

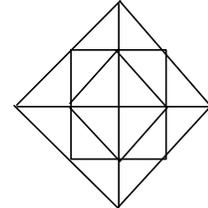
PART I : MAT

(Only One Option Correct Type) (+2, -1)

This section contains 5 multiple choice questions. Each question has four choices (a), (b), (c) and (d) out of which ONLY ONE Option is correct.

1. How many triangles are there in the figure below?

- (a) 28
- (b) 32
- (c) 26
- (d) 34



2. In the following equation, the equation becomes wrong due to wrong order of signs. Choose the correct order of signs in the form alternatives given below. So that equation become right and indicates its correct alternative letter.

$$8 = 3 + 17 \times 7$$

- (a) + = x
- (b) x + =
- (c) + x =
- (d) x = +

3.  +  = 7Kg.

$$\text{Round Fruit} + \text{Round Fruit} + \text{Eggplant} + \text{Lettuce} + \text{Lettuce} + \text{Lettuce} = 19\text{Kg.}$$

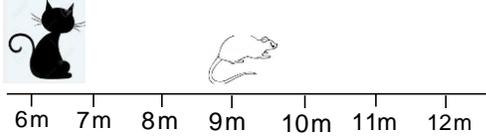
$$\text{Round Fruit} + \text{Eggplant} = 4\text{Kg.}$$

What is the weight of one  ?

- (a) 5 Kg
- (b) 4 Kg
- (c) 6 Kg
- (d) 7 Kg

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4. A cat is chasing a mouse.



The cat starts at 6 m and jumps 2 m every time.

The mouse starts at 9 m and jumps 1 m every time.

If they both start at the same time, after how many jumps would the cat reach the mouse?

- (a) After 5 jumps (b) After 4 jumps (c) After 3 jumps (d) After 2 jumps
5. If '<' means 'minus', '>' means 'plus', '=' means 'multiplied by' and '\$' means 'divided by', then what would be the value of $27 > 81 \$ 9 < 6$?
- (a) 6 (b) 33 (c) 30 (d) 54

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PART II : MATHEMATICS

(Only One Option Correct Type) (+4, -1)

This section contains 5 multiple choice questions. Each question has five choices (a), (b), (c), (d) and (e) out of which **ONLY ONE** Option is correct.

6. If $x = 9, y = \sqrt{17}$, the value of $(x^2 - y^2)^{\frac{1}{3}}$ is equal to.
 (a) 4 (b) 2 (c) 3
 (d) 17 (e) 5
7. Is the given expression a polynomial $3x^2 + 2x^1 + 4x + 5$.
 (a) yes (b) no
 (c) can't say (d) cannot determined
 (e) data insufficient
8. If $x = \frac{1}{2}$, then the value of $x + \frac{1}{1 - \frac{1}{1 + \frac{1}{x}}}$ is.
 (a) $\frac{5}{4}$ (b) $\frac{4}{5}$ (c) $\frac{3}{4}$
 (d) $\frac{4}{3}$ (e) 2
9. Find the value of $25^3 - 75^3 + 50^3$.
 (a) -281250 (b) 281250 (c) 93750
 (d) -9375 (e) 28950

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10. If $p \neq 0$, $q \neq 0$, $pq \neq 1$ and $pq \neq -1$, then $\frac{\left(p + \frac{1}{q}\right)^x \cdot \left(p - \frac{1}{q}\right)^y}{\left(q + \frac{1}{p}\right)^x \cdot \left(q - \frac{1}{p}\right)^y} =$

(a) $\left(\frac{p}{q}\right)^{x+y}$

(b) $\left(\frac{q}{p}\right)^{x+y}$

(c) $\left(\frac{p}{q}\right)^{x-y}$

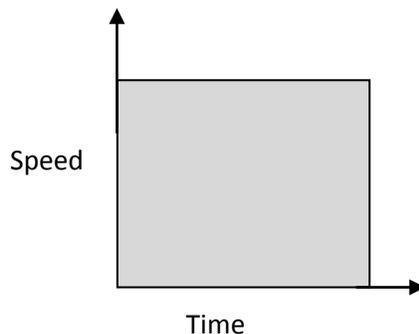
(d) $\left(\frac{q}{p}\right)^{x-y}$

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PART III : PHYSICS**(Only One Option Correct Type) (+4, -1)**

This section contains 5 multiple choice questions. Each question has four choices (a), (b), (c) and (d) out of which **ONLY ONE** Option is correct.

11. A graph is shown below.



What does the area of the shaded portion in the graph represent?

- (a) Distance (b) Speed (c) Time (d) Uniform motion
12. 'X' is the mode of transmission of heat that takes place by the movement of hot particles. Identify 'X'.
(a) Conduction (b) Convection (c) Radiation (d) Expansion
13. A freely falling stone has
(a) Uniform velocity (b) Variable velocity
(c) Uniform acceleration (d) Both(b) and (c)
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14. Rohit takes 15 minutes from his house to reach his school on a bicycle. If the bicycle has a speed of 36 km/hr, calculate the distance between his house and the school.
(a) 7200 m (b) 5400 m (c) 8100m (d) 9000 m
15. A beggar wrapped himself with a few layers of newspaper on a cold winter night. This helped him to keep himself warm because
(a) Friction between the layers of newspaper produces heat
(b) Air trapped between the layers of newspaper is a bad conductor of heat
(c) Newspaper is a conductor of heat
(d) Newspaper is at a higher temperature than the temperature of the surroundings

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PART IV : CHEMISTRY**(Only One Option Correct Type) (+2, -1)**

This section contains 5 multiple choice questions. Each question has four choices (a), (b), (c) and (d) out of which **ONLY ONE** option is correct.

16. Chemical used to disinfect water is _____.
- (a) Alum (b) Chlorine (c) Filtration (d) Both (a) & (b)
17. Wool traps a lot of air which gives warmth, because air is a good _____ of heat.
- (a) Conductor (b) Insulator (c) Radiator (d) Diffuser
18. Combustion takes place in the presence of -
- (a) Water (b) Nitrogen (c) Copper (d) Oxygen
19. The soil with particle size of 0.2 mm to 2.0 mm is
- (a) Clayey soil (b) Sandy soil (c) Gravel (d) Silt
20. Valency of phosphorus (P) in P_2O_5 is
- (a) 3 (b) 5 (c) 2.5` (d) 2

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PART V : BIOLOGY**(Only One Option Correct Type) (+2, -1)**

This section contains 5 multiple choice questions. Each question has four choices (a), (b), (c) and (d) out of which **ONLY ONE** option is correct.

21. Number of incisor in each jaw.
(a) 2 (b) 4 (c) 5 (d) 6
22. In which form carbohydrate is stored in plants?
(a) Glucose (b) Lactose (c) Starch (d) Glycogen
23. Bile juice is secreted by
(a) Stomach (b) Small intestine (c) Liver (d) Pancreas
24. Haemoglobin is present in
(a) RBC (b) WBC (c) Platelets (d) All
25. Ovule or Egg produced by
(a) Stigma (b) Style (c) Ovary (d) Zygote

END OF TEST PAPER

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