ST. JOSEPH STUDY CENTRE

10th STD: Unit Test-1   **MATHEMATICS**   **Time: 45 Mins / Total Marks: 25**

I.   **Answer the following questions:**   **[5 x 2 = 10]**

1. The radius and height of a cylinder are in the ratio 5:7 and its curved surface area is 5500 sq.cm. Find its radius and height.

2. 4 persons live in a conical tent whose slant height is 19 cm. If each person require 22 cm² of the floor area, then find the height of the tent.

3. The radius of a sphere increases by 25%. Find the percentage increase in its surface area.

4. The volume of a solid right circular cone is 11088 cm³. If its height is 24 cm then find the radius of the cone.

5. If the circumference of a conical wooden piece is 484 cm then find its volume when its height is 105 cm.

II.   **Answer the following questions:**   **[3 x 5 = 15]**

6. The ratio of the radii of two right circular cones of same height is 1:3. Find the ratio of their curved surface area when the height of each cone is 3 times the radius of the smaller cone.

7. The internal and external diameters of a hollow hemispherical vessel are 20 cm and 28 cm respectively. Find the cost to paint the vessel all over at Rs. 0.14 per cm²

8. A container open at the top is in the form of a frustum of a cone of height 16 cm with radii of its lower and upper ends are 8 cm and 20 cm respectively. Find the cost of milk which can completely fill a container at the rate of Rs. 40 per litre.

---ALL THE BEST---