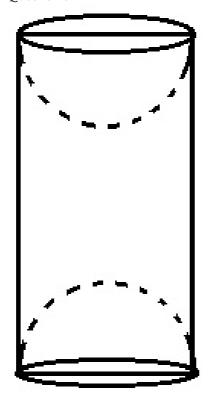


Exercise 19A

Question 3:

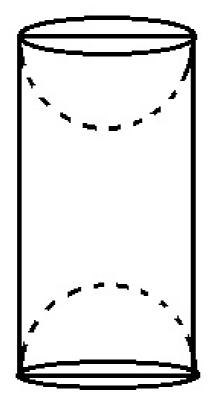


Height of cylinder = 20 cm And diameter = 7 cm and then radius = 3.5 cm Total surface area of article

= (lateral surface of cylinder with r = 3.5 cm and h = 20 cm)

=
$$\left[2\pi rh + 2 \times \left(2\pi r^2\right)\right]$$
 sq.units
= $\left[\left(2 \times \frac{22}{7} \times \frac{7}{2} \times 20\right) + \left(4 \times \frac{22}{7} \times \frac{7}{2} \times \frac{7}{2}\right)\right]$ cm²
= $\left(440 + 154\right)$ cm² = 594 cm²

Question 4:



Radius of wooden cylinder = 4.2 cm Height of wooden cylinder = 12 cm Lateral surface area

- = $2\pi rh sq.cm$
- $= 2 \times \pi \times 4.2 \times 12 \text{cm}^2$
- $= 100.8\pi \text{ cm}^2$

Radius of hemisphere = 4.2 cm Surface area of two hemispheres

- $=2\times2\pi r^2$ sq.unit
- $= 4\pi \times 4.2 \times 4.2 \text{ cm}^2$
- $= 70.70 \pi \text{ cm}^2$

Total surface area = (100.8 + 70.56) π cm²

- $= 538.56 \text{ cm}^2$
- $= 171.36 \pi$
- $= 171.36 \times 22/7 \text{ cm}^2$
- $= 538.56 \text{ cm}^2$

Further, volume of cylinder = $\pi r^2 h$ = 4.2 × 4.2 × 12 π cm²

 $= 211.68 \, \pi \, \text{cm}^2$

Volume of two hemispheres = $2 \times 2/3 \pi r^3$ cu.units

- $= 4/3 \pi \times 4.2 \times 4.2 \times 4.2$
- $= 98.784 \text{ cm}^3$

Volume of wood left = (211.68 – 98.784) π

- = 112.896 π cm³
- $= 112.896 \times 22/7 \text{ cm}^3$
- $= 354.816 \text{ cm}^3$

********** END *******