

CHAPTER 11**Mensuration****Solved examples:**

Q1. A cylindrical iron pipe carrying water is 25m long and has a diameter of 7 cm. Find the cost of painting the pipe at the rate of Rs. 200 per m^2 .

Sol.

The cylindrical pipe of diameter 7 cm is open at both the ends.

Radius of the pipe (r) = $\frac{7}{2}$ cm

Length of the pipe = Height of the cylinder

$\therefore h = 25 \text{ m} = 2500 \text{ cm}$

Curved surface area of the cylinder = $2\pi rh$

$$= \cancel{2} \times \frac{22}{\cancel{7}} \times \frac{\cancel{7}}{\cancel{2}} \text{ cm} \times 2500 \text{ cm}$$

$$= 22 \times 2500 \text{ cm}^2$$

$$= \frac{55000}{10000}$$

$$= 5.5 \text{ m}^2 \quad (1 \text{ m}^2 = 10,000 \text{ cm}^2)$$

Cost of painting 1m^2 of pipe is Rs. 200.

∴ The cost of painting 5.5 m^2 of pipe is $5.5 \times \text{Rs. } 200 = \text{Rs. } 1100$

