

All India Science Teachers' Association, West Bengal
SCIENCE APTITUDE AND TALENT SEARCH TEST - 2025

Time : 2 hr. 30 min.

Full Marks : 100

Class - VII

INSTRUCTIONS :

1) Write your name, class, name of school and roll number both at left and right side on the answer sheet. 2) In the question paper you will find four probable answers : a), b), c) and d) against each question. Find out which one of the answers is correct or the best. There are four circles on the answer sheet corresponding to each question below a), b), c) and d). Now mark the circle below the letter of selected answer by putting a cross mark distinctly with a ball pen. If c) is the correct answer, you are to mark ○○⊗○. 3) 1 mark will be awarded for each correct answer and 1 mark will be deducted for 3 wrong answers. 4) Don't write anything on the question paper. Don't mark answers on the question paper. Submit the answer sheet only after the examination. 5) You may use additional blank sheet for any rough work, if necessary. 6) Do not waste time for any question which appears difficult to you, better try next question. If you consider first answer to be wrong, blacken it like ● and put ⊗ on correct answer.

1. The main blood sucking tube in the body of mosquito is
a) labium b) labrum c) hypopharynx d) maxilla
2. A water-borne disease is
a) kala-azar b) influenza c) polio d) malaria
3. Rohan can't sit quietly in the class and also irritates his classmates continuously. The reason behind this problem is
a) autism b) inattentiveness
c) mental anxiety d) depression
4.

| | |
|--|--|
| Column I (Profession) | Column - II (Related diseases) |
| P. Cooking beside a coal-fired oven in sitting posture | i) Neck pain and problem of eye |
| Q. Carrying heavy load on head | ii) Problem in hand |
| R. Working as butcher | iii) Twisting of patella leading to tearing of cartilage |

- a) A is right and B is its correct explanation
- b) A is right but B is wrong
- c) A is wrong but B is right
- d) A is right but B is not its correct explanation

49-52. If a body starting with a velocity u moves with uniform acceleration f for a time t and thus traverses a distance S , then

$$S = ut + \frac{1}{2} ft^2.$$

Now a steady force is applied for 10 sec on a body of mass 5 kg at rest and it gains a final velocity 20m/s.

49. The acceleration of the body will be
- a) 2 m
 - b) 2 m/s
 - c) 4 m/s
 - d) 2 m/s²
50. After 10s the displacement of the body will be
- a) 40 m
 - b) 100 m
 - c) 50 m
 - d) 10 m
51. The force applied on the body in newton unit will be
- a) 10
 - b) 20
 - c) 5
 - d) 40
52. The magnitude of the work done by the applied force in joule unit will be
- a) 2000
 - b) 500
 - c) 1000
 - d) 100
53. The valency of phosphate radical in the compound Calcium Phosphate is
- a) 2
 - b) 3
 - c) 1
 - d) 5
54. The anion present in Sodium bicarbonate is
- a) HCO_3^-
 - b) CO_3^-
 - c) HCO_3^{2-}
 - d) HCO_3^+
55. Usually the nature of rain water is
- a) alkaline
 - b) acidic
 - c) neutral
 - d) either acidic or alkaline

20. In human body synovial fluid is present in
a) liver b) eye c) brain d) bone joint
21. The harmful substance that is mixed to prepare a cheap chocolate is
a) ajinamoto b) caramel
c) metanil yellow d) carageenan
22. Among children of 1 to 4 years old, the disease develops due to deficiency of protein is
a) ricket b) beriberi
c) kwashiorkor d) marasmas
23. The problem not related to the obesity is
a) pain in bone joint b) constant increase of blood pressure
c) decrease of diameter of blood vessels
d) decrease of level of haemoglobin in blood
24. The type of protein present in the tendon of human body is
a) actin b) myosin c) collagen d) fibrinogen
25. Information :
- A. Controlling mental ability and mental growth → Iron + Sodium
- B. Forming bones and teeth → Phosphorous + Vitamin D
- C. Coagulation of blood → Calcium + Vitamin K
- D. Normal contraction of muscles → Zinc + Magnesium
- From the given information the right option is
a) A & B b) B & C c) C & D d) A & D
26. Animals having 'blubber' in their body are
a) blue whale and penguin b) tiger and polar bear
c) sea horse and seal d) chimpanzee and shark

34-35. In case of image formation in a pin-hole camera

$$\frac{\text{Size of source of light}}{\text{Size of image}} = \frac{\text{Distance between the source of light and the pin hole}}{\text{distance between the image and the pin hole}}$$

34. if the size of image is double that of the source of light kept 5 cm apart from the hole of a pin-hole camera, the distance of the image from the hole in cm unit will be
a) 10 b) 20 c) 2.5 d) 15
35. if the size of the image of a source of light kept 5 cm apart from the hole of a pin-hole camera having length 20 cm is 8 cm, the size of the source of light in cm unit will be
a) 10 b) 32 c) 2 d) 4
36. If the increase in velocity of a body in one second is its acceleration, the S.I unit of acceleration will be
a) cm/s b) cm/s² c) m/s² d) m/s
37. When 58.7 cm is expressed in km its numerical value will be
a) 0.0000587 b) 0.0587 c) 0.00587 d) 0.000587
38. Unidirectional one among the following events is
a) melting of ice b) turning yellow of green leaves of plants
c) magnetisation of iron d) evaporation of water
39. Pressure remaining constant if the area of a surface be doubled, the magnitude of the applied force is to be
a) kept same b) doubled c) halved d) quadrupled
40. The formula of Potassium iodate is
a) KI b) KIO c) KIO₂ d) KIO₃

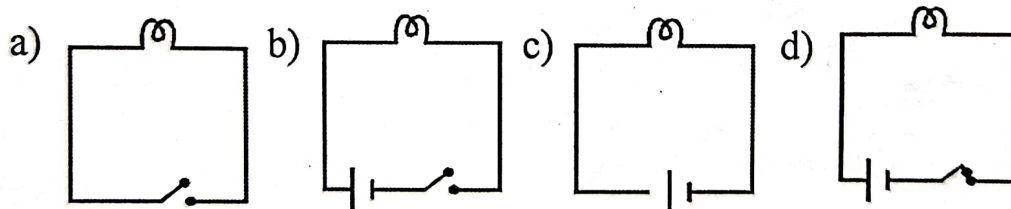
41-45. The names of some machines and their functions are given below.

| Machine | Functions |
|-------------|---------------------------------|
| A) Scissors | i) To cut & shape a solid |
| B) Pincers | ii) To dig a hole |
| C) Pulley | iii) To hoist the national flag |
| D) Crowbar | iv) To cut paper |
| E) Chisel | v) To bend a wire |

Compare the machines with their functions and answer the questions 41-45.

41. a) A → i b) B → ii c) C → v d) D → ii
42. a) B → ii b) C → iii c) D → iv d) E → v
43. a) C → v b) D → v c) E → i d) A → iii
44. a) D → iv b) E → v c) A → i d) B → v
45. a) C → v b) D → iv c) E → v d) A → iv

46. To glow the bulb the correct circuit in the following is



47. A person walks for 2 hr and 4 hr at uniform speed of 6 km/hr and 4.5 km/hr respectively. His average speed in km/hr unit in this whole journey is

- a) 4.5 b) 6 c) 5 d) 10

48. Read the following statements and choose the right option.

Statement A : When a bullet is fired from a gun it recoils.

Statement B : Action and reaction forces act on two different bodies and in opposite directions.

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49-52. If a body starting with a velocity u moves with uniform acceleration f for a time t and thus traverses a distance S , then

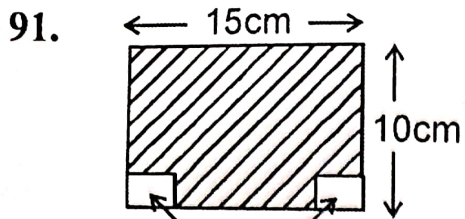
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 - b) acidic
 - c) neutral
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72. The greatest number which divides 1251, 9377, 15628 leaving remainders of 1, 2 and 3 respectively is
a) 600 b) 635 c) 25 d) 625
73. Three boys step off from the same place. If each of their steps measures 36 cm, 48 cm and 54 cm respectively, they will step together again from the starting point at the distance of
a) 268 cm b) 432 cm c) 144 cm d) 324 cm
74. $\sqrt{\sqrt{1600} + \sqrt{81}}$ is equal to
a) 49 b) 9 c) 40 d) 7
75. Number of vertices of a cone is
a) 2 b) 1 c) 3 d) 0
76. The year next to 1991 having the same calendar as that of 1990 is
a) 1998 b) 2001 c) 2002 d) 2003
77. If the diameter of a circle is 22 cm, then the radius of the circle is
a) 5.5 cm b) 44 cm c) 12 cm d) 11 cm
78. To draw an angle of 150° using compass and a ruler we should bisect
a) 120° and 180° angles b) 60° and 120° angles
c) 360° angle d) 0° and 60° angles
79. There are 8 apples, 12 oranges and 3 papayas in a basket. The ratio 8 : 23 numerically represents
a) oranges to apples b) apples to oranges
c) papayas to apples d) apples to all fruits
80. Jaita played basket ball against Ramita. She made 8 baskets for every 12 shots that she took. Number of baskets she would make in 60 shots at the same rate is
a) 24 b) 35 c) 40 d) 90

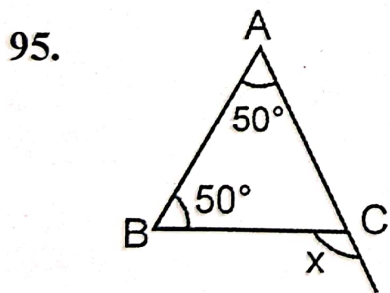
81. The co-efficient of x in the expression $2z - 3xz$ is
 a) 3 b) z c) $3z$ d) $-3z$
82. The value of the expression $z^3 - 2(z - 10)$ for $z = 10$ is
 a) 10 b) 100 c) 1000 d) 10000
83. The value of $\{(b - c)(b + c) + (c - a)(c + a) + (a - b)(a + b)\}$ is
 a) $b + c + a$ b) 0 c) $b^2 + ca + ab$ d) $b^2 + c^2 + a^2$
84. $\frac{103^2 - 97^2}{200}$ is equal to
 a) 3 b) 4 c) 5 d) 6
85. If $(a + b + c) = 12$ and $(a^2 + b^2 + c^2) = 100$ then $(ab + bc + ca)$ is equal to
 a) 23 b) 44 c) 22 d) 24
86. The number x is 3 less than the number y and the sum of the squares of x and y is 29, the product of x and y is
 a) 14 b) 10 c) 12 d) 20
87. The sum of $a + b - 1$, $b - a + 1$ and $1 - 2b$ is
 a) 1 b) -1 c) 2 d) -2
88. If the value of the expression $(x^2 - 5x + k)$ for $x = 0$ is 5, then the value of k is
 a) 2 b) 5 c) 3 d) 4
89. Rupanjan covers $5y$ cm in one step. Number of steps he takes to cover a distance of xy metres is
 a) $\frac{5x}{2y}$ b) $20x$ c) $20y$ d) $5y$
90. The difference between $(-19)^2$ and $-(19)^2$ is
 a) 76 b) 722 c) 0 d) -76



- Area of the shaded portion in the rectangular region is
- a) 200 sqcm b) 100 sqcm
c) 125 sqcm d) 150 sqcm

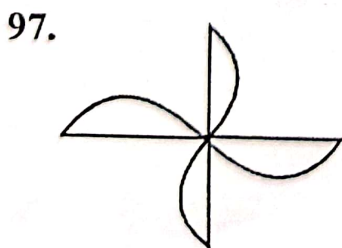
2 squares with
each side = 5 cm

92. Area of a square whose perimeter is 96 cm is
a) 576 sqcm b) 626 sqcm c) 726 sqcm d) 748 sqcm
93. In ΔABC , $\angle B = 6x$, $\angle C = 5x$ and $\angle A$ is 20° more than $\angle C$.
The largest angle of ΔABC is
a) $\angle A = 75^\circ$ b) $\angle B = 60^\circ$ c) $\angle A = 70^\circ$ d) $\angle B = 75^\circ$
94. The perpendicular from a vertex of a triangle to its opposite side is called
a) median b) diagonal c) base d) altitude



- The value of x in the given figure is
- a) 100° b) 60°
c) 120° d) 80°

96. Number of lines of symmetry in a regular pentagon is
a) 1 b) 5 c) 3 d) 2



- The order of rotational symmetry of the given figure is
- a) 3 b) 2 c) 4 d) 1

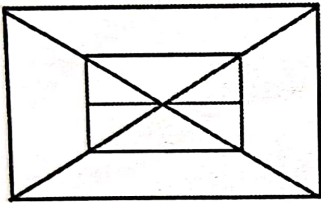
98. A car is running at a speed of 99 km/hr. The distance it will cover in 30 second is

- a) 850 m b) 900 m c) 875 m d) 825 m

99. A cyclist, after cycling a distance of 70 km on the second day, finds that the ratio of distance covered by him on the first two days is 4 : 5. If he travels a distance of 42 km on the third day, the ratio of distance travelled on the third day and the first day is

- a) 4 : 3 b) 3 : 4 c) 3 : 2 d) 2 : 3

100.



Number of horizontal line segments in the given figure is

- a) 4 b) 5
c) 3 d) 6

—: :—

white