

Chapter- Surface area and volumes

1. If l is the length of a diagonal of a cube of volume V , then
 - a) $3V=l$
 - b) $\sqrt{3}V=l$
 - c) $\sqrt{3}V=$
 - d) $\sqrt{3}V=$
2. If the radius of a cylinder is doubled and height is halved, then curved surface areas will be
 - a) Halved
 - b) doubled
 - c) same
 - d) four times
3. A solid cylinder is melted and cast into a cone of same radius. The heights of the cone and cylinder are in the ratio
 - a) 9:1
 - b) 1:9
 - c) 3:1
 - d) 1:3
4. If the surface area of a sphere is 144, then its volume is
 - a) 288
 - b) 316
 - c) 300
 - d) 188
5. The ratio of the total surface area of a sphere and a hemisphere of same radius is
 - a) 2:1
 - b) 3:1
 - c) 4:1
 - d) 4:3
6. Curved surface area is also known as.....
7. The radius of a sphere is $3r$, then its volume will be.....
8. The surface area of a cube, whose edge is 11cm, is.....
9. A cone, a hemisphere and a cylinder stand on equal bases and have the same height. The ratio of their volumes is
10. A sphere, a cylinder and a cone are of the same radius and same height. Find the ratio of their curved surfaces.
11. Find the curved surface area and total surface area of cylinder whose radius is 10cm and height is 49cm.
12. The ratio of the curved surface area to the total surface area of a right circular cylinder is 1:2. Find the volume of the cylinder, if its total surface area is 616
13. A right angled ABC with sides 5cm, 12cm and 13cm is revolved about the side 12cm. find the volume of the solid so obtained.
14. The inner diameter of a circular well is 3.5cm. it is 10m deep. Find
 - a) its inner curved surface area.
 - b) The cost of palstering this curved surface at the rate of Rs40 per
15. A joker's cap is in the form of a right circular cone of base radius 7cm and height 24cm. find the area of the sheet required to make 10 such caps.
16. The diameter of a sphere is decreased by 25%. By what per cent does its curved surface area decrease?
17. A heap of wheat is in the form of a cone, whose diameter is 10.5m and height is 3m. Find its volume. The heap is to be covered by canvas to protect it from rain. Also find the area of the canvas required.
18. A village, having a population of 4000, requires 150L of water per head per day. It has a tank measuring $20m \times 15m \times 6m$. for how many days will the water of this tank last?
19. Water in canal, 30dm wide and 12m deep, is flowing with a velocity of 20km per hour. How much area will it irrigate in 30 minutes, if 9cm of standing water is described?
20. A cylindrical road roller made of iron is 1.5m wide. Its inner diameter is 60cm and thickness of iron sheet rolled into the road roller is 10cm. find the weight of the roller if 21cc of iron weight 8gm.
21. The ratio of radius to height of a right circular cone is 4:9. If its volume is 1507. Find its slant height and radius.

22. A well with 20m inside diameter is dug 7m deep. Earth taken out of it is spread all around to a width of 3m to form an embankment. Find the height of embankment.
23. A tent is in the form of a right circular cylinder, which is closed. The diameter of the cylinder is 24m and height of the cylindrical portion is 11m. Find the area of the canvas required for the tent. Also, find the maximum length of the rod which can put in the tent.