(1) Electron	(p) Chadwick
(2) Proton	(q) J.J. Thomson
(3) Nucleus	(r) Goldstein
(4) Neutron	(s) Rutherford

(A) 1 – (q); 2 – (r); 3 – (s); 4 – (p)
(B) 1 – (s); 2 – (r); 3 – (q); 4 – (p)

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- (C) 1 – (p); 2 – (r); 3 – (s); 4 – (q)
(D) 1 – (q); 2 – (r); 3 – (p); 4 – (s)

BIOLOGY

29. Vesicles are essential for the normal functioning of the Golgi apparatus because
(A) They provide energy for chemical reactions.
(B) They move proteins and lipids between different parts of the organelle.
(C) They contribute to the structural integrity of the organelle.
(D) They produce the sugars that are added to proteins.
30. A plant cell having a cellulose wall, a thin lining of cytoplasm with a large vacuole but lacks nucleus, mitochondria plastic etc. and it still living. It is part of complex permanent tissue. The cell is
(A) Companion cell (B) Sieve cell
(C) Tracheid (D) Sclerenchyma fiber
31. Consider the following statements:
(a) Basic event in reproduction is creation of DNA copy.
(b) *Plasmodium* multiplies by binary fission.
(c) *Bryophyllum* propagates through spore formation.
(d) *Hibiscus* has unisexual flowers.
Which of these statement(s) is/are correct?
(A) (a) and (b) (B) (b) and (c)
(C) (c) and (d) (D) (a) only
32. *Helicobacter pylori* causes
(A) Tuberculosis (B) Peptic Ulcers (C) Pneumonia (D) Cholera
33. Which of the following will comprise the most appropriate distinction of prokaryotic cells to distinguish them from eukaryotic cells?
(A) Lack of DNA and nuclei
(B) Having dispersed DNA without a bounding nuclear membrane and by their lack of membrane bound organelles like plastids and mitochondria
(C) Biochemistry being fundamentally different
(D) Lack of ribosomes

Space for Rough Work

34. Biodiversity hotspots are
(A) Oceans (B) Glaciers (C) Rivers (D) Forests

35. **Column I**
(Canal irrigation system)

(1) *Kulhs*

(2) *Kattas*

(3) *Tals*

(4) *Khadin*

(A) 1 – (s); 2 – (p); 3 – (q); 4 – (r)

(B) 1 – (p); 2 – (s); 3 – (q); 4 – (r)

(C) 1 – (s); 2 – (p); 3 – (r); 4 – (q)

(D) 1 – (s); 2 – (q); 3 – (p); 4 – (r)

- Column II**
(State)

(p) Karnataka

(q) Maharashtra

(r) Rajasthan

(s) Himachal Pradesh



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THE NARAYANA GROUP

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