Mensuration: Worksheet -9

1. The section of a right circular cone by a plane through its vertex perpendicular to the base in an equilateral triangle of side 12 cm. The volume of the cone is [ ]

   a) $72\sqrt{3}\ \Pi\ cm^3$ b) $71\sqrt{3}\ \pi\ cm^3$ c) $70\sqrt{2}\ \Pi\ cm^3$ d) $69\sqrt{2}\ \Pi\ cm^3$

2. A hollow cylinder of inner radius r and thickness of wall t and length *l*. Then the volume of the cylinder is: _ _ _ _ _ _ [ ]

   a) $2\Pi l(r^2-l^2)$ b) $2\Pi rl\left(\frac{1}{2r}+1\right)$ c) $2\Pi l(r^2+t^2)$ d) $2\Pi r(r+t)$

3. A cone and a cylinder have the same base area. They also have the same curved surface area. If the height of the cylinder is 3 m then the slant height of the cone (in m) is _ _ _ _ _ _ _ _ [ ]

   a) 3 b) 4 c) 6 d) 7

4. If a conical tent is 10 m high and the radius of its base is 24m. Then cost of the canvas required to make the tent, if the cost of 1 m^2 canvas is Rs. 70 is _ _ _ _ _ _ _ _ _

5. If h, c and v respectively are the height, the curved surface area and volume of cone then $3\Pi Vh^2 - c^2h^2 + 9v^2 =$ _ _ _ _ _ _ _ _ _

6. There are two cones. The curved surface area of one is twice that of the other. The slant height of the later is twice the former. Then the ratio of their radii is _ _ _ _ _ _ _ _ .

7. If the slant height of a cone is four times its radius, then its curved Surface area _ _ _ _ _ _ _ _ _ _ _ _ _ [ ]

   a) Πr^2 b) $2\Pi r^2$ c) $3\Pi r^2$ d) $4\Pi r^2$

8. The slant height of the frustum of a cone is 4 cm and the perimeter of its plane ends are 18 cm and 6 cm. The curved surface of the frustum is _ _ _. [ ]

   a) 32 cm^2 b) 48 cm^2 c) 24 cm^2 d) 12 cm^2

9. If the volume of a right circular cylinder is 448 Π cm^3 and height is 14 cm then its curved area is : _ _ _ _ _ _ _ _ _ _ [ ]

a) 479.6 cm^2 b) 498.7 cm^2 c) 497.8 cm2 d) 488.6 cm^2

10. The total surface area of a right circular cylinder is 1540 cm^2. Its height is 4 times the radius of its base then the radius of the base of the cylinder is _ _ _ _ _ _ _ _ _ _ _ _ .