

# Question Bank

Subject : Mathematics

Class : X

Chapter : Volumes

## COMPETENCE BASED

1. A right triangle with sides 3 cm and 4 cm is revolved around its hypotenuse. Find the volume of the A tent of height 8.25 m is in the form of a right circular cylinder with diameter of base 30 m and height 5.5 m, surmounted by a right circular cone of the same base. Find the cost of the canvas of the tent at the rate of Rs. 45 per m<sup>2</sup>.
2. A vessel is a hollow cylinder 2 m long with hemispherical bottom of the same base. The depth of the cylinder is  $4\frac{2}{3}$  m and the diameter of the hemisphere is 3.5 m. Calculate the volume and the internal surface area of the solid.
3. The cube of metal whose edges are in the ratio 3:4:5 are melted and converted into a single cube whose diagonal is  $12\sqrt{3}$ cm. Find the edge of the three cubes (6cm, 8cm and 10cm).
4. An ice cream cone full of ice-cream having radius 5cm and height 10cm. Calculate volume of ice-cream ,provided that its  $\frac{1}{6}$  part is left unfilled with ice cream.
5. From a solid right circular cylinder with height 10 cm and radius of the base 6 cm, a right circular cone of the same height and same base is removed. Find the volume of the remaining solid.
6. The rain water from a roof of dimensions 22mx20m drains into the cylindrical vessel having diameter of base 2m and height 3.5m. If the rain water collected from the roof just fill the cylindrical vessel, then find the rainfall in cm. (2.5cm)
7. A factory manufactures 120000 pencils daily. The pencils are cylindrical in the shape each of length 25cm and circumference of the base as 1.5cm. Determine the cost of manufacture of pencils at the rate Rupees 0.05/- per cm<sup>3</sup>

- 8.** Two cones of same base radius 8cm and height 15cm are joined together along their bases .Find the volume of the shape so formed.
- 9.** Find the number of metallic circular discs with 1.5cm base diameter and of height 0.2cm to be melted to form right circular cylinder of height 10cm and diameter 4.5cm.( 450)
- 10.** The barrel of a fountain pen ,cylindrical in shape ,is 7cm long and 5mm in diameter.Full barrel of ink in the pen is used up on writing 3300 words on an average.How many words can be written in a bottle of ink containing  $\frac{1}{5}$  th of a litre.(480000 words)