

Class-X

SECTION-A : SCIENCE

1. Which of the following is not a property of particles of a matter?
(A) Particles of matter are extremely small (B) Particles of matter have spaces between them.
(C) Particles of matter are in stationary state (D) Particles of matter possess kinetic energy.

Ans. (C)

2. What is the removal of clear layer of the liquid, without disturbing the settled solid, known as?
(A) Evaporation (B) Condensation (C) Filtration (D) Segregation

Ans. (C)

3. If the atomic mass of Helium is 4u, how many moles will be there in 52g of Helium?
(A) 4 (B) 1 (C) 13 (D) 108

Ans. (C)

4. In which direction will water flow if a cell is kept in an isotonic solution?
(A) From inside the cell to outside (B) From outside the cell to inside
(C) Will not flow (D) Into the nucleus of the cell

Ans. (C)

5. What kind of tissue is a bone?
(A) Muscular Tissue (B) Connective Tissue
(C) Epithelial Tissue (D) Nervous Tissue

Ans. (B)

6. Which group of plants produces seeds but not fruits?
(A) Gymnosperm (B) Pteridophyta (C) Thallophyta (D) Angiosperm

Ans. (A)

7. What would the distance-time graph look like if an object has zero acceleration?
(A) A curve (B) A circle (C) A point (D) A straight line

Ans. (D)

8. What is the relation between force on a body, F and its momentum, p?
(A) $F = m \times p$ (B) $F = p \times t$ (C) $p = F/a$ (D) $F = p/t$

Ans. (D)

9. What is the unit of relative density?
(A) kg/m^3 (B) g/cm^3 (C) kg/m^2 (D) It is unitless

Ans. (D)

10. Apis dorsata is a variety of bee from which country?
- (A) Italy (B) India
 (C) United States of America (D) Russia

Ans. (B)

SECTION-B : MENTAL ABILITY

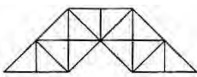
11. Each question consists of five statements followed by options consisting of three statements put together in a specific order. Choose the option which indicates a valid argument, that is where the third statement is a conclusion drawn from the preceding two statements.

- A. Apples are not sweets.
 B. Some apples are sweets.
 C. All sweets are tasty.
 D. Some apples are not tasty.
 E. No apple is tasty.

- (A) CEA (B) BDC (C) CBD (D) EAC

Ans.(A)

12. How many triangles are there in the following figure?



- (A) 25 (B) 20 (C) 31 (D) 29

Ans. (D)

13. How many 7s immediately preceded by 6 but not immediately followed by 4 are there in the following series?

7 4 2 7 6 4 3 6 7 5 3 5 7 8 4 3 7 6 7 2 4 0 6 7 4 3

- (A) One (B) Two (C) Four (D) Six

Ans. (B)

14. Find the next term in the series: 10, 19, 40, 77, 158, ?

- (A) 311 (B) 307 (C) 301 (D) 299

Ans. (A)

15. When the time by the watch is 20 minutes past 7, the angle between the hands of the watch is

- (A) 100° (B) 90° (C) 80° (D) 95°

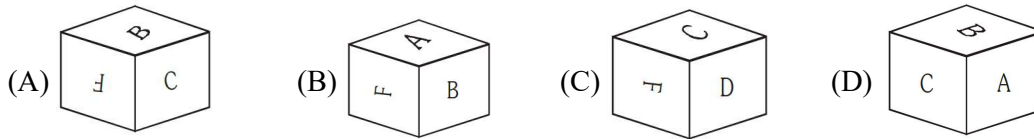
Ans. (A)

16. If 12th March 1986 was Wednesday, then 31st March 1994 would be

- (A) Wednesday (B) Thursday (C) Friday (D) Saturday

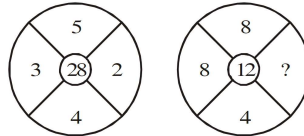
Ans.(B)

17. Of the following figures, which figure does not belong to the cube?



Ans.(D)

18. Find the missing term in the following Figure



- (A) 3 (B) 9 (C) 1 (D) 2

Ans.(D)

19. $P \neq Q$ implies that Q is standing 2 km to the right of P $P * Q$ implies that Q is standing 2km to the left of P $P @ Q$ implies that Q is standing 2km below P.

If $F \neq S @ B * V$, in which direction is F with respect to V?

- (A) North (B) south (C) East (D) West

Ans.(A)

20. In a game "Pass the ball" position of some players are as follows 'A' is 20 meters to the north of 'B' who is 18 meters to the east of 'C'. If the ball was initially with B and is passed to C, in which direction A is to C ?

- (A) North-East (B) North-West (C) South-East (D) None of these

Ans.(A)

SECTION-C : MATHEMATICS

21. A copper wire, when bent in the form of a square, encloses an area of 484 cm^2 . If the same wire is bent in the form of a circle, the radius of the circle will be

- (A) 10 cm (B) 14 cm (C) 15 cm (D) 21 cm

Ans.(B)

22. If $A : B = 2 : 3$, $B : C = 4 : 5$, and $C : D = 6 : 7$ then $A : B : C : D$ is

- (A) 16 : 22 : 30 : 35 (B) 16 : 24 : 15 : 35
(C) 16 : 24 : 30 : 35 (D) 18 : 24 : 30 : 35

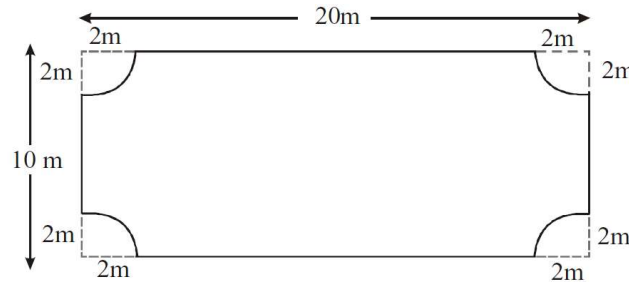
Ans. (C)

23. A car travels the first $\frac{1}{3}$ of a certain distance with a speed of 10 km/h, the next one third distance with a speed of 20 km/h and last $\frac{1}{3}$ distance with a speed of 60 km/h. The average speed of the car for the whole journey is

(A) 18km/h (B) 24km/h (C) 30km/h (D) 36km/h

Ans.(A)

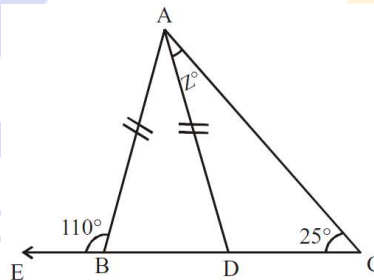
24. Evaluate the perimeter of the figure given below to one decimal place.



(A) 56.0 m (B) 56.6 m (C) 57.2 m (D) 57.9 m

Ans. (B)

25. In the figure, given below find $\angle Z$.



(A) 40° (B) 110° (C) 45° (D) None

Ans. (C)

26. The rates of simple interest in two banks A and B are in the ratio 5:4. A person wants to deposit his total savings in two banks in such a way that he received equal half yearly interest from both. He should deposit the saving in banks A and B in the ratio

(A) 5:2 (B) 2:5 (C) 4:5 (D) 5:4

Ans. (C)

27. The linear equation $3x - 11y = 10$ has:

(A) Unique solution (B) Two solutions
 (C) Infinitely many solutions (D) No solutions

Ans. (C)

28. A binomial of degree 20 in the following is:

- (A) $20x + 1$ (B) $x/20 + 1$ (C) $x^{20} + 1$ (D) $x^2 + 20$

Ans. (C)

29. The probability of each event lies between:

- (A) 1 & 2 (B) 1 & 10 (C) 0 & 1 (D) 0 & 5

Ans. (C)

30. If E and F are the midpoints of equal sides AB and AC of a triangle ABC. Then:

- (A) $BF=AC$ (B) $BF=AF$ (C) $CE=AB$ (D) $BF = CE$

Ans. (D)

