Exercise 13B

Question 1:

Here, $r = 5\text{cm}$ and $h = 21\text{ cm}$

$\therefore$ Volume of the cylinder $= (\Pi r^2 h)$

$$= \left(\frac{22}{7} \times 5^2 \times 21\right) \text{cm}^3$$

$$= \left(\frac{22}{7} \times 25 \times 21\right) \text{cm}^3$$

$$= 1650\ \text{cm}^3.$$

$\therefore$ Curved surface area of a cylinder $= (2\Pi rh)$

$$= 2 \times \left(\frac{22}{7} \times 5 \times 21\right) \text{cm}^2$$

$$= 660\ \text{cm}^2$$

Question 2:

Here, diameter $= 28$ cm

$$\text{Radius} = \left(\frac{28}{2}\right) \text{cm} = 14 \text{ cm and}$$

height $= 40$ cm

$\therefore$ Curved surface area $= (2\Pi rh)$

$$= \left(2 \times \frac{22}{7} \times 14 \times 40\right) \text{cm}^2$$

$$= 3520 \text{cm}^2$$

$\therefore$ Total surface area $= (2\Pi rh + 2\Pi r^2)$

$$= \left(2 \times \frac{22}{7} \times 14 \times 40 + 2 \times \frac{22}{7} \times 14^2\right)$$

$$= (3520 + 1232) = 4752\ \text{cm}^2$$

$\therefore$ Volume of the cylinder $= (\Pi r^2 h)$

$$= \left(\frac{22}{7} \times 14^2 \times 40\right) \text{cm}^3$$

$$= \left(\frac{22}{7} \times 14 \times 14 \times 40\right) \text{cm}^3$$

$$= 24640\ \text{cm}^3.$$

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