

KH

Exam for
Young Scientists..!



J-2023

SCIENCE APTITUDE TEST

CLASS 5

ANSWER KEY WITH SOLUTION

DATE : 15.10.23

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PART - I : MENTAL ABILITY

1.

Sol. (c) South-East

2.

Sol. (c) Monika is the only daughter of his father and she is the sister of the boy in the photograph. So the boy will be the son of Monika's father. (c)

3.

Sol. (b) Pattern: $36 - 2 = 34$

$34 - 4 = 30$

$30 - 2 = 28$

$28 - 4 = 24$

$24 - 2 = 22$ (b)

4.

Sol. (d) Pattern: $3 + 1 = 4$

$4 + 3 = 7$

$7 + 1 = 8$

$8 + 3 = 11$

$11 + 1 = 12$

$12 + 3 = 15$ (d)

5.

Sol. (a) QPR

6.

Sol. (b) EK

7.

Sol. (d) Water → food

Food → tree

Tree → sky

Sky → wall

Fruit grows on tree but tree is called sky. (d)

8.

Sol. (b) Racket is not an electrical appliance. (b)

9.

Sol. (c) Coward. Antonyms (a)

10.

Sol. (d) Wife of Veena's husband is Veena. Sister (Kuhu) of her son will be her daughter. (d)

11.

Sol. (a) 5 9 3 2 1 7 4 2 6 9 7 4 6 1 3 2 8 7 4 1 3 8 3 2 5 6 7 4 3 9 5 8 2 0 1 8 7 4 6 3

Four (a)

12.

Sol. (a) North-east (a)

13.

Sol. (b) ROSE → 6821, CHAIR → 73456 and
PREACH → 961473
S = 2, E = 1, A = 4, R = 6, C = 7, H = 3
SEARCH → 214673 (b)

14.

Sol. (a) Cat

15.

Sol. (d) 10

PART - II : MATHEMATICS

1.

Sol. (a) $\frac{2 \div 2}{4 \div 2} = \frac{1}{2}$

2.

Sol. (c) 30 square unitsArea of rectangle = length x breadth = $10 \times 3 = 30$ sq. units (c)

3.

Sol. (c) 2 is the smallest prime number.

4.

Sol. (b) $\frac{3}{4} + \frac{1}{4} = \frac{4}{4} = 1$

5.

Sol. (b) Counting by 10 starting from 0: 0, 10, 20, 30, 40, ... **Ans.** Forth number: 30 (b)

6.

Sol. (c) 1 litre - 1000 ml

7.

Sol. (d) 4 and 9 are co-prime. So their product will be the LCM. $4 \times 9 = 36$ (d)

8.

Sol. (c) 1 min = 6°
20 min = 120°

9.

Sol. (c) 1 metre = 1000 mm

10.

Sol. (c) $\frac{1}{2}$ of 10 = $\frac{1}{2} \times 10 = 5$

11.

Sol. (c) Area of rectangle = length x breadth = $15 \times 9 = 135$ sq . metres (c)

12.

Sol. (d) Not defined

13.

Sol. (d) 1 day = 24 hours $\Rightarrow \frac{1}{4}$ of a day = $\frac{1}{4} \times 24 = 6$ hours

14.

Sol. (c) A pentagon has 5 diagonals

15.

Sol. (d) HCF of 7, 8 is 1. Co-prime of 8 will be 7

16.

Sol. (b) Isosceles triangle

17.

Sol. (d) $10 \div (2 \times 5) = 10 \div 10 = 1$

18.

Sol. (a) True

19.

Sol. (a) 1 litre = 1000 ml \Rightarrow 49 litre = 49000 ml

20.

Sol. (d) infinite

21.

Sol. (b) $2000 - 850 = 1150$

22.

Sol. (a) 1

23.

Sol. (c) 0

24.

Sol. (a) 1 ml = 0.001 litre \Rightarrow 50 ml = $0.001 \times 50 = 0.05$ litre

25.

Sol. (b) November has 30 days1 day \rightarrow Rs. 5030 days \rightarrow Rs. $(30 \times 50) =$ Rs. 1500

26.

Sol. (a) $3647 + 1 = 3648$

27.

Sol. (d) $49 = XLIX$

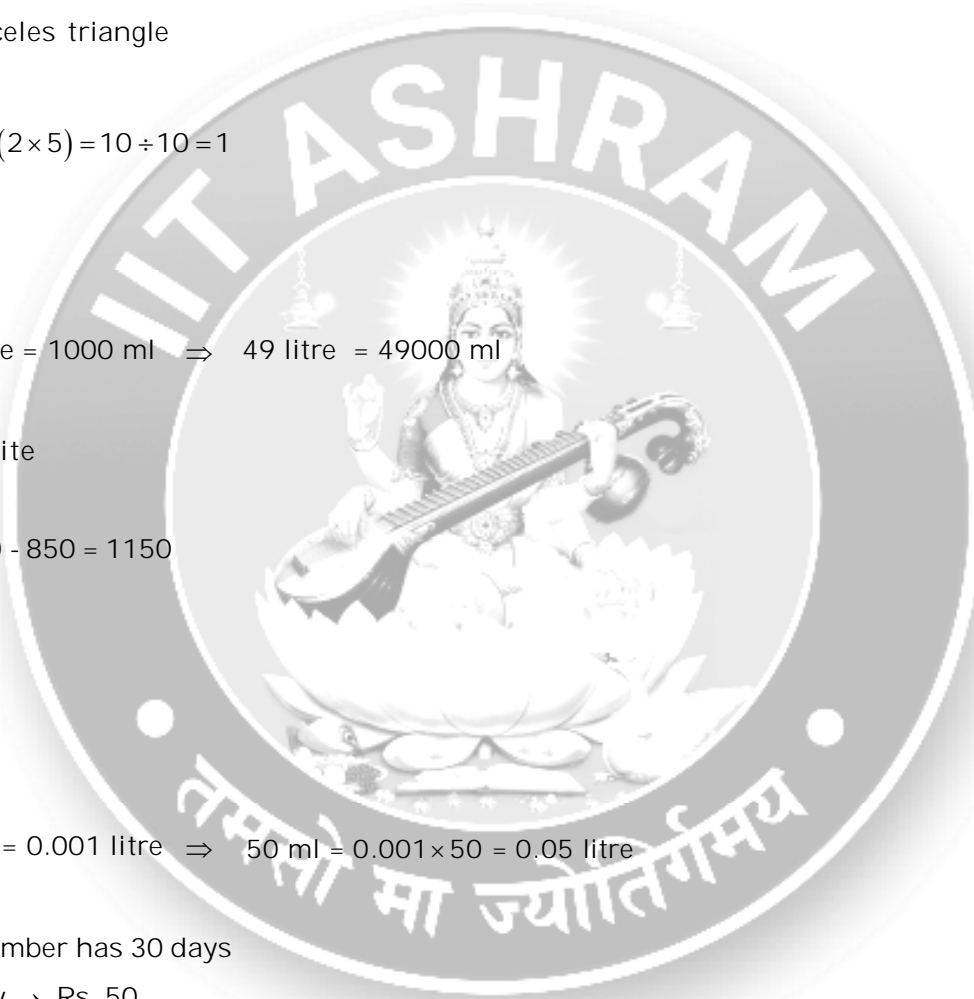
28.

Sol. (d) 1 cm = 0.01 metre \Rightarrow 324 cm = $324 \times 0.01 = 3.24$ m

29.

Sol: (c) 9999999

30.

Sol. (c) $9999 - 1 = 9998$ 

PART - III : PHYSICS & CHEMISTRY

1.

Sol. (a) Solar eclipse occurs when the moon "eclipses" the sun. This means that the moon, as it orbits the Earth, comes in between the sun and the Earth, thereby blocking the sun and preventing any sunlight from reaching us.

2.

Sol. (a) Venus, which can be seen with the unaided eye from Earth, is the brightest planet in our Solar System.

3.

Sol. (a) Renewable energy is energy produced from sources like the sun and wind that are naturally replenished and do not run out.

4.

Sol. (d) A mechanical device that changes the direction or magnitude of a force is known as a simple machine. A bicycle is a compound machine - an assembly of several simple machines.

5.

Sol. (b) Frictional force is the force generated by two surfaces that contact and slide against each other. Friction force opposes the relative motion between two surfaces of objects when they come in contact. Frictional force always acts in a direction opposite to the direction of applied force.

6.

Sol. (c) When light rays fall on an object their direction changes and they turn back. This is called the reflection of light. The rays falling on any surface are called incident rays. The point at which an incident ray falls is called the point of incidence.

7.

Sol. (d)

* White light is actually made of all of the colours of the rainbow because it contains all wavelengths.

* The properties of light are:

1. Light is a form of energy.
2. Light always travels along a straight line.
3. Light does not need any medium for its propagation.
4. Light can even travel through a vacuum.

8.

Sol. (c) Kilometers per hour is a unit of measurement using length in kilometers and time in hours, and thus it acts as a derived unit for speed.

Speed = Distance travelled per unit time.

9.

Sol. (b) The SI unit of work is joule (J).

10.

Sol. (c) Following are some precautions to be taken while measuring length with the help of a metre scale:

1. Scale must be placed in contact with the object along its length.
2. Eyes must be exactly perpendicular to the point where the measurement is to be taken, this avoid parallax error.

11.
Sol. (c) 0.93% Argon, nitrogen 78% oxygen 22% , Bromine is liquid
12.
Sol. (b) Oxygen gas helps in burning.
13.
Sol. (c) Human body contains upto 70%
14.
Sol. (c) Both evaporation and condensation clouds are formed due to evaporation and condensation
15.
Sol. (c) Feeling of cold is not a matter.
16.
Sol. (a) Gas state no definite volume and shape
17.
Sol. (c) Plastics are not natural resources
18.
Sol. (b) CO_2 in air = 0.03%
19.
Sol. (c) Plant obtain Nitrogen from Soil
20.
Sol. (d) Ozone gas Protects us From Ultra violet



PART - IV : BIOLOGY

1.
Sol. (a) Fertilizer is used to increase the fertility of soil
2.
Sol. (a) ORS is given when a person is suffering from vomiting and loose motion
3.
Sol. (a) Front part of the tongue is taste sweet.
4.
Sol. (a) Malaria is caused by the bite of female anophelese mosquito
5.
Sol. (d) Protein is known as the body building material
6.
Sol. (a) Acidic nature of digestive juice in the stomach
7.
Sol. (a) Lotus seeds are disperse by water
8.
Sol. (d) Harvesting is the step of farming when the crop is ready to cut
9.
Sol. (c) The lost animal lives in water
10.
Sol. (d) The X is Frog