# SURFACE AREAS AND VOLUMES

1. Find the lateral surface area and the total surface area of a cylinder whose radius is 10 centimetre and height is 49cm.

2. The ratio of curved surface area to the total surface area of a right circular cylinder is 1:2. Find the volume of the cylinder ,if the total surface area is 616 cm².

3. The diagonals of the three faces of a cuboid are x, y and z, respectively. What is the volume of the cuboid ?

4. A small indoor greenhouse is made entirely of glass panes held together with tape. It is 3.5 cm long, 1.5 cm wide and 2 cm high
   (i)what is the area of the glass panes ?

   (ii)How much tape is needed for all the 12 edges ?

5. The external and internal diameters of a hollow hemispherical vessel are 25 cm and 24 cm respectively .The cost of painting 1 cm² of the surface is rupees 0.05. Find the total cost to paint the vessel all over.

6. The diameter of a sphere is decreased by 25% .By what percent does it curved surface area decrease ?

7. Shashi has a piece of Canvas whose area is 1102m². She uses it to make a conical tent with base radius 14m. Wastage in stitching margin and cutting amounts to 2m². Find the volume of the tent that can be made with it.

8. A copper wire of diameter 6 mm is evenly wrapped on a cylinder of length 15 cm and diameter 49 cm to cover its whole surface. Find the length and the volume of the wire.

9. A girl fills a cylindrical bucket 32 cm in height and 18 cm in radius with sand .She empties bucket on the ground and makes a conical heap of the same. If the height of the conical heap is 24 cm then find its radius and its slant height.

10.   (i)Find the lateral surface area of a closed cylindrical petrol Storage tank which is 4.2 m in diameter and 4.5 m high.
(ii) How much Steel actually used if one by 12 of the Steel actually used was wasted in making the tank ?

11. A heap of rice is in the form of a cone, whose diameter is 12 m and height is 4 m. Find its volume. This heap is to be covered by canvas to protect it from rain. Find the area of the canvas required.

12.Two hemispherical domes are to be painted as shown in the following figure. If the circumferences of the bases of the domes are 17.6 cm and 70.4 cm respectively, then find the cost of painting at the rate oft 10 per cm .
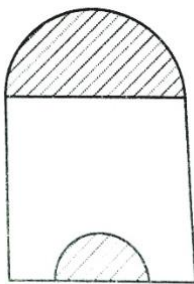
13. A solid iron rectangular block of dimensions 2.2 m × 1.2 m× 1 m is cast into a hollow cylindrical pipe of internal radius 35 cm and thickness 5 cm. Find the length of the pipe.