ONE TWO ACADEMY

STD 10 MATHEMATICS

MENSURATION

Total:- 25 marks **Time:- 45 minutes**

Answer the following questions: **4 x 1 = 4**

1. The curved surface area of a right circular cylinder of height 14 cm is 88 cm^2. Find the diameter of the cylinder
2. Give the formula to find the surface area of right circular cone.
3. What is the formula for T.S.A of a hemisphere?
4. If the base area of a hemispherical solid is 1386 sq. metres, then find its total surface area?

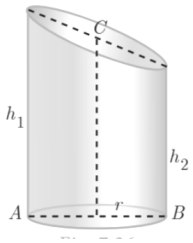
Answer any three of the following questions:- **3 x 2 = 6**

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

6.If the radii of the circular ends of a frustum which is 45 cm high are 28 cm and 7 cm, find the volume of the frustum.

7.If the ratio of radii of two spheres is 4:7, find the ratio of their volumes.

8.Calculate volume of the adjacent figure



Answer any three of the following questions:-

3 x 5 = 15

9.The internal and external radii of a hollow hemispherical shell are 3 m and 5 m respectively. Find the T.S.A. and C.S.A. of the shell.

10. Four persons live in a conical tent whose slant height is 19 m. If each person requires 22 m^2 of the floor area, then find the height of the tent.

11.A funnel consists of a frustum of a cone attached to a cylindrical portion 12 cm long attached at the bottom. If the total height be 20 cm, diameter of the cylindrical portion be 12 cm and the diameter of the top of the funnel be 24 cm. Find the outer surface area of the funnel.

12.A right circular cylindrical container of base radius 6 cm and height 15 cm is full of ice cream. The ice cream is to be filled in cones of height 9 cm and base radius 3 cm, having a hemispherical cap. Find the number of cones needed to empty the container.