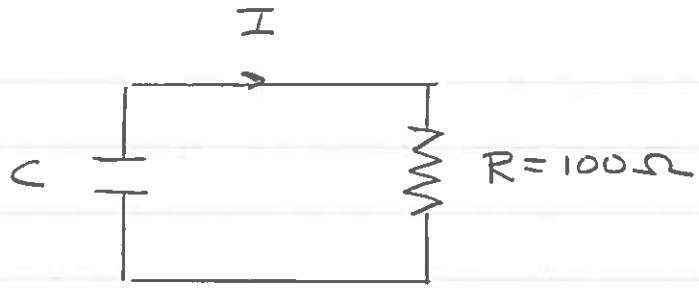

at $t = 2.5\,ms$, $I(t=2.5ms) = I_0 e^{-t/\tau}$

and,

$$\frac{I(t)}{I_0} = 0.25 = e^{-t/\tau}$$

So,

$$-\frac{t}{\tau} = \ln(0.25)$$

and

$$\tau = \frac{-t}{\ln(0.25)} = 1.803 \times 10^{-3}\ s$$

$\therefore$ $\tau = RC \Rightarrow C = \frac{\tau}{R} = 1.803 \times 10^{-5}\ F$

$= 18.03\ \mu F$