Surface areas and Volumes

1. Find the total Surface area and lateral surface area of the Cube with side 4 cm.

2. Each edge of a cube is increased by 50%. Find the percentage increase in the surface area.

3. Find the volume of cuboid if l = 12 cm., b = 10 cm. and h = 8 cm.

4. Find the volume of cube, if its edge is 10 cm.

5. A Rectangular piece of paper 11 cm × 4 cm is folded without overlapping to make a cylinder of height 4 cm. Find the volume of the cylinder.

6. Circular discs 5 mm thickness, are placed one above the other to form a cylinder of curved surface area 462 cm2. Find the number of discs, if the radius is 3.5 cm.

7. A hollow cylinder having external radius 8 cm and height 10 cm has a total surface area of 338 p cm2. Find the thickness of the hollow metallic cylinder.

8. A closed cylindrical tank of height 1.4 m. and radius of the base is 56 cm. is made up of a thick metal sheet. How much metal sheet is required (Express in square meters)

9. The volume of a cylinder is 308 cm.3. Its height is 8 cm. Find its lateral surface area and total surface area.

10. A metal cuboid of dimension 22 cm. × 15 cm. × 7.5 cm. was melted and cast into a cylinder of height 14 cm. What is its radius?

11. An overhead water tanker is in the shape of a cylinder has capacity of 61.6 cu.mts. The diameter of the tank is 5.6 m. Find the height of the tank.

12. Find the slant height and vertical height of a Cone with radius 5.6 cm and curved surface area 158.4 cm3.

13. A conical tent was erected by army at a base camp with height 3m. and base diameter 8m. Find;
(i) The cost of canvas required for making the tent, if the canvas cost ` 70 per 1 sq.m.
(ii) If every person requires 3.5 m.3 air, how many can be seated in that tent.

14.. A tent is cylindrical to a height of 4.8 m. and conical above it. The radius of the base is 4.5m. and total height of the tent is 10.8 m. Find the canvas required for the tent in square meters.

15. What length of tarpaulin 3 m wide will be required to make a conical tent of height 8m and base radius 6m? Assume that extra length of material that will be required for stitching margins and wastage in cutting is approximately 20 cm (use p = 3.14)