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UDAAN

A QUEST FOR SCIENCE ASPIRANTS

SCIENCE APTITUDE TEST

CLASS - 5

SOLUTIONS

EXAM DATE : 21.12.25

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PART - I : MENTAL ABILITY

1.

Sol. (c) 3

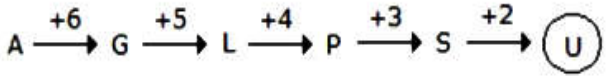
2.

Sol. (b) 22

This is an alternating number subtraction series. First, 2 is subtracted, then 4, then 2, and so on.

3.

Sol. (a) U

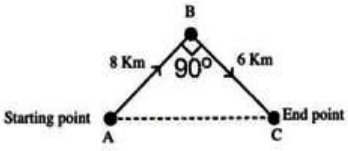


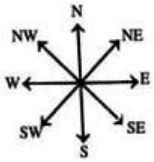
4.

Sol. (b) 2

5.

Sol. (b) 14 km, 10 km





According to the question,

Here, total distance = AB + BC

= 8 + 6 = 14 km

and shortest distance $AC=\sqrt{AB}^2+BC^2$

$=\sqrt{8}^2+6^2 = \sqrt{64}+36 = \sqrt{100} = 10\text{km}$

6.

Sol. (d) 34

This is a simple addition series with a random number, 8, interpolated as every other number. In the series, 6 is added to each number except 8, to arrive at the next number.

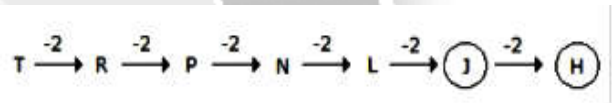
7.

Sol. (d) Veil

All except Veil cover the head, while veil covers the face.

8.

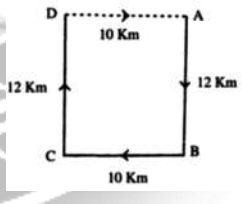
Sol. (b) J, H

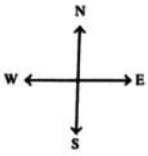


9.

Sol. (d) 10

According to the question, direction diagram of Vijay is a given below.





Let point A be the starting point and D be the final point of travelling of Vijay.

Now, Vijay's distance from starting point = AD = BC = 10 km

10.

Sol. (c) Explosion

All except Explosion are natural calamities.

11.

Sol. (a) 15

This is a simple alternating subtraction series, which subtracts 2, then 5

12.

Sol. (c) Both I and II follow

Using the chain rule of syllogism, "All cats are dogs" and "All dogs are animals" imply "All cats are animals" (1). Additionally, the second statement ensures "Some animals are dogs" (II). Hence, both conclusions follow.

13.

Sol. (b) 10

This is a simple alternating addition and subtraction series. In the first pattern, 3 is added; in the second, 2 is subtracted.

14.

Sol. (c) 25

In this simple alternating subtraction and addition series; 1 is subtracted, then 2 is added, and so on.

15.

Sol. (c) 3

(3)

PART - II : MATHEMATICS

1.

Sol. (c) 1000

1 kilometer = 1000 meters.

2.

Sol. (c) 2000 ml

1 liter = 1000 ml

$\Rightarrow$ 2 liters = 2 × 1000 = 2000 ml.

3.

Sol. (a) 23400

Multiplying by 100 adds two zeros to the number.

234 × 100 = 23400

4.

Sol. (a) 322

Dividend = Divisor × Quotient + Remainder

= 15 × 21 + 7 = 315 + 7 = 322.

5.

Sol. (a) Point

A point is a location in space. It has no dimensions.

6.

Sol. (b) Intersecting lines

When two lines cross each other at a point, they are called intersecting lines.

7.

Sol (b) -12

The opposite (or additive inverse) of +12 is -12.

8.

Sol. (a) -7

Let the other integer be x.

-5 + x = -12 $\Rightarrow$ x = -12 + 5 = -7

9.

Sol. (d) $\frac{1}{5}$

For fractions with same numerator, the one with largest denominator is smallest.

$\frac{1}{5}<\frac{1}{4}<\frac{1}{3}<\frac{1}{2}$

10.

Sol. (b) $\frac{7}{12}$

Fraction eaten = $\frac{5}{12}$

Fraction remaining

$= 1 - \frac{5}{12} = \frac{12-5}{12} = \frac{7}{12}$

11.

Sol. (a) Tenths

8.75 = 8 units, 7 tenths, 5 hundredths

7 is in tenths place.

12.

Sol. (a) 1.001, 1.01, 1.1, 1.11

1.001 < 1.01 < 1.1 < 1.11

13.

Sol. (b) Rs 85.00

42.50 × 2 = 85.00

14.

Sol. (c) 24 cm

Perimeter of square = 4 × side

= 4 × 6 cm = 24 cm

15.

Sol. (c) 60 m^2

Area = Length × Breadth = 10 × 6 = 60 m^2

16.

Sol. (d) Compass

17.

Sol. (a) 5

9 × 55 = 495

$\Rightarrow$ remainder = 500 – 495 = 5.

18.

Sol. (a) Vertex

In polygons, the corner points where two sides meet are called vertices.

19.

Sol. (a) -4

On a number line, numbers increase to the right.

-4 is to the right of -7, so -4 > -7.

20.

Sol. (a) $\frac{4}{6}$

$\frac{2}{3}\times\frac{2}{2}=\frac{4}{6}$. Both represent the same value.

21.

Sol. (a) 10 mm

1 cm = 10 mm.

22.

Sol. (b) 3200 g

1 kg = 1000 g $\Rightarrow$ 3 kg = 3000 g.

3 kg 200 g = 3000 + 200 = 3200 g.

23.

Sol. (c) Regular polygon

A regular polygon has equal sides and equal angles.

24.

Sol. (b) 366

A leap year has 366 days (February has 29 days).

25.

Sol. (b) 9 cm

Perimeter = 4 × side

$\Rightarrow$ side = Perimeter ÷ 4 = 36 ÷ 4 = 9 cm.

26.

Sol. (c) 12

Number of packets

= Total pencils ÷ Pencils per packet

= 144 ÷ 12 = 12.

27.

Sol. (b) 112

1568 ÷ 14 = 112

28.

Sol. (b) -2°C

3°C - 5°C = -2°C

29.

Sol. (b) 15

Absolute value is distance from zero, always non-negative.

|-15| = 15

30.

Sol. (c) 27

Let number be x.

$\frac{1}{3} \times x = 9 \Rightarrow x = 9 \times 3 = 27$

PART - III : PHYSICS & CHEMISTRY

1.

Sol. (c) Constellation

A constellation is a group of stars forming a recognizable pattern in the night sky (like Orion or Ursa Major).

2.

Sol. (b) Phases of the Moon occur because the Moon moves around Earth, and we see different lit portions of it.

3.

Sol. (b) Shadows form when an opaque object blocks light; light cannot pass through opaque objects.

4.

Sol. (c) Ice has very low friction, allowing skates to slide smoothly over its surface.

5.

Sol. (c) If an object changes its position, both distance and displacement must be non-zero.

6.

Sol. (c) The wheel of a sewing machine rotates about a fixed axis $\rightarrow$ rotatory motion.

7.

Sol. (b)

1 m = 100 cm

$1 \text{ cm} = \frac{1}{100} \text{m}$

$143.27 \text{ cm} = \frac{143.27}{100} \text{m} = 1.4327 \text{m}$

8.

Sol. (c) A stationary object has balanced forces acting on it $\rightarrow$ net force = zero.

9.

Sol. (a) Effort arm = distance between the effort and the fulcrum in a lever.

10.

Sol. (a) An inclined plane is a sloping surface that helps lift loads easily (like a ramp).

11.

Sol. (c) Gold is a solid, and solids have tightly packed particles.

12.

Sol. (d) Liquid → solid is called solidification, e.g., water turning to ice.

13.

Sol. (d) Salt fills in the empty spaces between water molecules, so water level does not rise.

14.

Sol. (b) Cooling causes particles to come closer ? matter contracts.

15.

Sol. (c) Both dust and smoke pollute air and harm health.

16.

Sol. (a) Hydrogen gas is not found in the atmosphere because it is too light and escapes into space.

17.

Sol. (b) Tap water contains water + dissolved minerals + impurities → it is a mixture.

18.

Sol. (a) Plants absorb nitrogen in the form of nitrates from the soil.

19.

Sol. (b) "Catch water where it falls" means storing rainwater directly → rainwater harvesting.

20.

Sol. (d) **Graphite is:**

Slippery

Conducts electricity

Non-magnetic

Conducts heat

Hence correct options = (i), (ii), (iv), (v).

PART - IV : BIOLOGY

1.

Sol. (b) Liver

Bile is produced by the liver. It is stored in the gallbladder and helps in the digestion of fats.

2.

Sol. (c) Oesophagus

The food pipe is called the oesophagus, which carries food from the mouth to the stomach.

3.

Sol. (b) Embryo

The tiny baby plant inside a seed is the embryo.

Cotyledon = food storage

Plumule = part that grows into shoot

Seed coat = outer covering

4.

Sol. (b) Light and hairy

Seeds carried by wind are light, hairy, or have wings to help them float in the air (e.g., cotton seeds).

5.

Sol. (b) Anopheles

Anopheles mosquito spreads malaria by transmitting the Plasmodium parasite.

6.

Sol. (b) Rice

Rice requires the most water among the given crops and grows in waterlogged fields.

7.

Sol. (b) Soil erosion

Deforestation removes trees whose roots hold soil in place. Without them, soil erosion increases.

8.

Sol. (a) Both A and R are true, and R is the correct explanation of A.

Honey bees communicate using a waggle dance.

The dance shows the direction and distance of food.

So R correctly explains A.

9.

Sol. (a) Both A and R are true, and R is the correct explanation of A.

Ants secrete chemicals called pheromones, which can be sensed by other ants and help them follow the trail due to their strong sense of smell.

10.

Sol. (b) It has fibres that help it float

Coconut seeds are covered with fibrous husk, which traps air and helps them float on water for dispersal.