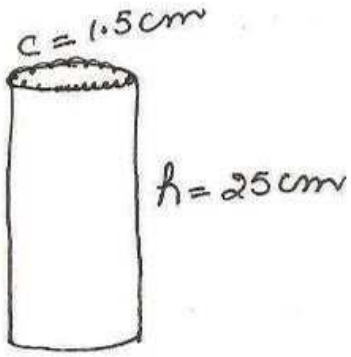
(7)



C.S.A of a pencil $= 2\pi rh$

$=$ circumference of base $\times h$

$= 1.5 \times 2.5$

$= 3.75\ cm^2$

area to be coloured $=$ 120000 $\times$ CSA of a pencil

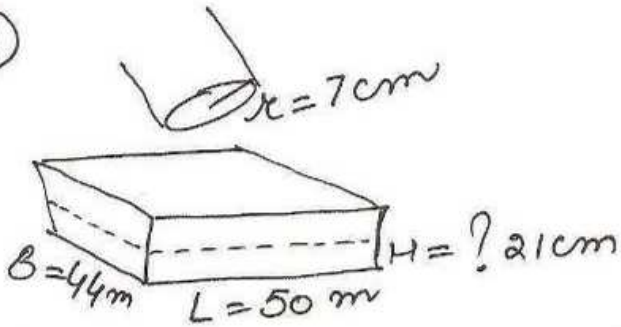
$= 120000 \times 3.75$

$= 450000\ cm^2$

cost of colouring $= 450000 \times 0.05$

$=$ Rs 22500

(8)



volume of water flowing out = vol. of water collected

$\pi r^2 h = LBH$

$\frac{22}{7} \times 7 \times 7 \times h = 5000 \times \frac{4400}{200} \times \frac{21}{3}$

$h = 3000000\ cm$

$= 30\ km \quad [\because 1\ km = 10^5\ cm]$

$\therefore$ distance travelled by water in pipe $= 30\ km$

speed $= 15\ km/h$

time $= d/s = \frac{30}{15}$

$= 2$ hours