1. $\triangle \mathrm{ABC}$ is isosceles in which $\mathrm{AE} \perp \mathrm{BC}, \mathrm{AE}=6 \mathrm{~cm}, \mathrm{BC}=9 \mathrm{~cm}$, the area of $\triangle \mathrm{ABC}$ is
(a) $27 \mathrm{~cm}^{2}$
(b) $54 \mathrm{~cm}^{2}$
(c) $22.5 \mathrm{~cm}^{2}$
(d) $45 \mathrm{~cm}^{2}$
2. The area of parallelogram is
(a) base + height
(b) base x height
(c) base x base
(d) height x height
3. The base in the area of parallelogram is
(a) $\frac{\text { area }}{\text { height }}$
(b) $\frac{\text { height }}{\text { area }}$
(c) area $x$ base
(d) area x height
4. The height in the area of parallelogram is
(a) $\frac{\text { area }}{\text { base }}$
(b) $\frac{\text { base }}{\text { area }}$
(c) area $x$ base
(d) area $x$ height
5. Which of the following has the formula: Base $x$ Height
(a) area of parallelogram
(b) area of quadrilateral
(c) area of triangle
(d) area of trapezium
6. The area of triangle is
(a) base $x$ height
(b) $\frac{1}{2} \mathrm{x}$ base x height (c) $\frac{1}{2} \mathrm{x}($ base + height $)(\mathrm{d})$ base + height
7. The height in the area of a triangle
(a) $\frac{2 . \text { area }}{\text { base }}$
(b) $\frac{2 . b a s e}{\text { area }}$
(c) $\frac{\text { base }}{2 . a r e a}$
(d) $\frac{\text { area }}{2 . b a s e}$
8. The area of the given parallelogram in the below left figure is
(a) $98 \mathrm{~cm}^{2}$
(b) $77 \mathrm{~cm}^{2}$
(c) $49 \mathrm{~cm}^{2}$
(d) none of these

9. The area of the given rectangle in the above sided right figure is
(a) $98 \mathrm{~cm}^{2}$
(b) $77 \mathrm{~cm}^{2}$
(c) $49 \mathrm{~cm}^{2}$
(d) none of these
10. The area of the given parallelogram in the below left figure is
(a) $98 \mathrm{~cm}^{2}$
(b) $77 \mathrm{~cm}^{2}$
(c) $49 \mathrm{~cm}^{2}$
(d) none of these

11. The area of the given triangle in the above sided right figure is
(a) $98 \mathrm{~cm}^{2}$
(b) $77 \mathrm{~cm}^{2}$
(c) $49 \mathrm{~cm}^{2}$
(d) none of these
12. The area of the given square in the below left figure is
(a) $98 \mathrm{~cm}^{2}$
(b) $77 \mathrm{~cm}^{2}$
(c) $49 \mathrm{~cm}^{2}$
(d) none of these

13. The area of the garden (shaded portion) in the above sided right figure is
(a) $300 \mathrm{~m}^{2}$
(b) $625 \mathrm{~m}^{2}$
(c) $325 \mathrm{~m}^{2}$
(d) none of these
14. The perimeter of the below left figure is
(a) 11.6 cm
(b) 14.6 cm
(c) 12.8 cm
(d) none of these

15. The perimeter of the above sided right figure is
(a) 11.6 cm
(b) 14.6 cm
(c) 12.8 cm
(d) none of these
16. The perimeter of the below left figure is
(a) 11.6 cm
(b) 14.6 cm
(c) 12.8 cm
(d) none of these

17. The area of the above sided right figure is
(a) $24 \mathrm{~cm}^{2}$
(b) $48 \mathrm{~cm}^{2}$
(c) $49 \mathrm{~cm}^{2}$
(d) none of these
18. What will be the area of circular button of radius 7 cm
(a) $154 \mathrm{~cm}^{2}$
(b) $49 \mathrm{~cm}^{2}$
(c) 154 cm
(d) $3.14 \times 7 \mathrm{~cm}^{2}$
19. The circumference of circle whose diameter is 14 cm will be
(a) 44 cm
(b) 88 cm
(c) $44 \mathrm{~cm}^{2}$
(d) $88 \mathrm{~cm}^{2}$
20. The perimeter of circle is its
(a) area
(b) circumference
(c) radius
(d) diameter
21. Diameter is $\qquad$ .
(a) twice radius
(b) half radius
(c) equal to radius
(d) one-third of radius
22. $\pi$ (pi) is
(a) ratio of circumference to diameter
(b) diameter to circumference
(c) $21 / 17$
(d) 3.41
23. If the area of circle is $44 \mathrm{~cm}^{2}$, the perimeter will be
(a) $11 \mathrm{~cm}^{2}$
(b) 11 cm
(c) $22 \mathrm{~cm}^{2}$
(d) none of these
24. If the radius of pipe is 1 cm , the circumference of pipe will be
(a) 62.8 cm
(b) 6.28 cm
(c) $62.8 \mathrm{~cm}^{2}$
(d) 6.28 cm
25. The circumference of a circle is
(a) $\pi r$
(b) $\pi r^{2}$
(c) $\pi \times 2 \mathrm{r}$
(d) $\pi+2 r$
26. The diameter of a circle is
(a) $\mathrm{r}^{2}$
(b) 2 r
(c) $2 \pi r^{3}$
(d) $\pi r^{2}$
27. Which of the following is an example of circle?
(a) a chair
(b) a bottle cap
(c) a cup
(d) a table
28. The area of a circle is
(a) $2 \pi \mathrm{r}$
(b) $2 \pi r^{2}$
(c) $\pi r^{2}$
(d) $\pi d$
29. $1 \mathrm{~m}^{2}=$ $\qquad$ .
(a) $100 \mathrm{~cm}^{2}$
(b) $1000 \mathrm{~cm}^{2}$
(c) $10000 \mathrm{~m}^{2}$
(d) $10000 \mathrm{~cm}^{2}$
30. One hectare is equal to
(a) $100 \mathrm{~m}^{2}$
(b) $1000 \mathrm{~m}^{2}$
(c) $10,000 \mathrm{~m}^{2}$
(d) $10,000 \mathrm{~m}$
31. The circumference of a circle with radius 7 cm is
(a) 11 cm
(b) 22 cm
(c) 44 cm
(d) 49 cm
32. The area of a circle is $49 \pi \mathrm{~cm}^{2}$. Its circumference is
(a) $7 \pi \mathrm{~cm}$
(b) $14 \pi \mathrm{~cm}$
(c) $21 \pi \mathrm{~cm}$
(d) $28 \pi \mathrm{~cm}$
33. The perimeter of circular field is 242 cm . The area of the field is
(a) $9317 \mathrm{~cm}^{2}$
(b) $18634 \mathrm{~cm}^{2}$
(c) $4658.5 \mathrm{~cm}^{2}$
(d) none of these
34. The area of a circle is $38.5 \mathrm{~cm}^{2}$. Its circumference is
(a) 62 cm
(b) 12.1 cm
(c) 11 cm
(d) 22 cm
35. The difference between the circumference and radius of a circle is 37 cm . The area of the circle is
(a) $111 \mathrm{~cm}^{2}$
(b) $184 \mathrm{~cm}^{2}$
(c) $154 \mathrm{~cm}^{2}$
(d) $259 \mathrm{~cm}^{2}$
36. The circumference of two circles are in the ratio $2: 3$. The ratio of their areas is
(a) $2: 3$
(b) $4: 9$
(c) $9: 4$
(d) none of these
37. On increasing the diameter of circle by $40 \%$, its area will be increased by
(a) $40 \%$
(b) $80 \%$
(c) $96 \%$
(d) none of these
38. In making 1000 revolutions, a wheel covers 88 km . The diameter of the wheel is
(a) 14 m
(b) 24 m
(c) 28 m
(d) 40 m
39. The diameter of a wheel is 40 cm . How many revolutions will it make an covering 176 m ?
(a) 140
(b) 150
(c) 160
(d) 166
40. The radius of wheel is 0.25 m . How many revolutions will it make in covering 11 km ?
(a) 2800
(b) 4000
(c) 5500
(d) 7000
41. Find the circumference of a circle of diameter 21 cm .
(a) 62 cm
(b) 64 cm
(c) 66 cm
(d) 68 cm
42. Find the area of a circle whose circumference is 52.8 cm .
(a) $221.76 \mathrm{~cm}^{2}$
(b) $220.76 \mathrm{~cm}^{2}$
(c) $200.76 \mathrm{~cm}^{2}$
(d) none of these.
43. A steel wire when bent in the form of a square, encloses an area of 121 sq . cm . The same wire is bent in the form of a circle. Find the area of the circle.
(a) $111 \mathrm{~cm}^{2}$
(b) $184 \mathrm{~cm}^{2}$
(c) $154 \mathrm{~cm}^{2}$
(d) $259 \mathrm{~cm}^{2}$
44. If the perimeter of a semicircular protractor is 36 cm , find the diameter.
(a) 14 cm
(b) 16 cm
(c) 18 cm
(d) 12 cm
45. The area of a square and a rectangle are equal. If the side of the square is 40 cm and the breadth of the rectangle is 25 cm , find the length of the rectangle.
(a) 60 cm
(b) 62 cm
(c) 64 cm
(d) 68 cm
46. The surface area of a cuboid is
(a) $2(\mathrm{lb}+\mathrm{bh}+\mathrm{lh})$
(b) $3(\mathrm{lb}+\mathrm{bh}+\mathrm{lh})$
(c) $2(\mathrm{lb}-\mathrm{bh}-\mathrm{lh})$
(d) $3(\mathrm{lb}-\mathrm{bh}-\mathrm{lh})$
47. The surface area of a cube if edge ' $a$ ' is
(a) $7 a^{2}$
(b) $6 a^{2}$
(c) $5 a^{3}$
(d) $5 \mathrm{a}^{2}$
48. The length, breadth and height of a room is $5 \mathrm{~m}, 4 \mathrm{~m}$ and 3 m . The cost of white washing its four walls at the rate of Rs. 7.50 per $\mathrm{m}^{2}$ is
(a) Rs. 110
(b) Rs. 109
(c) Rs. 220
(d) Rs. 105
49. The perimeter of floor of rectangular hall is 250 m . The cost of the white washing its four walls is Rs. 15000 . The height of the room is
(a) 5 m
(b) 4 m
(c) 6 m
(d) 8 m
50. The breadth of a room is twice its height and is half of its length. The volume of room is $512 \mathrm{dm}^{3}$. Its dimensions are
(a) $16 \mathrm{dm}, 8 \mathrm{dm}, 4 \mathrm{dm}$
(b) $12 \mathrm{dm}, 8 \mathrm{dm}, 2 \mathrm{dm}$
(c) $8 \mathrm{dm}, 4 \mathrm{dm}, 2 \mathrm{dm}$
(d) $10 \mathrm{dm}, 15 \mathrm{dm}, 20 \mathrm{dm}$
51. The area of three adjacent faces of a cube is $x, y$ and $z$. Its volume $V$ is
(a) $V=x y z$
(b) $V^{3}=x y z$
(c) $V^{2}=x y z$
(d) none of these
52. Two cubes each of edge 12 cm are joined. The surface area of new cuboid is
(a) $140 \mathrm{~cm}^{2}$
(b) $1440 \mathrm{~cm}^{2}$
(c) $144 \mathrm{~cm}^{2}$
(d) $72 \mathrm{~cm}^{2}$
53. The curved surface area of cylinder of height ' $h$ ' and base radius ' $r$ ' is
(a) $2 \pi \mathrm{rh}$
(b) $\pi \mathrm{rh}$
(c) $\frac{1}{2} \pi \mathrm{rh}$
(d) none of these
54. The total surface area of cylinder of base radius ' $r$ ' and height ' $h$ ' is
(a) $2 \pi(r+h)$
(b) $2 \pi r(r+h)$
(c) $3 \pi \mathrm{r}(\mathrm{r}+\mathrm{h})$
(d) $4 \pi r(r+h)$
55. The curved surface area of a cylinder of height 14 cm is $88 \mathrm{~cm}^{2}$. The diameter of its circular base is
(a) 5 cm
(b) 4 cm
(c) 3 cm
(d) 2 cm
56. It is required to make a closed cylindrical tank of height 1 m and base diameter 140 cm from a metal sheet. How many square meters a sheet are required for the same?
(a) $6.45 \mathrm{~m}^{2}$
(b) $6.48 \mathrm{~m}^{2}$
(c) $7.48 \mathrm{~m}^{2}$
(d) $5.48 \mathrm{~m}^{2}$.
57. A metal pipe is 77 cm long. Inner diameter of cross section is 4 cm and outer diameter is 4.4 cm . Its inner curved surface area is:
(a) $864 \mathrm{~cm}^{2}$
(b) $968 \mathrm{~cm}^{2}$
(c) $768 \mathrm{~cm}^{2}$
(d) none of these
58. The diameter of a roller is 84 cm and its length is 120 cm . It takes 500 complete revolutions to move once over to level a playground. The area of the playground in $\mathrm{m}^{2}$ is:
(a) 1584
(b) 1284
(c) 1384
(d) 1184
59. A cylindrical pillar is 50 cm in diameter and 3.5 m in height. The cost of painting its curved surface at the rate of Rs. 12.50 per $\mathrm{m}^{2}$ is:
(a) Rs. 68.75
(b) Rs. 58.75
(c) Rs. 48.75
(d) Rs. 38.75
60. The inner diameter of circular well is 3.5 m . It is 10 m deep. Its inner curved surface area in $\mathrm{m}^{2}$ is:
(a) 120
(b) 110
(c) 130
(d) 140
61. In a hot water heating system there is a cylindrical pipe of length 28 m and diameter 5 cm . The total radiating surface area in the system in $\mathrm{m}^{2}$ is:
(a) 6.6
(b) 5.5
(c) 4.4
(d) 3.4
62. A matchbox measures $4 \mathrm{~cm} \times 2.5 \mathrm{~cm} \times 1.5 \mathrm{~cm}$. The volume of packet containing 12 such boxes is:
(a) $160 \mathrm{~cm}^{3}$
(b) $180 \mathrm{~cm}^{3}$
(c) $160 \mathrm{~cm}^{2}$
(d) $180 \mathrm{~cm}^{2}$
63. A cuboidal water tank is 6 m long, 5 m wide and 4.5 m deep. How many litre of water can it hold?
(a) 1350 liters
(b) 13500 liters
(c) 135000 liters
(d) 135 liters
64. A cuboidal vessel is 10 m long and 8 m wide. How high must it be made to hold 380 cubic metres of a liquid?
(a) 4.75 m
(b) 7.85 m
(c) 4.75 cm
(d) none of these
65. The capacity of a cuboidal tank is 50000 litres. The length and depth are respectively 2.5 m and 10 m . Its breadth is
(a) 4 m
(b) 3 m
(c) 2 m
(d) 5 m
66. A godown measures $40 \mathrm{~m} \times 25 \mathrm{~m} \times 10 \mathrm{~m}$. Find the maximum number of wooden crates each measuring $1.5 \mathrm{~m} \times 1.25 \mathrm{~m} \times 0.5 \mathrm{~m}$ that can be stored in the godown.
(a) 18000
(b) 16000
(c) 15000
(d) 14000
67. A paper is in the form of a rectangle $A B C D$ in which $A B=18 \mathrm{~cm}$ and $B C=14 \mathrm{~cm}$. $A$ semicircular portion with BC as diameter is cut off. Find the area of the remaining paper (see in below figure).
(a) $175 \mathrm{~cm}^{2}$
(b) $165 \mathrm{~cm}^{2}$
(c) $145 \mathrm{~cm}^{2}$
(d) none of these

68. Find the area of the shaded region in the above sided figure. Take $\pi=3.14$
(a) $75 \mathrm{~cm}^{2}$
(b) $72 \mathrm{~cm}^{2}$
(c) $70 \mathrm{~cm}^{2}$
(d) none of these
69. The perimeter of parallelogram PQRS is:
(a) 12 cm
(b) 7 cm
(c) 38 cm
(d) 19 cm

70. The area of the given below left figure is
(a) $45 \mathrm{~cm}^{2}$
(b) $11 \mathrm{~cm}^{2}$
(c) $49 \mathrm{~cm}^{2}$
(d) none of these

71. The area of the above sided right figure is
(a) $45 \mathrm{~cm}^{2}$
(b) $11 \mathrm{~cm}^{2}$
(c) $49 \mathrm{~cm}^{2}$
(d) none of these
72. Find the area of trapezium whose parallel sides are 24 cm and 20 cm and the distance between them is 15 cm .
73. The area of trapezium is $1080 \mathrm{~cm}^{2}$. If the lengths of its parallel sides are 55.6 cm and 34.4 cm , find the distance between them.
74. The area of trapezium is $352 \mathrm{~cm}^{2}$ and the distance between its parallel sides is 16 cm . If one of the parallel sides is of length 25 cm , find the length of the other side.
75. Find the lateral surface area of the cuboids whose dimensions are:
(i). Length $=22 \mathrm{~cm}$, breadth $=12 \mathrm{~cm}$ and height $=7.5 \mathrm{~cm}$
(ii). Length $=15 \mathrm{~cm}$, breadth $=6 \mathrm{~cm}$ and height $=9 \mathrm{~cm}$
(iii). Length $=24 \mathrm{~m}$, breadth $=25 \mathrm{~cm}$ and height $=6 \mathrm{~m}$
76. The circumference of the base of a cylinder is 176 cm and its height is 65 m . Find its curved surface area and total surface area of the cylinder.
77. Find the curved surface area and total surface area of the cylinders whose dimensions are:
(i). radius $=7 \mathrm{~cm}$ and height $=35 \mathrm{~cm}$.
(ii). radius $=14 \mathrm{~cm}$ and height $=10 \mathrm{~cm}$.
(iii). radius $=10 \mathrm{~cm}$ and height $=25 \mathrm{~cm}$.
78. Find the area of a rhombus whose diagonals are of lengths 15 cm and 25 cm .
79. The area of a rhombus is $360 \mathrm{~cm}^{2}$ and one of the diagonals is 18 cm . Find the other diagonal.
80. The diagonal of a quadrilateral shaped field is 25 m and the perpendiculars dropped on it from the remaining opposite vertices are 18 m and 12 m . Find the area of the field.
81. An aquarium is in the form of a cuboid whose external measures are $40 \mathrm{~cm} \times 15 \mathrm{~cm} \times 20 \mathrm{~cm}$. The base, side faces and back face are to be covered with a coloured paper. Find the area of the paper needed?
82. Find the area of the following trapeziums

83. Find the area of the quadrilateral $P Q R S$ in the adjoining figure:

84. Find the area of a rhombus whose diagonals are of lengths 10 cm and 8.2 cm .
85. Find the area of the quadrilaterals in the adjoining figures:

(iii)
86. The length, breadth and height of a room are $5 \mathrm{~m}, 4 \mathrm{~m}$ and 3 m respectively. Find the cost of white washing the walls of the room and the ceiling at the rate of Rs 7.50 per $\mathrm{m}^{2}$.
87. The floor of a rectangular hall has a perimeter 250 m . If the cost of painting the four walls at the rate of Rs 10 per $\mathrm{m}^{2}$ is Rs 15000 , find the height of the hall.
88. A cubical box has each edge 10 cm and another cuboidal box is 12.5 cm long, 10 cm wide and 8 cm high.
(i) Which box has the greater lateral surface area and by how much?
(ii) Which box has the smaller total surface area and by how much?
89. The curved surface area of a right circular cylinder of height 14 cm is 88 cm 2 . Find the diameter of the base of the cylinder.
90. It is required to make a closed cylindrical tank of height 1 m and base diameter 140 cm from a metal sheet. How many square metres of the sheet are required for the same?
91. The diameter of a roller is 84 cm and its length is 120 cm . It takes 500 complete revolutions to move once over to level a playground. Find the area of the playground in $\mathrm{m}^{2}$.
92. Curved surface area of a right circular cylinder is $4.4 \mathrm{~m}^{2}$. If the radius of the base of the cylinder is 0.7 m , find its height.
93. Find the lateral or curved surface area of a closed cylindrical petrol storage tank that is 4.2 m in diameter and 4.5 m high.
94. A matchbox measures $4 \mathrm{~cm} \times 2.5 \mathrm{~cm} \times 1.5 \mathrm{~cm}$. What will be the volume of a packet containing 12 such boxes?
95. A cuboidal water tank is 6 m long, 5 m wide and 4.5 m deep. How many litres of water can it hold?
96. A cuboidal vessel is 10 m long and 8 m wide. How high must it be made to hold 380 cubic metres of a liquid?
97. The capacity of a cuboidal tank is 50000 litres of water. Find the breadth of the tank, if its length and depth are respectively 2.5 m and 10 m .
98. The circumference of the base of a cylindrical vessel is 132 cm and its height is 25 cm . How many litres of water can it hold?
99. If the lateral surface of a cylinder is $94.2 \mathrm{~cm}^{2}$ and its height is 5 cm , then find (i) radius of its base (ii) its volume. (Use $\pi=3.14$ )
