

Marks:15

MATHEMATICS

Std: IX

Chapter : Surface areas and volumes

Duration: 45 minutes

Q.1. Solve (2 Marks each)

1. A patient in a hospital is given soup daily in a cylindrical bowl of diameter 7 cm. If the bowl is filled with soup to a height of 4 cm, how much soup the hospital has to prepare daily to serve 250 patients?
2. Curved surface area of a right circular cylinder is 4.4 m^2 . If the radius of the base of the cylinder is 0.7 m, find its height.
3. In a hot water heating system, there is a cylindrical pipe of length 28 m and diameter 5 cm. Find the total radiating surface in the system.

Q.2. Solve (3 Marks each)

1. The diameter of a roller is 84 cm and its length is 120 cm. It takes 500 complete revolutions to move once over to level a playground. Find the area of the playground in m^2 .
2. If the lateral surface of a cylinder is 94.2 cm^2 and its height is 5 cm, then find
(i) Radius of its base (ii) its volume. (Use $\pi = 3.14$)
3. The students of a Vidyalaya were asked to participate in a competition for making and decorating penholders in the shape of a cylinder with a base, using cardboard. Each penholder was to be of radius 3 cm and height 10.5 cm. The Vidyalaya was to supply the competitors with cardboard. If there were 35 competitors, how much cardboard was required to be bought for the competition?