IIT ASHRAM BRINGS...

Spread Your Wings

उड़ान

A QUEST FOR SCIENCE ASPIRANTS !

CLASS 5

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.

PART - I : MENTAL ABILITY

1   Choose the odd one out

(a)   (b)

(c)   (d)
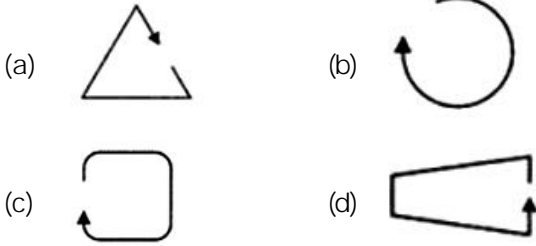
2. Find the missing alphabet: A, C, E, G, ?, K
    (a)   L   (b)   M
    (c)   T   (d)   I

3. Which of the following will replace the question mark?

    " ؟ " ؟ ?

    (a)   ؟   (b)   "
    (c)   "   (d)   ؟

4. Arrange the following words as they are arranged in the dictionary
    1. Land   2. Lamp
    3. Landscape   4. Lantern
    (a)   2,1,3,4   (b)   2,1,4,3
    (c)   1,2,3,4   (d)   1,3,4,2

5. If the letter of the word DESTINY are rearranged in alphabetical order, which letter will be in the middle in the order after rearrangement?
    (a)   D   (b)   I
    (c)   Y   (d)   N

6. If 'Sugar' is called 'Book', 'Book' is called 'Salt' and 'Salt' is called 'Sweet', then what do we read?
    (a)   Sugar   (b)   Sweet
    (c)   Book   (d)   Salt

7. If WATER is written as YCVGT then what is written as FIRE?
    (a)   IRFE   (b)   HKTG
    (c)   REFI   (d)   ERIF

8. In which figure is the below given shape hidden?

    (a)   (b)

    (c)   (d)

9. How many triangles are there in the following figure?
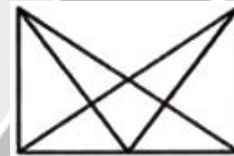
    (a)   12   (b)   17
    (c)   18   (d)   19

10. Rahul started walking straight towards East. He walks a certain distance and then turns his right and walks again. Find the direction he's walking now?
    (a)   North   (b)   East
    (c)   South   (d)   West

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11. A man walks 5 kms towards South and then turns to the right. After walking 3 kms, he turns to the left and walks 5 km. now, in which direction is he from the starting point?
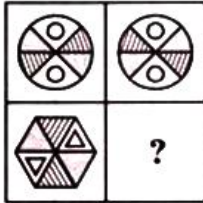
    (a) South   (b) South-West

    (c) North-west   (d) West

12. Which of the following can replace the question mark?

(a)   (b)

(c)   (d)

13. A is older than B but younger than C. D is younger than E but older than A. If C is younger than D, who is the eldest of all?

    (a) A   (b) E

    (c) D   (d) C

14. Which of the following represents the correct sequence?

    1. Seed   2. Flower

    3. Soil   4. Plant

    5. Fruit

    (a) 4,2,5,1,3   (b) 2,5,4,1,3

    (c) 3,2,1,5,4   (d) 3,1,4,2,5

15. Sugan ranks sixteenth from the top and forty ninth from the bottom in a class. How many students are there in the class?

    (a) 64   (b) 54

    (c) 65   (d) 66

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PART - II : MATHEMATICS

1. Area of a square is 49 cm². Its perimeter will be
   (a) 49 cm   (b) 7 cm
   (c) 28 cm   (d) 14 cm

2. What is the average of first 5 natural numbers?
   (a) 6   (b) 4
   (c) 8   (d) 3

3. What type of fraction is $\frac{32}{17}$?
   (a) Proper fraction   (b) Unit fraction
   (c) Equivalent fraction (d) Improper fraction

4. 1 cm = ____ mm.
   (a) 0.1   (b) 100
   (c) 10   (d) 1000

5. Smallest factor of any number is
   (a) 0   (b) 2
   (c) 1   (d) 3

6. HCF of 2 prime numbers is
   (a) 1   (b) 2
   (c) 0   (d) 3

7. The sum of place values of 7 in the number 278072 is
   (a) 70070   (b) 14
   (c) 70007   (d) 77000

8. 0 ÷ 9898 = ___
   (a) 9898   (b) 0
   (c) 1   (d) Not defined

9. Example of a proper fraction is
   (a) $\frac{16}{9}$ (b) $\frac{2}{1}$
   (c) $\frac{4}{9}$ (d) $\frac{9}{4}$

10. 1 gram = _____ kgs.
    (a) 10   (b) 100
    (c) 1000   (d) 0.001

11. Raju reads $\frac{3}{5}$ of a book. He finds that there are still 80 pages left to read. The total number of pages in the book are ____
    (a) 250   (b) 400
    (c) 800   (d) 200

12. $\frac{14}{3}$ divide by 7 is
    (a) 23   (b) $\frac{7}{3}$
    (c) $\frac{2}{3}$ (d) $\frac{3}{2}$

13. Compare: $\frac{9}{11}$ ____ $\frac{2}{5}$.
    (a) =   (b) >
    (c) <   (d) none

14. Fraction is part of a
    (a) Half   (b) Quarter
    (c) Whole   (d) Third quarter

15. At 3:25, the smaller angle formed between the two hands of a clock is
    (a) Obtuse   (b) Acute
    (c) Right   (d) None

16. Mixed fraction = nearest natural number + _____
    (a) Improper fraction (b) Proper fraction
    (c) Like fraction   (d) Complex fraction

17. Decimals having same number of decimal places is called
    (a) Like decimals   (b) Unlike decimals
   (c) Decimals   (d) Whole decimals

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18. Which of the following statements is correct?
    (a) Every prime number is odd.
    (b) Every even number is composite.
    (c) Sum of two odd numbers is always odd.
    (d) HCF of a given number is always a factor of their LCM.

19. Which of the following is a perfect square?
    (a) 28
    (b) 26
    (c) 25
    (d) 24

20. 2.5 kg = _____ grams
    (a) 250
    (b) 25000
    (c) 0.025
    (d) 2500

21. What will be the quotient when $\frac{21}{5}$ is divided by 3?
    (a) $\frac{7}{5}$
    (b) 7
    (c) $\frac{63}{15}$
    (d) $\frac{3}{5}$

22. Which among the following fractions is smallest?
    (a) $\frac{10}{13}$
    (b) $\frac{10}{8}$
    (c) $\frac{10}{19}$
    (d) $\frac{10}{10}$

23. What will be the answer when 8 is subtracted from the product of 7 and 8?
    (a) 48
    (b) 8
    (c) 64
    (d) None of the above

24. 8 sided polygon is called a
    (a) Hexagon
    (b) Octagon
    (c) Heptagon
    (d) Decagon

25. The average of first five prime numbers will be
    (a) 36
    (b) 7.2
    (c) 5
    (d) 5.6

26. Repeated addition is called
    (a) Subtraction
    (b) Division
    (c) Inverse
    (d) Multiplication

27. Which of the following statements is true?
    (a) (-23) = (23)
    (b) 49 > (-23)
    (c) 49 < (-23)
    (d) (-49) > 49

28. The measure of right angle is
    (a) 180°
    (b) 120°
    (c) 90°
    (d) 60°

29. By how much is 42 greater than 29?
    (a) 13
    (b) 71
    (c) 10
    (d) none

30. Rohan obtained 32 marks out of 50. The ratio of total marks to the marks scored by Rohan is
    (a) 32:50
    (b) 50:32
    (c) 1:1
    (d) 50:18

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PART - III : PHYSICS & CHEMISTRY

1. Two like poles of a magnet always ___
   (a) Attracts each other
   (b) Always Repel each other
   (c) Sometimes repel and sometimes attract
   (d) Can't say

2. Which of the following statements is true about using a hammer as a lever to pull a nail out of a piece of wood?
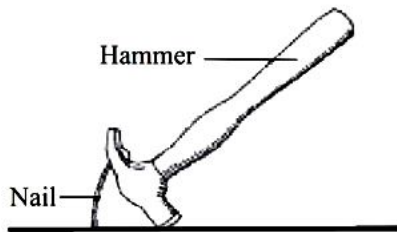
   (a) The load is much near to the fulcrum than the effort.
   (b) The lever changes the direction of the force.
   (c) We use larger force to pull out the nail with hammer as compared to pulling it out directly without using the hammer.
   (d) The pulling action is changed to the vertical lifting action on the nail.

3. X is a space object that orbits around sun but in an irregular orbit that intersects orbit of a planet. What is X?
   (a) Neptune   (b) Pluto
   (c) Titan   (d) Both (b) and (c)

4. A paper cutter is shown in the given figure. At which position P, Q, R or S should a straw be placed so that least force is applied to cut it?

   (a) P   (b) Q
   (c) R   (d) S

5. We see what we call lunar phases because of ___.
   (a) the changing amount of shadow on the Moon
   (b) the changing amount of light reflecting towards the Earth
   (c) the changing position of the Sun
   (d) the tilt of the Earth

6. Earthquake are measured in ___.
   (a) Rular   (b) Barometer
   (c) Richter Scale (d) None of the above

7. Water at 100 degrees temperature is in which state
   (a) solid   (b) liquid
   (c) gaseous   (d) more than one

8. 20 seconds equal to ___.
   (a) 1/4 minute   (b) 1/2 minute
   (c) 1/5 minute   (d) 1/3 minute

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9. Hot magma when reaches on Earth's surface is known as ___.
   (a) Lava
   (b) Cyclone
   (c) Crater
   (d) None of these

10. Global warming is the result of which of the following?
    (a) Air pollution
    (b) Water pollution
    (c) Noise pollution
    (d) Soil pollution

11. What happens to water when it is frozen
    (a) it become a gas
    (b) It become a liquid
    (c) It become a solid
    (d) It evaporates

12. What is the primary source of energy from the sun?
    (a) wind
    (b) solar
    (c) hydro
    (d) Geothermal

13. Which gas makes up the majority of earth atmosphere
    (a) Oxygen
    (b) carbon dioxide
    (c) Nitrogen
    (d) Hydrogen

14. In which state does matter have a definite shape but takes the shape of its container.
    (a) Solid
    (b) Liquid
    (c) gas
    (d) Plasma.

15. What is the chemical formula for carbon dioxide
    (a) H_2O
    (b) CO
    (c) CO_2
    (d) N_2

16. In which state do particles have the most onergy and move the fastest
    (a) solid
    (b) Liquidd
    (c) Gas
    (d) Nome of thabom

17. What do we call tiny solid particles or liquid droplets present in the air
    (a) Just
    (b) Haze
    (c) Aerosols
    (d) smog

18. What air is the approximate % of oxygen in air?
    (a) 21%
    (b) 31%.
    (c) 41%
    (d) 51%

19. What the chemical symbol of sodium
    (a) O
    (b) S
    (c) Na
    (d) F

20. Which of the following is a liquid at room temperature
    (a) ice
    (b) water
    (c) Steam
    (d) Rock

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PART - IV : BIOLOGY

1. Why most animals have one or two senses more important than the others
    (a) Because animals need to feed
    (b) Because animals are alive
    (c) Because animals need to adapt to their specific environments
    (d) Because animals have babies

2. Who has a very strong sense of smell by which they can differentiate a number of their own colony and the members from some other colony?
    (a) Ants   (b) Birds
    (c) Sheep   (d) Dolphins

3. Where does our food go, after we put it into the mouth and swallow it?
    (a) Liver   (b) Stomach
    (c) Small intestine   (d) Pancreas

4. In which of the following ways, do we lose water from our body?
    (a) Sweating   (b) Urination
    (c) Both a and b (d) None of the above

5. In the old days people used the bark of the ....tree to make medicine for malaria
    (a) Banyan   (b) Cinchona
    (c) Peepal   (d) mango

6. Which of the following seed has a rough texture?
    (a) Papaya   (b) Rajma
    (c) Apple   (d) All of the above

7. Which of are following are prevented by trees?
    (a) Soil erosion (b) Floods
    (c) Irregular rainfall   (d) All of the above

8. Every bee hive has how many queen bees.
    (a) 1   (b) 2
    (c) 3   (d) 4

9. What does Basava's father do?
    (a) Teaching   (b) Fishing
    (c) Farming   (d) Business

10. What are the symptoms that show that a person has malaria
    (a) Fever and stomach pain
    (b) Fever with chills and rigors
    (c) Fever, vomiting and loose motions
    (d) Indigestion and fever

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