

Subject: Maths

Class:10

Topic: Ch.16 Surface Area & Volume

## EXERCISE 16.4

1. Find the surface area and volume of a sphere whose radius is 1.4 cm.
2. The surface area of a sphere is  $616 \text{ cm}^2$ . Find its volume.
3. The radius of a hemisphere is 4.5 cm. Find its surface area and its volume.
4. Volume of a sphere is  $38808 \text{ cm}^3$ . Find its surface area.
5. A cylinder made out of lead has radius 4 cm and height 10 cm. It is melted to form lead shots of radius 2 cm. Find the number of lead shots.
6. A hollow spherical shell is 2 cm thick. If its outer radius is 8 cm, then find the volume of the metal to make such a shell.
7. How many cones of radius 3 cm and height 6 cm can be made by melting a metallic sphere of radius 9 cm.

8. Eight spheres of equal radii are obtained by melting a metallic sphere of radius 10 cm. Find the surface area of each sphere thus obtained.
9. If surface area of a sphere is  $5544 \text{ cm}^2$ , then find the volume of the sphere.
10. How many spherical lead shots each 4.2 cm in diameter can be obtained from a rectangular solid slab of lead with dimensions 66 cm, 42 cm and 21 cm.
11. A sphere of diameter 6 cm is dropped in a right circular cylindrical vessel partly filled with water. The diameter of the cylindrical vessel is 12 cm. If the sphere is completely submerged in water, by how much will the level of water rise in the cylindrical vessel?
12. A hemispherical bowl of internal radius 9 cm is full of liquid. This liquid is to be filled in cylindrical bottles each of diameter 3 cm and height 4 cm. How many bottles are required to empty the bowl?
13. The diameter of a sphere is 0.7 cm. If 3000 spheres, completely filled with water, are drawn out from a water tank then find volume of water drawn out.
14. The outer and inner diameter of a hollow hemi-spherical vessel are 43 cm and 42 cm. Find the cost of colouring the vessel at 7 paise per square cm.

