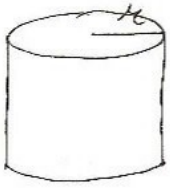
(5)



rate of paint per m^2 = ₹20
cost of paint = ₹ 2200

inner C.S.A = $\frac{\text{cost}}{\text{rate}}$

$= \frac{2200}{20}$

$= 110\ m^2$

inner CSA = $110\ cm^2$

$2\pi rh = 110$

$2 \times \frac{22}{7} \times r \times 10 = 110$

$\Rightarrow r = \frac{40 \times 7}{2 \times 22 \times 10}$

$= \frac{7}{4}\ m$

$= 1.75\ m$

capacity = $\pi r^2 h$

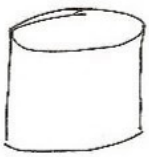
$= \frac{22}{7} \times \frac{7}{4} \times \frac{7}{4} \times 10$

$= \frac{385}{4}$

$= 96.25\ m^3$

$= 96.25\ kl$

(6)



capacity = 15.4 l

$\pi r^2 h = \frac{15.4}{1000}\ m^3$

$\frac{22}{7} \times r^2 \times 1 = \frac{154}{10000}$

$\Rightarrow r^2 = \frac{154 \times 7}{22 \times 10000}$

$\Rightarrow r = \sqrt{\frac{7 \times 7}{100 \times 100}}$

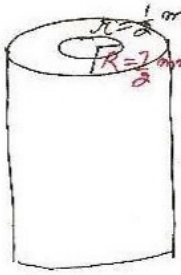
$= 0.07\ m$

area of sheet reqd = $2\pi r(r+h)$

$= 2 \times \frac{22}{7} \times 0.07 \times 1.07$

$= 0.4708\ m^2$

(7)



volume of graphite

$= \pi r^2 h$

$= \frac{22}{7} \times \frac{1}{20} \times \frac{1}{20} \times 14$

$= \frac{11}{100}$

$= 0.11\ cm^3$

vol of wood

= outer vol. − inner vol.

$= \pi h (R^2 - r^2)$

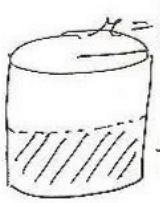
$= \frac{22}{7} \times 14 \left[\left(\frac{7}{20}\right)^2 - \left(\frac{1}{20}\right)^2\right]$

$= 44 \times \frac{6}{20} \times \frac{8}{20}$

$= \frac{528}{100}$

$= 5.28\ cm^3$

(8)



quantity of soup reqd. for 250 pat.

$= 250\ \pi r^2 h$

$= 250 \times \frac{22}{7} \times \frac{7}{2} \times \frac{7}{2} \times 4$

$= 38500\ cm^3$

$= 38.5\ l$