



Surface Area and volume of A Right Circular cylinder Ex 19.1 Q14

Answer :

Given data is as follows:

Diameter of each pillar = $0.50m$

$h = 4m$

Cleaning rate = $Rs.2.50 / m^2$

Number of pillars = 20

We have to find the total cost of cleaning all 20 pillars

Given is the diameter of the pillar which is equal to $0.50m$. Therefore, radius = $\frac{0.50}{2}m$

We have to first find the Curved Surface Area of each pillar.

Curved Surface Area = $2\pi rh$

$$\begin{aligned} &= 2 \times \frac{22}{7} \times \frac{0.50}{2} \times 4 \\ &= \frac{44}{7}m \end{aligned}$$

Total area of all 20 pillars = $20 \times$ Curved Surface Area of each pillar

$$\begin{aligned} &= 20 \times \frac{44}{7}m^2 \\ &= \frac{880}{7}m^2 \end{aligned}$$

Cost of cleaning $1 m^2 = Rs.2.50$

Cost of cleaning $\frac{880}{7}m^2 = \frac{880}{7} \times 2.50$

Total cost of cleaning = $Rs.314.28$

***** END *****