IIT ASHRAM BRINGS...

Spread Your Wings

उड़ान

A QUEST FOR SCIENCE ASPIRANTS !

CLASS 5

SCIENCE APTITUDE TEST

TIME : 2 HOURS	MAX MARK : 300	DATE : 21- 01- 2023

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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PART - I : MENTAL ABILITY

1. Which shape does not fit with the others?

   (a)   (b)

   (c)   (d)
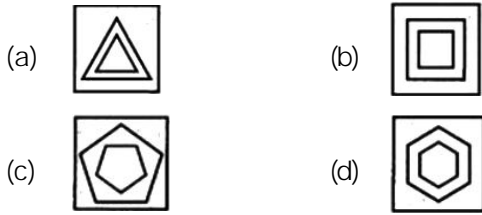
2. Find the missing term: E, D, C, ?, A
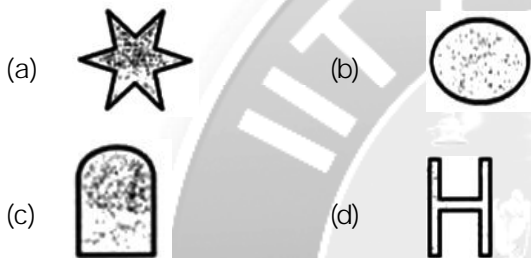   (a) K   (b) F
   (c) H   (d) B

3. Which shape will replace the question mark?

   (a)   (b)

   (c)   (d)

4. Arrange the words in meaningful order
   (1) Work   (2) Day
   (3) Night   (4) Sleep
   (a) 4,3,1,2   (b) 2,1,4,3
   (c) 2,1,3,4   (d) 1,2,3,4

5. Which letter in the word DESTINATION occupies the same position as it does in English alphabet?
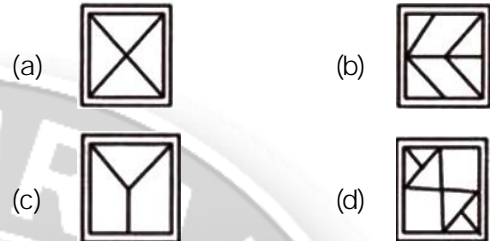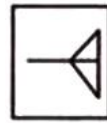   (a) O   (b) E
   (c) I   (d) T

6. In a certain code language, 'I will go' is written as 'ta ma ra' and 'I will eat' is written as 'ta ma ga', then code for 'eat' is
   (a) ga   (b) ma
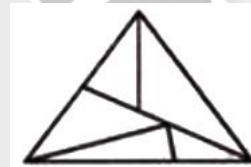   (c) ta   (d) ra

7. In a certain code SOBER is written as RNADQ. How LOTUS can be written in that code?
   (a) KMSTR   (b) MPUWT
   (c) KNSTR   (d) LMRST

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

   (a)   (b)

   (c)   (d)

9. Count the number of triangles in the following figure:

   (a) 6   (b) 7
   (c) 8   (d) 9

10. Rani goes to the market which is towards east from her house. If she has to return home, in which direction will she come?
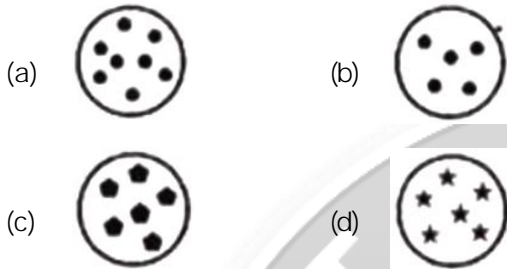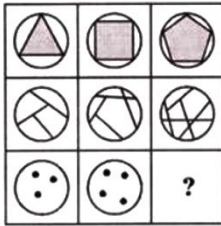   (a) North   (b) South
    (c) East   (d) West

11. Ruhi is moving towards North. She takes a right turn. After this, she turns right again. In which direction is she moving now?
    (a) South   (b) North
    (c) West   (d) East

Space for Rough Work

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


(a)

(b)

(c)

(d)

13. Pune is larger than Jhansi. Sitapur is larger than Chittore. Rajgarh is not as large as Jhansi but larger than Sitapur. Which is the smallest city out of these?
    (a) Pune   (b) Jhansi
    (c) Sitapur   (d) Chittore

14. Nikhil ranked 8th from the top in the class of 50 students. What is his rank from the bottom?
    (a) 42nd   (b) 43rd
    (c) 44th   (d) 45th

15. Rishi spent 25 minutes on his homework last night. He started at 5:50 pm. At what time will he finish his work?
    (a) 6:15 pm   (b) 5:10 pm
    (c) 5:15 pm   (d) 6:10 pm

PART - II : MATHEMATICS

1. The difference between successor and predecessor of 1000 is
    (a) 1   (b) 2
    (c) 1000   (d) 999

2. The largest 6 digit number ending with 8 is
    (a) 999999   (b) 900008
    (c) 100008   (d) 999998

3. The predecessor of 1 crore is
    (a) 1,00,00,000   (b) 99,99,999
    (c) 9,99,99,999   (d) 1,00,00,001

4. The polygon with seven sides is called
    (a) Hexagon   (b) Octagon
    (c) Heptagon   (d) Square

5. Which of the following is an odd number?
    (a) 2   (b) 4
    (c) 5   (d) 6

6. The three prime number between 1 and 20 are
    (a) 7, 11, 19   (b) 7, 9, 11
    (c) 11, 15, 19   (d) 5, 15, 18

7. I am a number between 660 and 665. I am divisible by 3 but not by 6. What number am I?
    (a) 661   (b) 662
    (c) 663   (d) 664

8. The largest prime number between 1 and 100 is
    (a) 89   (b) 99
    (c) 93   (d) 97

9. A factor of 91 is
    (a) 17   (b) 13
    (c) 31   (d) 19

Space for Rough Work

10. In the figure below, the measure of $\angle$ACB is
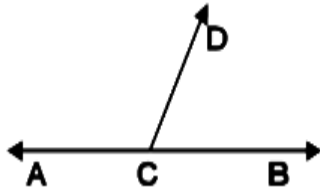
   (a) 120°   (b) 60°
   (c) 180°   (d) 360°

11. There are ____ types of triangles on the basis of sides.
   (a) 4   (b) 3
   (c) 2   (d) 1

12. Which of the following cannot be drawn by compasses?
   (a) Line   (b) Arc
   (c) Circle   (d) None of the above

13. A decagon has _____ sides.
   (a) 10   (b) 12
   (c) 14   (d) 8

14. The average of first 5 even numbers is
   (a) 6   (b) 10
   (c) 30   (d) 4

15. Aman buys a toy for Rs. 172 and sells it for Rs. 198. Which of the following is true?
   (a) There is a profit of Rs. 370
   (b) There is a loss of Rs. 26
   (c) There is a profit of Rs. 26
   (d) There is a loss of Rs. 370

16. Value of the expression 4 - (-7) is
   (a) 21   (b) 3
   (c) -11   (d) 11

17. Which of the following statements is false?
   (a) (-7) > (-4)   (b) (-9) < 9
   (c) (-100) > (-110)   (d) 0 < 10

18. 1 kilometre = _____ meter
   (a) 10   (b) 0.1
   (c) 1000   (d) 100

19. Zero is greater than any negative integer.
   (a) False   (b) True
   (c) Sometimes   (d) Can't say

20. $\frac{1}{24}$ of a day is
   (a) 24 hours   (b) 12 hours
   (c) 6 hours   (d) 1 hour

21. $\frac{7}{8}$ is what type of fraction?
   (a) Proper fraction   (b) Improper fraction
   (c) Unit fraction   (d) Mixed fraction

22. Area of square is 64 cm². Its perimeter will be
   (a) 16 cm   (b) 64 cm
   (c) 32 cm   (d) 128 cm

23. Length of a rectangle = area ÷ _____
   (a) Perimeter   (b) Breadth
   (c) Length   (d) Area

24. 300 in Roman numerals will be
   (a) XXX   (b) MMM
   (c) CCC   (d) LLL

25. The sum of 7 and $\frac{1}{9}$ is
   (a) $\frac{64}{9}$ (b) $\frac{8}{9}$
   (c) $\frac{9}{64}$ (d) $\frac{36}{9}$

Space for Rough Work

26. Product of a fractional number and its multiplicative inverse is

    (a)   0   (b)   1

    (c)   Fraction itself   (d)   None of the above

27. Which of the following fraction is the largest?

    (a) $\dfrac{3}{16}$ (b) $\dfrac{3}{2}$

    (c) $\dfrac{3}{8}$

    (d)   All the above given fractions are equal

28. Raju scored 16 marks out of 65. Its fraction will be

    (a) $\dfrac{65}{16}$ (b) $\dfrac{16}{65}$

    (c) $\dfrac{49}{65}$ (d)   none

29. 35 paise = _____ Rupees

    (a)   32   (b)   3.5

    (c)   0.35   (d)   0.035

30. Smallest factor of any number will be

    (a)   1   (b)   2

    (c)   3   (d)   0

PART - III : PHYSICS & CHEMISTRY

1. Magnetic compass _

    (a)   Always points in N-S direction.

    (b)   Used to find direction

    (c)   Is a magnet

    (d)   All of the above

2. The box in the given figure would be easier to move if the surface of the ramp was smoother because there would be less __
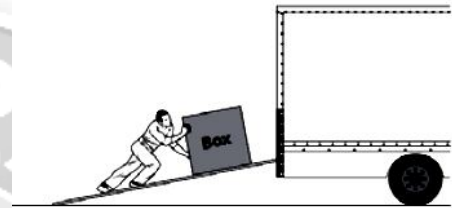
    (a)   Gravity pulling on the box.

    (b)   Friction opposing the box.

    (c)   Mass in the box

    (d)   Distance to pull the box

3. Which of the following statements is incorrect about the Sun?

    (a)   The Sun is a huge mass of very hot gases.

    (b)   The Sun is the only planet that we can see in the day.

    (c)   The distance of the Sun from Earth is about 150000000 km.

    (d)   The Sun is important to the Earth because it provides light energy to green plants to make food

Space for Rough Work

4. Which of the following statements is/are true ?
    I.   A force can change the shape of an object.
    II. A force cannot change the direction of a moving object.
    III. A force can be applied to stop a moving object.
    (a) I only   (b) III only
    (c) I and III only   (d) I, II and III

5. Which of the following is the nearest planet to the Sun?
    (a) Jupiter   (b) Earth
    (c) Mercury   (d) Mars

6. The shaking and trembling of earth is called_____.
    (a) Tsunami   (b) Volcano
    (c) Earthquake   (d) None of these

7. Which of the following is considered an invisible force?
    (a) Gravity   (b) Magnetic Force
    (c) Electrostatic force (d) All of the above

8. Distance between house and school is 3.2 km. Express this distance in cm.
    (a) 3200 cm   (b) 32000 cm
    (c) 320000 cm   (d) 0.32 cm

9. ___ holds the layer of air around the earth.
    (a) Friction   (b) Electricity
    (c) Gravity   (d) None of these

10. Presence of undesirable substances in water is known as ___.
    (a) Water cycle   (b) Water pollution
    (c) Water vapour   (d) All of the above

11. What is the chemical symbol for nitrogen, oxygen, chlorine respectively
    (a) O, N, P   (b) O, N, S
    (c) O, S, N   (d) N, O, CI

12. Which of the following is green house gas
    (a) Oxygen   (b) Nitrogen
    (c) Carbon dioxide   (d) Hydrogen

13. What % of the earth' surface is Covered by water
    (a) 50%   (b) 71%
    (c) 90%   (d) 30%

14. what is the process of changing a liquid into a gas called
    (a) Condensation   (b) Evaporation
    (c) Melting   (d) Freezing

15. What is the basic unit of matter
    (a) Atom   (b) Molecule
    (c) Element   (d) Compound

16. Which natural resource is derived from plants and animals
    (a) Minerals   (b) Rain water
    (c) Air   (d) Biomass

17. Which natural resource is crucial for plant growth and is absorbed by the roots from the soil?
    (a) Air   (b) Water
    (c) Sunlight   (d) Soil

18. What is the chemical formula of carbon monoxide
    (a) H_2O (b) CO_2
    (c) CO   (d) O_2

19. Which of the following is a component of Air?
    (a) Water vapour   (b) Oxygen gas
    (c) Nitrogen gas   (d) All of the above

20. Which of the following is a renewalbie resource?
    (a) Coal   (b) Sunlight
    (c) Petroleum   (d) Natural gas

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PART - IV : BIOLOGY

1. A tiger can at once come to know if there is another tiger in its area by the smell of the....
   (a) Saliva   (b) Sweat
   (c) Blood   (d) Urine

2. What are the five senses
   (a) Happy, sad, excited, bored, and stressed
   (b) Sight, hearing, smell, taste, and touch
   (c) To survive, to adapt, to live, to reproduce and to communicate
   (d) None of these

3. Why cannot we taste the food properly when we have a cold
   (a) The food is not tasty
   (b) Our tongue feels ill, when we have a cold
   (c) As we cannot smell the food, because 90% of taste come from its smell
   (d) When we have cold digestive system don't works

4. What are the after effects, if a child does not eat properly
   (a) Always feeling tired
   (b) Mostly feel lazy and weak
   (c) Mostly feels sick
   (d) All of these

5. Eating food exposed to the flies spread
   (a) Tuberculosis   (b) Measles
   (c) Cholera   (d) Tetanus

6. In which year did Ronald Ross get the Nobel prize for his discovery of malaria?
   (a) 1903   (b) 1905
   (c) 1902   (d) 1901

7. When seeds are kept in water, they get swelled and increased in size, called
   (a) Soaking of seeds
   (b) Resting of seeds
   (c) Sprouting of seeds
   (d) Germination of seed

8. Which of the following is a type of farming
   (a) Stone farming   (b) Jhoom farming
   (c) Both A and B   (d) None of these

9. How does a honey bee hurt a human
   (a) It sucks blood   (b) It bites
   (c) It tickles   (d) It stings

10. Which crop is Basa's father going to grow
    (a) Wheat   (b) Paddy
    (c) Onion   (d) Bajra

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