

IIT ASHRAM BRINGS...



CLASS 6

SCIENCE APTITUDE TEST

TIME : 2 HOURS

MAX MARK : 300

DATE : 28- 01- 2024

INSTRUCTIONS

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

Caution : Class, as given on paper above MUST be correctly marked on the answer OMR sheet before attempting the paper. Wrong Class will give wrong results.

1. This booklet consists of 75 questions. Question paper consists of 4 sections. Marking scheme is given in table below:

Section	Subject	Questions No.	Making Scheme for each questions	
			Correct Answer	Wrong Answer
PART - I	Mental Ability	15	4	-1
PART - II	Mathematics	30	4	-1
PART - III	Physics & Chemistry	20	4	-1
PART - IV	Biology	10	4	-1

3. Answers have to be marked on the OMR sheet. The Question Paper contains blank spaces for your rough work. No additional sheets will be provided for rough work.
4. Blank papers, cellular phones, smart watches, log tables, slide rule, calculator and electronic devices, in any form, are not allowed.

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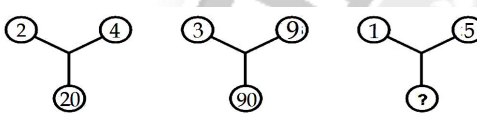
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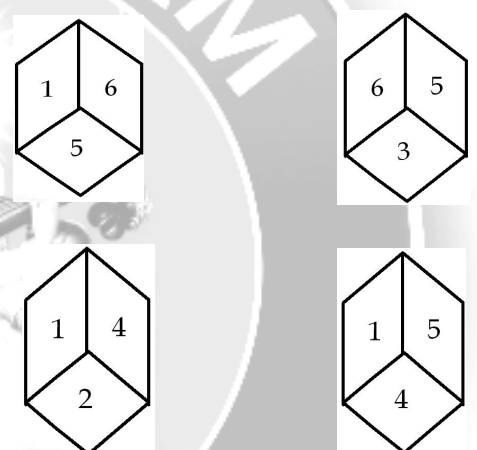
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PART - I : MENTAL ABILITY

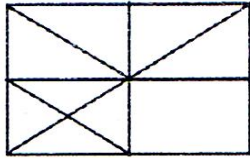
1. Find the wrong term(s) -
24, 49, ?, 94, 15, 31, 59, 58
(a) 51 (b) 63
(c) 77 (d) 95
2. Find the missing term :
AP, CN, EK, GG, ?
(a) LD (b) IB
(c) ID (d) JB
3. Which sequence of letters when placed at the blanks one after the other will complete the given letter series ?
_ca_c_bc_b_a
(a) abcba (b) bbaac
(c) ccbab (d) cbaca
4. Find the missing term in the given figures


(a) 75 (b) 26
(c) 25 (d) 20
5. If QUIZ is written as RVJA how will you write CLASS ?
(a) BHIMB (b) DMBTT
(c) DMVSS (d) QNZTB
6. Starting from a point, a person walked 12 metres North, he turned right and walked 10 metres, he again turned right and walked 12 metres, then he turned left and walked 5 metres. How far is he now and in which direction from the starting point ?
(a) 10 metres towards West
(b) 15 metres towards East
(c) 10 metres towards West
(d) 5 metres towards West
7. In the following questions, choose the words that show the same relationship as given in the each questions.
Hour is related to Second in the same way as Tertiary is related to
(a) Ordinary (b) Secondary
(c) Primary (d) Intermediary
8. The number on opposite side of the face having the number 3 will be


(a) 1 (b) 2
(c) 4 (d) 5

Space for Rough Work

9. In the following figure, the number of triangles are-



- (a) 8 (b) 12
(c) 15 (d) 16

10.



- (a)
- (b)
- (c)
- (d)

11. Find the missing numbers :

1, 4, 9, ?, 25, 36

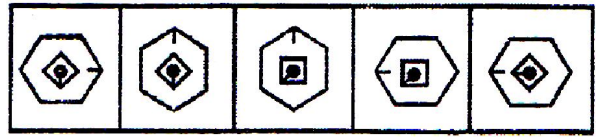
- (a) 11 (b) 19
(c) 21 (d) 16

12. At a ticket counter 35 people are standing in a row. Mohit is 15th from ticket counter. What is his position from the end?

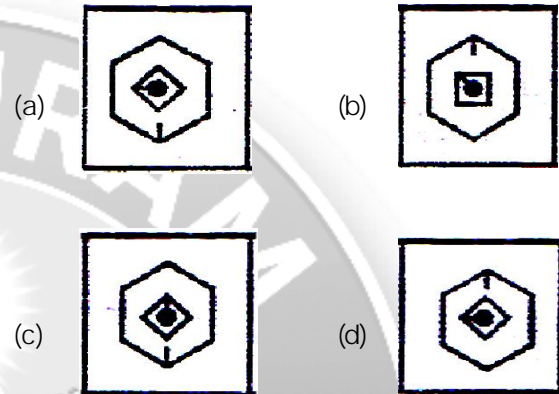
- (a) 19th (b) 20th
(c) 21st (d) 22nd.

13. Each of the following questions consists of five problem figure. These problem figures form a series. Find out the one figure from the answer figures that will continue the series.

Problem Figures



Answer Figures



14. In the given below question, four words are given, out of which three are same in one way and the fourth one is different from others. Select the odd one.

- (a) Camel (b) Goat
(c) Cow (d) Dog

15. What is the value of

$$100 \times 10 - 100 + 2000 \div 100 = ?$$

- (a) 29 (b) 780
(c) 920 (d) 979.

Space for Rough Work

PART - II : MATHEMATICS

1. What is the place value of 6 in 706, 227, 329?
 - (a) million
 - (b) 6 million
 - (c) 6
 - (d) 60 million
2. Roman numeral for the smallest 4-digit number is__
 - (a) X
 - (b) C
 - (c) M
 - (d) D
3. On dividing 55,390 by 299 the remainder is 75. The quotient is
 - (a) 195
 - (b) 185
 - (c) 175
 - (d) 193
4. 432650 is not divisible by
 - (a) 2
 - (b) 5
 - (c) 10
 - (d) 4
5. Which of the following is the LCM of 9, 14 and 21?
 - (a) 189
 - (b) 126
 - (c) 252
 - (d) 378
6. $\frac{4}{1000}$ is equal to
 - (a) 0.004
 - (b) 0.04
 - (c) 0.4
 - (d) 4.001
7. A gas pipe is an example of a
 - (a) cone
 - (b) a cylinder
 - (c) cube
 - (d) sphere
8. Name the quadrilateral which has just one pair of parallel lines.
 - (a) Rectangle
 - (b) Square
 - (c) parallelogram
 - (d) Trapezium
9. When 47 is subtracted from 23, we get
 - (a) 70
 - (b) 24
 - (c) 24
 - (d) 70
10. Which of the following is greater than - 1?
 - (a) -3
 - (b) -20
 - (c) 0
 - (d) -5
11. If $\frac{1}{2} + \frac{1}{x} = 2$, then $x =$
 - (a) $\frac{2}{5}$
 - (b) $\frac{5}{2}$
 - (c) $\frac{3}{2}$
 - (d) $\frac{2}{3}$
12. The value of $\frac{231}{1000}$ is
 - (a) 0.231
 - (b) 2.31
 - (c) 23.1
 - (d) 0.0231
13. Which of the following is the smallest decimal?
 - (a) 0.019
 - (b) 0.08
 - (c) 0.084
 - (d) 0.00054
14. $10 - x$ means
 - (a) 10 is subtracted x times
 - (b) x is subtracted 10 times
 - (c) x is subtracted from 10
 - (d) 10 is subtracted from x
15. Which of the following is an equation
 - (a) $2x + 3 + 5$
 - (b) $2x + 3 < 5$
 - (c) $2x + 3 > 5$
 - (d) $2x + 3 = 5$

Space for Rough Work

16. The coefficient of $-x$ is_____

- (a) 0 (b) 1
(c) -1 (d) x

17. $16 : 24 = \dots\dots\dots$

- (a) $2 : 3$ (b) $22 : 33$
(c) $18 : 27$ (d) All of the above

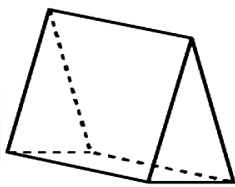
18. Cost of 1 book is Rs.12. The cost of 9 books is :

- (a) Rs. 86 (b) Rs. 106
(c) Rs. 108 (d) Rs. 118

19. What will happen to the area of a square if its side is doubled?

- (a) 2 times (b) 4 times
(c) 6 times (d) 5 times

20. The name of the solid in Fig. is:



- (a) triangular pyramid
(b) rectangular prism
(c) triangular prism
(d) rectangular pyramid

21. Total number of curved edges of a cylinder be

- (a) 0 (b) 1
(c) 2 (d) 3

22. Area of which figure is length \times breadth

- (a) rectangle (b) square
(c) isosceles triangle (d) equilateral triangle

23. The number of lines of symmetry of a rectangle is

- (a) 0 (b) 2
(c) 4 (d) 1

24. A line segment $\overline{XY} = 10.4$ cm is bisected at M, then length of XM is__

- (a) 5.4 cm (b) 5 cm
(c) 5.2 cm (d) 20.8 cm

25. The longest chord of a circle is equal to its

- (a) Radius (b) Diameter
(c) Circumference (d) Secant

26. How many milligrams make one kilogram?

- (a) 100 (b) 1000
(c) 100000 (d) 1000000

27. The value of $17 \div 0$ is

- (a) 0 (b) 1
(c) 17 (d) not defined

28. Which natural number has no predecessor?

- (a) 0 (b) 1
(c) 10 (d) 100

29. $6\frac{3}{4} + 5\frac{3}{4} - 5\frac{3}{5}$ equals__

- (a) $6\frac{4}{5}$ (b) $6\frac{1}{5}$
(c) $6\frac{3}{20}$ (d) $6\frac{9}{10}$

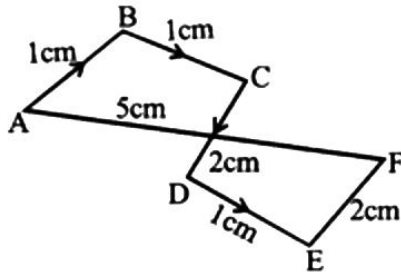
30. $2.5 + 3.05 - 4.005$ is equal to

- (a) 1.545 (b) 1.455
(c) 1.554 (d) 0.545.

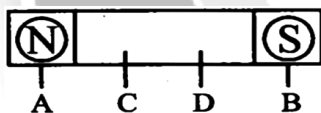
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PART - III : PHYSICS & CHEMISTRY

1. A fly is moving on a paper and the movement of the fly shown on it. The displacement by fly from A to F is ____.
[Distances AB = 1 cm, BC = 1 cm, CD = 2 cm, DE = 1 cm, EF = 2 cm, AF = 5 cm]

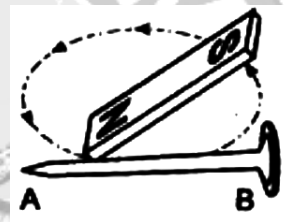


- (a) 3 cm (b) 5 cm
(c) 7 cm (d) 2 cm
2. On a scale the main divisions are marked in centimetres and each centimetre on this scale is further divided into 10 parts. The smallest part of this scale will be equal to
- (a) 1 cm (b) 0.01 cm
(c) 1 mm (d) 0.1 mm
3. The results of some observations about the number of iron pins attracted by a bar magnet are shown below. In your opinion which of the given readings are correct?



Observation	At Position - A	At Position B	At Position C	At Position D
I.	10	10	2	2
II.	10	5	5	4
III.	6	6	6	6
IV.	2	10	10	2

- (a) (i) (b) (ii)
(c) (iii) (d) (iv)
4. A nail is magnetized as shown in the figure. Which polarity will develop at A and B?



- (a) A - North, B-North (b) A - North, B-South
(c) A - South, B - South (d) A - South, B-North
5. Metals conduct charges better than wood because metals have more
- (a) protons
(b) free electrons
(c) negative ions
(d) space between particles

Space for Rough Work

6. Non-luminous bodies become visible when they.....light.
 (a) reflect (b) radiate
 (c) refract (d) none of these
7. What is the correct alignment during a solar eclipse?
 (a) Sun, Moon, Earth (b) Moon, Sun, Earth
 (c) Sun, Earth, Moon (d) None of these
8. Read the given statements and mark the correct option.
 (i) The inertia of an object depends on the size of the object.
 (ii) When the mass of an object increases, the weight of the object always increases.
 (iii) The inertia of an object depends on the volume of the object.
 (a) (i) only (b) (ii) only
 (c) (iii) only (d) (ii) and (iii) only
9. The S.I. Unit of Temperature is ____.
 (a) Kelvin (b) Celsius
 (c) Fahrenheit (d) All of the above
10. Which is the largest planet in solar system?
 (a) Mercury (b) Mars
 (c) Jupiter (d) Saturn
11. Match the column
Column-I (Fibre). **Column-II (Source)**
 A. Jute (p) Fleece of sheep
 B. Wool (q) Plant source
 C. Nylon (r) Cocoon of silk worm
 D. Silk (s) Synthetic
 (a) A → (p); B → (q); C → (r); D → (s)
 (b) A → (q); B → (p); C → (s); D → (r)
 (c) A → (r); B → (s); C → (p); D → (q)
 (d) A → (s); B → (r); C → (q); D → (p)
12. Which of the following device is used for weaving?
 (a) Charkha (b) Gin
 (c) Handloom (d) Hand spindle
13. Match the column
Column-I (Objects) **Column-II (Property)**
 A. Coconut oil (p) Float on surface of water
 B. Vinegar (q) Sink in water
 C. Dry leaves (r) Miscible in water
 D. Glass marbles (s) Immiscible in water
 (a) A → (s); B → (r); C → (p); D → (q)
 (b) A → (r); B → (q); C → (s); D → (p)
 (c) A → (q); B → (r); C → (p); D → (s)
 (d) A → (p); B → (q); C → (r); D → (s)
14. Which of the following materials can be placed into same group?
 (a) Books, shirt, table, newspaper
 (b) Books, note books, newspaper, calendar
 (c) Shirt, shoes, handkerchief, plate
 (d) All of these
15. Choose correct alternative to complete the given analogy. Muddy water: sedimentation: Butter from milk.....
 (a) Filtration (b) Churning
 (c) Sublimation (d) Evaporation
16. Which of the following is not a separation technique?
 (a) Churning (b) Loading
 (c) Stirring (d) Sieving
17. Which method will be used to remove tea leaves from brew?
 (a) Handpicking (b) Filtration
 (c) Threshing (d) Any of these

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18. Why alum is used to purify muddy water?

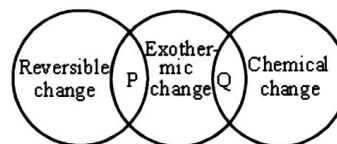
- (a) Mud gets dissolved due to alum
- (b) Mud floats due to alum
- (c) Mud settles down due to alum
- (d) Alum kills germs from muddy water

19. Look at the picture given below. What kind of change is shown in the picture? Choose the correct option.



- (a) Irreversible change, melted wax cannot be solidified again.
- (b) Reversible change, melted wax can be solidified again.
- (c) Periodic change, candle melts after an interval of an hour.
- (d) Chemical change, melting of candle wax results in change in composition of candle.

20. Look at the following diagram and answer the following questions.



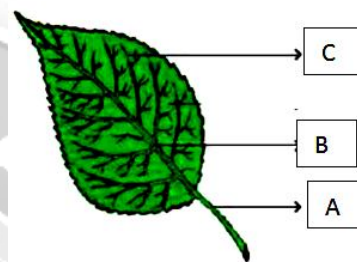
Which of the following represents 'P'?

- (a) Freezing of water into ice
- (b) Burning of coal
- (c) Cooking of food
- (d) Bursting of cracker

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PART - IV : BIOLOGY

1. The removal of waste substances from the body is called
 (a) reproduction (b) respiration
 (c) breathing (d) excretion
2. Which of the following is not the characteristic of a living thing?
 (a) Growth (b) Movement
 (c) Do not need food (d) Respiration
3. Which one of the following is not a terrestrial habitat?
 (a) Soil (b) Tree
 (c) Ocean (d) Desert
4. A food is taken in a test tube and a few drops of iodine solution are added to it. It was observed that the solution turned blue-black due to the presence of which of the following components?
 (a) Carbohydrates (b) Protein
 (c) Fat (d) Vitamin
5. Spinach is a good source of
 (a) Iron (b) Calcium
 (c) Phosphorous (d) Sodium chloride
6. The vitamins that get easily destroyed by heating during cooking are
 (a) Vitamin-A (b) Vitamin-B
 (c) Vitamin C (d) Vitamin D
7. Which one of the following is a synthetic fiber?
 (a) Nylon (b) Rayon
 (c) Polyester (d) All of these
8. Which of the following can be recycled
 (a) Waste paper (b) Kitchen waste
 (c) Animal waste (d) All of these
9. The picture below shows a leaf. Label its parts A, B, and C correctly.



- (a) A-petiole, B-midrib, C-veins
- (b) A-midrib, B-petiole, C-veins
- (c) A-veins -, B- midrib, C- petiole
- (d) A-veins, B-petiole, C-midrib
10. The shoulder joints and hip joints are
 (a) ball and socket joints
 (b) pivotal joints
 (c) hinge joints
 (d) gliding joints

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