SURFACE AREAS AND VOLUMES

CYLINDER

EXERCISE

- **Q.1** The inner diameter of a circular well in 2 m and its depth is 10.5 m. Find :
 - (i) the inner curved surface area of the well.
 - (ii) the cost of plastering this curved surface area at the rate of Rs. 35 per m^2 .
- Q.2 The total surface area and the curved surface area of a cylinder are in the ratio 5 : 3.Find the ratio between its height and its diameter.-
- **Q.3** The circumference of the base of a cylindrical vessel is 132 cm and its height is 25 cm. How many liters of water can it hold? (1000 cm³ = 1 λ)
- **Q.4** If the lateral surface of a cylinder is 94.2 cm² and its height is 5 cm, then find:
 - (i) radius of its base
 - (ii) its volume. (Use $\pi = 3.14$)
- Q.5 A hollow cylinder is 35 cm in length (height). Its internal and external diameters are 8 cm and 8.8 cm respectively. Find its :
 - (i) outer curved surface area
 - (ii) inner curved surface area
 - (iii) area of cross-section
 - (iv) total surface area.
- Q.6 Find the total surface area of a hollow cylindrical pipe oflength 50 cm, external diameter 12 cm and internal diameter 9 cm.-





CLASS 9

- Q.7 The inner diameter of a cylindrical wooden pipe is 24 cm and its outer diameter is 28 cm. The length of the pipe is 35 cm. Find the mass of the pipe, if 1 cm³ of wood has a mass of 0.6 g.
- **Q.8** The internal radius of a hollow cylinder is 8 cm and thickness of its wall is 2 cm. Find the volume of material in the cylinder, if its length is 42 cm.
- **Q.9** The radii of two right circular cylinders are in the ratio 3 : 4 and their heights are in the ratio 6 : 5. Find the ratio between their curved (lateral) surface areas.

ANSWER KEY

- **1.** (i) 66 m² (ii) Rs. 2,310
- **2.** 3:4
- **3.** 34.650 λ
- **4.** (i) 3 cm (ii) 141.3 cm^3
- 5. (i)968 cm² (ii)880 cm² (iii)10.56 cm²
- **6.** 3399 cm²
- **7.** 3.432 kg
- **8.** 4752 cm³
- **9.** 9:10