



In

$$a \text{ Cone} : l^2 = r^2 + h^2$$

$$CSA \text{ of Cone} = \pi r l$$

$$TSA \text{ of Cone} = \pi r (r + l)$$

Where $r = \text{radius}$

$h = \text{height}$ and

$l = \text{Slant height}$



Exercise 13.3.

Diameter of the base of a cone is 10.5 cm.
& its slant height is 21 cm. & diameter of

base is 24 cm.

$$\text{Radius} = \frac{24}{2} = 12$$

$$= 5.25 \text{ cm.}$$

slant height = 10cm.

$$C.S.A = \pi r l$$

$$= \frac{22}{7} \times 5.25 \times 10$$

$$= 165 \text{ cm}^2$$

3 Find the total surface area of a cone, if its slant height is 21m & diameter of its base is 24m.

→ Slant height (l) = 21m.

diameter = 24m

$$r = \frac{24}{2} = r = 12 \text{ m.}$$

$$T.S.A = \pi r [r + l]$$

$$\frac{22}{7} \times 12 [12 + 21]$$

$$= \frac{37.7}{7} [12 + 21]$$

$$37.7 \times 33$$

$$= 1244.1 \text{ m}^2$$

3 Curved Surface area of a cone is 308 cm^2 & its slant height is 14cm.

Find (i) radius of the base (ii) Total surface area of the cone.

→ i) Slant height: 14 cm

CSA: 308 cm^2

$$\pi r l = 308 \text{ cm}^2$$

$$\frac{22}{7} \times r \times 14 = 308$$

$r =$

$$44r = 308$$

$$r = \frac{308}{44}$$

$$r = 7$$

$$r = 7$$

$$r = 7 \text{ cm}$$

TSA: $\pi r (2l + r)$

$$\frac{22}{7} \times 7^2 [7 + 14]$$

$$22 [23]$$

$$506 \text{ cm}^2$$

Hence, TSA of the cone is 506 cm^2

ii) A conical tent is 10 m high & the radius

of its base is 24 m . Find

the cost of the canvas

if the cost of 1 m^2 canvas is $\text{Rs } 70$.

→ i) h. 10 m , r. 24 m

$$l = \sqrt{r^2 + h^2}$$

$$= \sqrt{24^2 + 10^2}$$

$$\sqrt{576 + 100} = \sqrt{676} = 26 \text{ m}$$

ii) CSA of the tent = $\pi r l$

$$\frac{22}{7} \times 24 \times 26$$

$$1925.5$$

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$$= 1932.5 \times 70$$

$$= 135275$$