Chapter-Surface area and volume

Q1.
Two cones have their heights in the ratio 1 : 3 and radii in the ratio 3 : 1. What is the ratio of their volumes?

Q2.
Volume and surface area of a solid hemisphere are numerically equal. What is the diameter of hemisphere?

Q3.
The volume of a right circular cylinder with its height equal to the radius is **25 1/7 cm³**. *Find the height of the cylinder. (Use π = 22/7)*

Q4.
A solid wooden toy is in the form of a hemisphere surmounted by a cone of same radius. The radius of hemisphere is 3.5 cm and the total wood used in making of toy is 166 x 5/6 cm3 Find the height of the toy. Also, find the cost of painting the hemispherical part of the toy at the rate of 10 rupees per cm2

Q5.

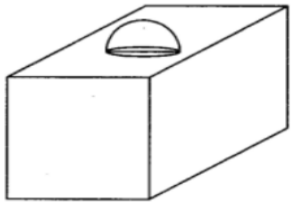
From a solid right circular cylinder of height **14 cm** and base radius **6 cm**, a right circular Cone of same height and same base radius is removed. Find the volume of the remaining solid

Q6.
From a solid right circular cylinder of height 2.4 cm and radius 0.7 cm, a right circular cone of same height and same radius is cut out. Find the total surface area of the remaining solid

Q7.
A metallic solid sphere of radius 10.5 cm is melted and recasted into smaller solid cones, each of radius 3.5 cm and height 3 cm. How many cones will be made?

Q8.

In Figure, a decorative block, made up of two solids a cube and a hemisphere. The base of the block is a cube of side 6 cm and the hemisphere fixed on the top has a diameter of 3.5 cm. Find the total surface area of the block.(use π=22/7)



Q9.

The sum of the radius of base and height of a solid right circular cylinder is 37 cm. If the total surface area of the solid cylinder is 1628 sq. cm, find the volume of the cylinder, (use π=22/7)

Q10.

A toy is in the form of a cone of base radius 3.5 cm mounted on a hemisphere of base diameter 7 cm. If the total height of the toy is 15.5 cm, find the total surface area of the toy(use π =22/7)