# SAMPLE PAPER

# M-STAR

**Momentum Scholarship Test for Admission & Rewards**

**10th Edition, 2025**

## Talent HUNT Exam

**(Class VII Studying Moving to Class VIII)**

**Science, Mathematics & Mental Ability**

## INSTRUCTIONS FOR CANDIDATE

1. Duration of Test is 1 hr.
2. The Test Booklet consists of 40 questions. The maximum marks are 90. There is **no negative marking** for wrong answer.
3. **Pattern of the questions are as under:**

   The question paper consists of three subjects i.e., **Science, Mathematics and Mental Ability.** There are two sections in this question paper**.**

(i) **Section-I:** This section contains **35 multiple choice questions**, which have **only one correct** answer. Each question carries **+2 marks** for correct answer.

(ii) **Section-II:** This section contains 5 multiple choice questions, in which **one or more than one choice(s)** is/are correct. Each question carries **+4 marks** for correct answer.

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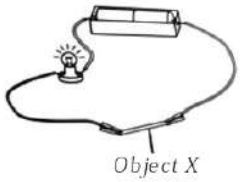
## SECTION - I

This section contains **35 multiple choice questions**. Each question has 4 choices (A), (B), (C) and (D) out of which **ONLY ONE** is correct. Each question carries **+2 Marks** for correct answer.

**1. When an object X is connected in the circuit shown below, the bulb lights up.**




**What can you conclude from this observation ?**

(A) Object X is an electrical insulator.

(B) Object X is an electrical conductor.

(C) Electric current does not flow through an open circuit.

(D) Both (A) and (B)

**2. Which of the following properties remains constant when a metal rod is heated ?**

(A) Length (B) Density

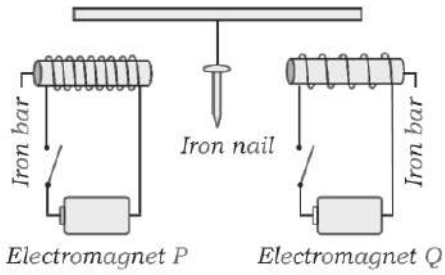
(C) Volume (D) Mass

**3. A school bus takes 45 minutes to cover a distance of 18 km. Calculate its speed in km/h.**

(A) 11 km/h (B) 15 km/h

(C) 18 km/h (D) 24 km/h

**4. An iron nail is suspended freely midway between electromagnet P and electromagnet Q as shown.**




**If both the circuits are closed, what will happen to the iron nail ?**

(A) There is no change in the position of iron nail.

(B) Iron nail moves towards electromagnet Q.

(C) Iron nail moves towards electromagnet P.

(D) Both (A) and (B).

**5. Which of these is an example of contraction ?**

(A) Riveting steel plates together

(B) Skating on ice

(C) Sagging of telephone wires

(D) Drinking through a straw

**6. Two boys X and Y participated in a 200 m race. Boy X finished the race in 20 seconds and boy Y finished it in 25 seconds. Who ran faster ?**

(A) Boy X (B) Boy Y

(C) Boys X and Y (D) None of the boys

**7. Which substance is used to reduce the acidity in soil ?**

(A) Ammonium sulfate (B) Calcium hydroxide

(C) Sodium chloride (D) Calcium nitrate

**8. Which of the following is mostly affected by a strong typhoon ?**

(A) Areas along the shores

(B) Fertile valley

(C) High mountains

(D) Wide plateaus

**9. Identify an exothermic process.**

(A) Melting of ice

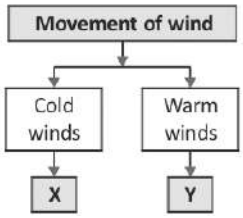
(B) Evaporation of ethanol

(C) Formation of iodine vapour from iodine crystals

(D) Condensation of water vapour to form liquid droplets.

**10. Study the flow chart given below and identify 'X' and 'Y'.**

| | X | Y |
|---|---|---|
| (A) | Lateral | Vertical |
| (B) | Vertical | Lateral |
| (C) | Lateral | Lateral |
| (D) | Vertical | Vertical |



**11.** **Which of the following elements burn in oxygen to form an oxide, which when mixed with water, gives an acidic solution with a pH less than 7 ?**

(A) Calcium (B) Copper

(C) Magnesium (D) Sulfur

**12.** **Which of these changes indicate a chemical change ?**

(A) The reaction is reversible.

(B) There is no energy change.

(C) A new chemical substance is formed.

(D) Heat and light are not given off.

**13.** **A rain forest is a very wet place. What helps plants survive there ?**

(A) Thick stems that store water

(B) Roots that grow close to the ground

(C) Stems that move around

(D) Large, pointed leaves

**14.** **Which organism(s) is/are both a predator and a prey in the given food chain ?**

**Banana → Fruit fly → Frog → Snake → Eagle.**

**(1) Fruit fly** **(2) Frog**

**(3) Snake** **(4) Eagle**

(A) 2 only (B) 2 and 3 only

(C) 1, 2 and 3 only (D) 1, 2, 3 and 4

**15.** **Which organisms are most important for adding nutrients to the soil ?**

(A) Consumers (B) Scavengers

(C) Producers (D) Decomposers

**16.** **Study the chart.**

$$\boxed{P} \longrightarrow S \longrightarrow T \longrightarrow \boxed{Q}$$

**It shows that P develops into Q after P undergoes processes S and T. What can P, Q, S and T be ?**

| | P | Q | S | T |
|---|---|---|---|---|
| (A) | Flower | Fruit | Fertilisation | Pollination |
| (B) | Flower | Pollination | Fertilisation | Fruit |
| (C) | Flower | Fruit | Pollination | Fertilisation |
| (D) | Seed | Seedling | Fertilisation | Pollination |

**17.** **How will an oxygen molecular travel after it enters the body from the atmosphere ?**

(A) Trachea → bronchus → bronchiole → alveoli

(B) Bronchus → bronchiole → trachea → alveoli

(C) Bronchus → trachea → bronchiole → alveoli

(D) Trachea → bronchus → alveoli → bronchiole

**18.** **What are the products of aerobic and anaerobic respiration in humans ?**

| | Aerobic respiration | | | Anaerobic respiration | | |
|---|---|---|---|---|---|---|
| | Carbon dioxide | Lactic acid | Water | Carbon dioxide | Lactic acid | Water |
| (A) | ✓ | ✓ | ✗ | ✓ | ✓ | ✓ |
| (B) | ✓ | ✗ | ✓ | ✓ | ✓ | ✓ |
| (C) | ✓ | ✗ | ✓ | ✗ | ✓ | ✓ |
| (D) | ✗ | ✓ | ✗ | ✓ | ✗ | ✗ |

Key: ✓ = is a product Key: ✓ = is not product

**19.** **If** $x^{\left(\frac{-p}{q}\right)^{-1}} = \left(\frac{1}{x}\right)^{k}$ **then k =**

(A) $\frac{p}{q}$ (B) $-\frac{p}{q}$ (C) $-\frac{q}{p}$ (D) $\frac{q}{p}$

**20.** **$(-12) \times 6 - (-12) \times 4 \div (-2 \times -12)$ = ?**

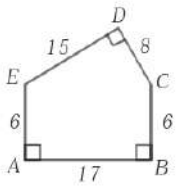
(A) 1 (B) $-70$

(C) 120 (D) $-120$

**21.** **A piece of string is 40 centimeters long. It is cut into three pieces. The longest piece is 5 cm more than twice as long as the middle-sized and the shortest piece is half of the middle piece. Find the length of the longest piece (in cm)**

(A) 27 (B) 25 (C) 4 (D) 9

**22.** **Find the area of the following figure.**




(A) 140 units$^2$ (B) 162 units$^2$

(C) 172 units$^2$ (D) 200 units$^2$

**23.** Of the 120 people in the room, $\frac{3}{5}$th are women. If $\frac{2}{3}$rd of the people are married, what is the maximum number of women in the room who could be unmarried ?

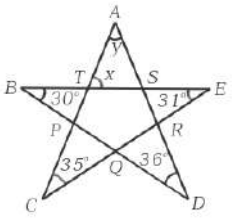
(A) 40 (B) 20 (C) 30 (D) 60

**24.** A jar contains black and white marbles. If there are ten marbles in the jar, which of the following could not be the ratio of black to white marbles ?

(A) 9:1 (B) 7:3

(C) 1:10 (D) 1:4

**25.** Find the angles $x$ and y in the following figure.




(A) $x = 71°$ and $y = 61°$ (B) $x = 61°$ and $y = 71°$

(C) $x = 66°$ and $y = 48°$ (D) $x = 48°$ and $y = 66°$

**26.** The sum of three expressions is $x^2 + y^2 + z^2$. If two of them are $4x^2 - 5y^2 - z^2$ and $-3x^2 + 4y^2 + 2z^2$, find the third expression.

(A) $2x^2 + 2z^2$ (B) $2y^2$

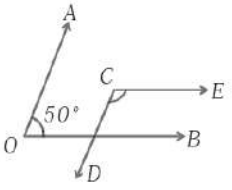
(C) $2x^2 + 2y^2 - z^2$ (D) $-2y^2 - 2z^2$

**27.** Which of the following is equal to

$x + y - [z - x - \{y + z - (x + y) - (z + x - \overline{y + z + x})\}]$

(A) $3x$ (B) $2y$ (C) $x$ (D) $x + 2y$

**28.** In the below given figure, it is being given that AO||CD, OB||CE and $\angle AOB = 50°$. Find the measure of $\angle ECD$.




(A) 50° (B) 90° (C) 110° (D) 130°

**29.** $7^{20} \times 49^5 \times 343^{-10} =$

(A) $7^2$ (B) 7 (C) 1 (D) $49^2$

**30.** Find the value of $9^{4.5} : 3^7$.

(A) 9 : 1 (B) 3 : 1 (C) 9 : 2 (D) 3 : 2

**Direction (Q. 31 to 34): Identify the relation between each of the given pairs on either side of '::'. Replace the question mark '?' with the correct option.**

**31.** 11 : 17 : : 23 : ?

(A) 27 (B) 29

(C) 31 (D) 37

**32.** 41 : 14 :: 73 : ?

(A) 11 (B) 37

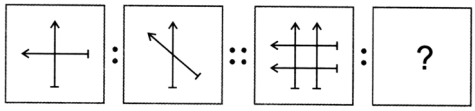
(C) 21 (D) 25

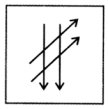
**33.** Teeth : Chew :: Mind : ?

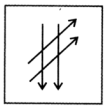
(A) Think (B) Brain

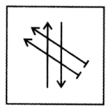
(C) Study (D) walk

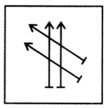
**34.**




(A) 

(B) 

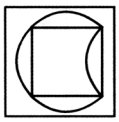
(C) 

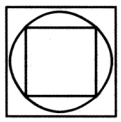
(D) 

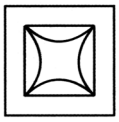
**Direction (Q. 35): Find the option figure which contains figure (X) as its part.**

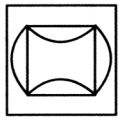
**35.**

(X)

(A) 

(B) 

(C) 

(D) 

## SECTION - II

This section contains **5 multiple choice questions**. Each question has 4 choices (A), (B), (C) and (D) out of which **ONLY ONE OR MORE THAN ONE** choice(s) is/are correct. Each question carries **+4 makrs** for correct answer.

**36. Identify the incorrect statement.**

(A) When an electric current flows through a conductor, heat is produced.

(B) Room heater, electric bulb etc, utilize the heating effect of current.

(C) Electromagnets are used in electric bells and buzzers.

(D) An electric circuit is a continuous, non- conducting path for flow of electric current.

**37. A mixture of five parts of iron fillings and three parts of sulphur are strongly heated. Which of the following does not take place ?**

(A) Heat is given off.

(B) Light is given off.

(C) A chemical change took place.

(D) The black residue is attracted to a magnet.

**38. Angles ratio of quadriteral is 1:2:3:4. What is the size of the greatest angle ?**

(A) 144° (B) 180° (C) 160° (D) 170°

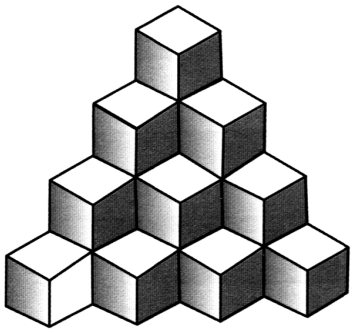
**39. $(-8) \div 0 = ?$**

(A) –8 (B) 0

(C) not defined (D) Any real number

**Direction (Q. 40): Find the number of unit cubes in the given blocks.**

**40.**



(A) 10 (B) 12
(C) 16 (D) 20

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