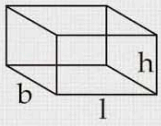
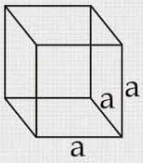
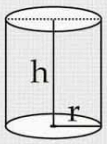
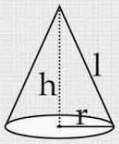
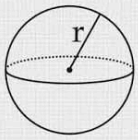
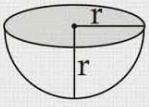
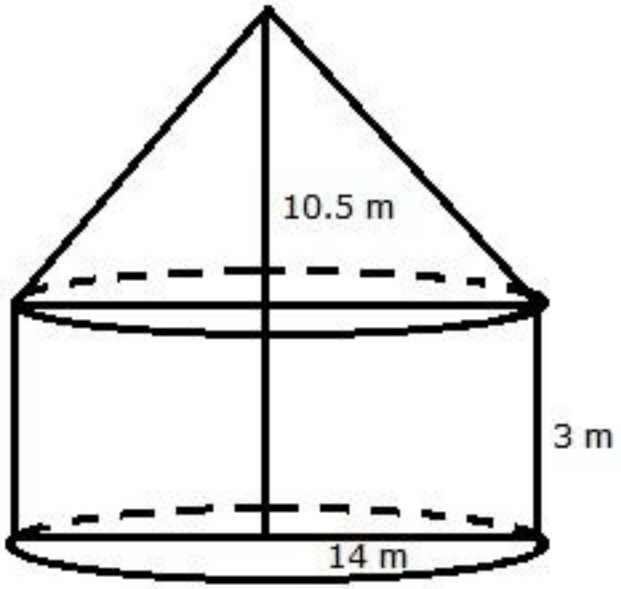
RS Aggarwal Class 10 Solutions
Volume and Surface Areas of Solids

Name of the solid	Figure	Volume	Laterial/Curved Surface Area	Total Surface Area
Cuboid		lbh	2lh + 2bh or 2h(l+b)	2lh+2bh+2lb or 2(lh+bh+lb)
Cube		a^3	$4a^2$	$4a^2+2a^2$ or $6a^2$
Right circular cylinder		πr^2h	$2\pi rh$	$2\pi rh + 2\pi r^2$ or $2\pi r(h+r)$
Right circular cone		$\frac{1}{3}\pi r^2h$	πrl	$\pi rl + \pi r^2$ or $\pi r(l+r)$
Sphere		$\frac{4}{3}\pi r^3$	$4\pi r^2$	$4\pi r^2$
Hemisphere		$\frac{2}{3}\pi r^3$	$2\pi r^2$	$2\pi r^2+\pi r^2$ or $3\pi r^2$

Question 1:



Radius of the cylinder = 14 m
And its height = 3 m
Radius of cone = 14 m
And its height = 10.5 m
Let l be the slant height

$$\therefore \quad l^2 = (14)^2 + (10.5)^2$$

$$l^2 = (196 + 110.25)\,m^2$$

$$l^2 = 306.25\ m^2$$

$$l = \sqrt{306.25}\ m$$

$$= 17.5\ m$$

Curved surface area of tent
= (curved area of cylinder + curved surface area of cone)

$$= 2\pi rh + \pi rl$$

$$= \left[\left(2 \times \frac{22}{7} \times 14 \times 3\right) + \left(\frac{22}{7} \times 14 \times 17.5\right)\right] m^2$$

$$= (264 + 770)\,m^2 = 1034\ m^2$$

Hence, the curved surface area of the tent = 1034
Cost of canvas = Rs.(1034 × 80) = Rs. 82720

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