



Assignment

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Date: __ / __ / __

Name: _____

Max Marks: 25

Section- A (Two Marks Each)

- 1 Diameter of the base of a cone is 10.5 cm and its slant height is 10 cm. Find its curved surface area.
- 2 A cone of radius 4 cm is divided into two parts by drawing a plane through the midpoints of its axis and parallel to its base. What is the ratio of the volume of the two parts.
- 3 A bus stop is barricaded from the remaining part of the road, by using 50 hollow cones made of recycled cardboard. Each cone has a base diameter of 40 cm and height 1 m. If the outer side of each of the cones is to be painted and the cost of painting is Rs 12 per m^2 , what will be the cost of painting all these cones?
(Use $\pi = 3.14$ and take $\sqrt{1.04} = 1.02$).
- 4 Find the total surface area of a hemisphere of radius 10 cm.

Section-B (Three Marks Each)

- 5 A conical tent is 10 m high and the radius of its base is 24 m. Find:
 - (i) slant height of the tent
 - (ii) cost of the canvas required to make the tent, if the cost of $1 m^2$ canvas is Rs 70.
- 6 The slant height and base diameter of a conical tomb are 25 m and 14 m respectively. Find the cost of white-washing its curved surface at the rate of Rs 210 per $100 m^2$.
- 7 Water flows at the rate of 10m minute through a cylindrical pipe of diameter 5 mm. How long would it take to fill a conical vessel of base diameter 40 cm and depth 24 cm?

Section-C (Four Marks Each)

- 8 The radius of a spherical balloon increases from 7 cm to 14 cm as air is being pumped into it. Find the ratio of surface areas of the balloon in the two cases also find the ratio of volume in both cases.
- 9 Consider a Rocket. Suppose the rocket is in the form of a Circular Cylinder Closed at the lower end with a Cone of the same radius attached to its top. The Cylindrical portion of the rocket has radius say, 2.5m and the height of that cylindrical portion of the rocket is 21m. The Conical portion of the rocket has a slant height of 8m, then calculate the total surface area of the rocket and also find the volume of the rocket.