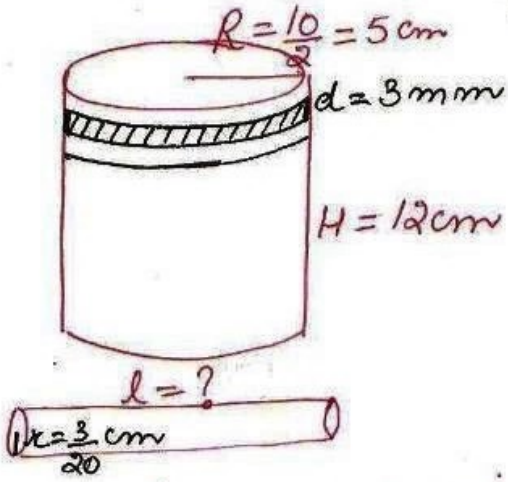
ex 13.5

① 

density = 8.8 g/cm³

Mass = V × D

$= \frac{4356}{7\times7} \times 8.8$

$= \frac{38332.8}{49}$

$= 782.3\ g$

no of turns of wire

$= \frac{\text{height of cylinder}}{\text{diam. of wire}}$

$= \frac{12}{3/10}$

$= {}^{4}\cancel{12} \times \frac{10}{\cancel{3}}$

$= 40$

length of wire (l)

$= 40 \times 2\pi R$

$= 80 \times \frac{22}{7} \times 5$

$= \frac{8800}{7}$

$= 1257.14\ cm$

volume of wire used

$= \pi r^2 h$

$= \frac{22}{7} \times \frac{3}{\cancel{20}} \times \frac{3}{\cancel{20}} \times \frac{\overset{22}{\cancel{8800}}}{7}$

$= \frac{4356}{49}$

$= 88.89\ cm^3$