1. Area of verandah of width $4m$ around a house of dimensions $17m$ by $17m$ is

(a) $281m^2$ (b) $208m^2$ (c) $289m^2$ (d) $336m^2$

2. If the base of a triangle is tripled and its height is halved, then the ratio of the area of new triangle formed to the area of original triangle is

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

3. The perimeter of a parallelogram whose adjacent sides measure $6cm$ and $11cm$, is

(a) $17cm$ (b) $66cm$ (c) $34cm$ (d) $33cm$

4. Find the height of a parallelogram whose base is – $24cm$ and area is $283.2cm^2$.

(a) $11.8cm$ (b) $23.6cm$ (c) $5.9cm$ (d) None of these

5. The area of largest circle cut from a square of side $10.5cm$ is

(a) $86.625cm^2$ (b) $346.5cm^2$ (c) $1386cm^2$ (d) $38.5cm^2$

6 If it is rebent in circular shape, then find the area of the circle.

(a) $24715m^2$ (b) $13209m^2$ (c) $12474m^2$ (d) None of these

7. The distance between the parallel sides of a trapezium of measure $9cm$ and $17cm$ and having area $143cm^2$ is

(a) $13cm$ (b) $26cm$ (c) $11cm$ (d) Nune of these

8. The area of a trapezium is 4,400 sq. m. One of its parallel sides is $75m$. If the distance between the parallel sides is $80m$. Find the length of the other parallel side.

(a) $45m$ (b) $25m$ (c) $32m$ (d) $35m$

9. The area of quadrilateral whose one diagonal is $23cm$ long and perpendicular dropped on it from opposite vertices are $6cm$ and $8cm$, is

(a) $161cm^2$ (b) $124cm^2$ (c) $116cm^2$ (d) None of these

10. Area of a rhombus whose diagonals measure $6cm$ and $12cm$, is

(a) $36cm^2$ (b) $72cm^2$ (c) $54cm^2$ (d) can't be determined

11. If one diagonal of a rhombus of area $116m^2$ is $29m$, then the other diagonal is

(a) $16m$ (b) $12m$ (c) $4m$ (d) $8m$

12. Which of the following is true?

(a) A cube has all its faces identical. (b) A cuboid has three pairs of identical faces.

(c) A cylinder has one pair of identical faces. (d) All of these.

13. The cost of painting the walls of a room of dimensions $9\text{m} \times 7\text{m} \times 4\text{m}$ at the rate of ₹ 24 per m^2 is

(a) ₹ 1280 (b) ₹ 3072 (c) ₹ 6400 (d) ₹ 1600

14. Find the ratio of the lateral surface area of two cubes, if the length of the edge of smaller cube is one–fourth the length of the edge of bigger cube.

(a) 64: 13 (b) 1: 4 (c) 16: 13 (d) 1: 16

15. The surface area of an open cylindrical vessel of radius 11.2m and height 90cm is

(a) 45760m^2 (b) 457.6m^2 (c) 457600cm^2 (d) 45760cm^2

16. The ratio between the curved surface area and the total surface area of a right circular cylinder is 4: 7. Find the ratio of the radius to the height of the cylinder.

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

17. The volume of a cuboidal box of base area 114m^2 and height 80cm is

(a) 9120m^3 (b) 91.2m^3 (c) 91200m^3 (d) 912m^3

18. How many cubes of edge 20mm are used to form a cube of edge 4cm ?

(a) 80 (b) 800 (c) 8 (d) 8000

19. The volume of a cylinder of radius 4cm and height 6cm is_____ approximately.

(a) 302cm^3 (b) 75.36cm^3 (c) 100.48cm^3 (d) None of these

20. How many coins of diameter 3.5cm and thickness 2mm must be melted to form a cuboid of dimensions $11\text{cm}\times 5\text{cm}\times 7\text{cm}$?

(a) 800 (b) 1600 (c) 400 (d) 200

21. A water tank is filled with 108000 litres of water. Its length and breadth are 6m and 3m respectively. What is the height of the water in the tank?

(a) 9m (b) 4m (c) 18m (d) 6m

22. A cube of side 5cm is painted on all its faces. If it is sliced into 1 cubic centimetre cubes, how many 1 cubic centimetre cubes will have exactly one of their faces painted?

(a) 27 (b) 42 (c) 54 (d) 142

23. A circle of maximum possible size is cut from a square sheet of board. Subsequently, a square of maximum possible size is cut from the resultant circle. What will be the area of the final square?

(a) $\frac{3}{4}$ of original square. (b) $\frac{1}{2}$ of original square.

(c) $\frac{1}{4}$ of original square. (d) $\frac{1}{3}$ of original square.

24. If the height of a cylinder becomes $\frac{1}{4}$ of the original height and the radius is doubled, then which of the following will be true?

(a) Volume of the cylinder will be doubled.

(b) Volume of the cylinder will remain unchanged.

(c) Volume of the cylinder will be halved.

(d) Volume of the cylinder will be $\frac{1}{4}$ of the original volume.

25. If the height of a cylinder becomes $\frac{1}{4}$ of the original height and the radius is doubled, then which of the following will be true?
   (a) Total surface area of the cylinder will be doubled.
   (b) Total surface area of the cylinder will remain unchanged.
   (c) Total surface of the cylinder will be halved.
   (d) None of the above.

26. A regular hexagon is inscribed in a circle of radius r. The perimeter of the regular hexagon is
   (a) 3 r (b) 6 r (c) 9 r (d) 12 r

27. The volume of a cube is $64\,cm^3$. Its surface area is

(a) $16\,cm^2$ (b) $64\,cm^2$ (c) $96\,cm^2$ (d) $128\,cm^2$

28. The volume of a cube whose edge is 3 x is

(a) $27\,x^3$ (b) $9\,x^3$ (c) $6\,x^3$ (d) $3\,x^3$

29. The area of a parallelogram is $60\,cm^2$ and one of its altitude is $5\,cm$. The length of its corresponding side is

(a) $12\,cm$ (b) $6\,cm$ (c) $4\,cm$ (d) $2\,cm$

30. A covered wooden box has the inner measures as $115\,cm, 75\,cm$ and $35\,cm$ and thickness of wood as $2.5\,cm$. The volume of the wood is

(a) $85,000\,cm^3$ (b) $80,000\,cm^3$ (c) $82,125\,cm^3$ (d) $84,000\,cm^3$

31. The surface areas of the six faces of a rectangular solid are 16,16,32,32,72 and 72 square centimetres. The volume of the solid in cubic centimetres, is

(a) 192 (b) 384 (c) 480 (d) 2592

Assertion Reasoning :

(a) If both Assertion and Reason are true and Reason is the correct explanation of Assertion.

(b) If both Assertion and Reason are true but Reason is not the correct explanation of Assertion.

(c) If Assertion is true but Reason is false.

(d) If statement I is false but Statement II is true.

32. **Assertion:** The area of a trapezium is $702\,cm^2$. If the parallel sides are $26\,cm$ and $32.5\,cm$ long, then the distance between them is $24\,cm$.

Reason : Area of a trapezium = half of the sum of the lengths of parallel sides times perpendicular distance between them.

33. **Assertion:** Diagonal of a cube with side s is $\sqrt{3}s$.

Reason: Diagonal of a square with side s is $\sqrt{2}s$.

34. **Assertion:** The lateral surface area of a cube of side $8\,cm$ is $256\,cm^2$.

Reason: Total surface area of cube $= 6(\text{ side })^2$

35. **Assertion:** If the radius and the height of the cylinder are equal to r then its curved surface area is $2\pi r^2$.

Reason: Area of top and bottom part of the cylinder are not always same.

36. **Assertion:** The volume of the cuboid formed by stacking 100 rectangular sheets each of area $37\,cm^2$ and thickness $2\,mm$ is $740\,cm^3$.

Reason: Volume of cuboid = Base area $\times$ Height.

37. **Assertion:** The perimeter of rhombus of diagonals measuring $56\,cm$ and $42\,cm$ is $70\,cm$.
Reason: Diagonals of rhombus bisects each other at right angle.

38. **Assertion:** If a rectangular sheet is folded to form a cylinder of base radius $7\,cm$ and height $16\,cm$, then area of sheet is $704\,cm^2$.

Reason: Curved surface area of cylinder $= 2\pi r(r+h)$

39. **Assertion:** The volume of a cubical box whose edge is 2 r is $8r^3$.

Reason: Volume of a cube $= 6(\text{ side })^2$

ANSWERS

1. D 2. C 3. C 4. A

5. A	6 C	7. C	8. D
9. A	10. A	11. D	12. D
13. B	14. D	15. B	16. D
17. B	18. C	19. A	20. D
21. D	22. C	23. B	24. B
25. D	26. B	27. C	28. A
29. A	30. C	31. A	32. A
33. B	34. B	35. C	36. A
37. D	38. C	39. C	