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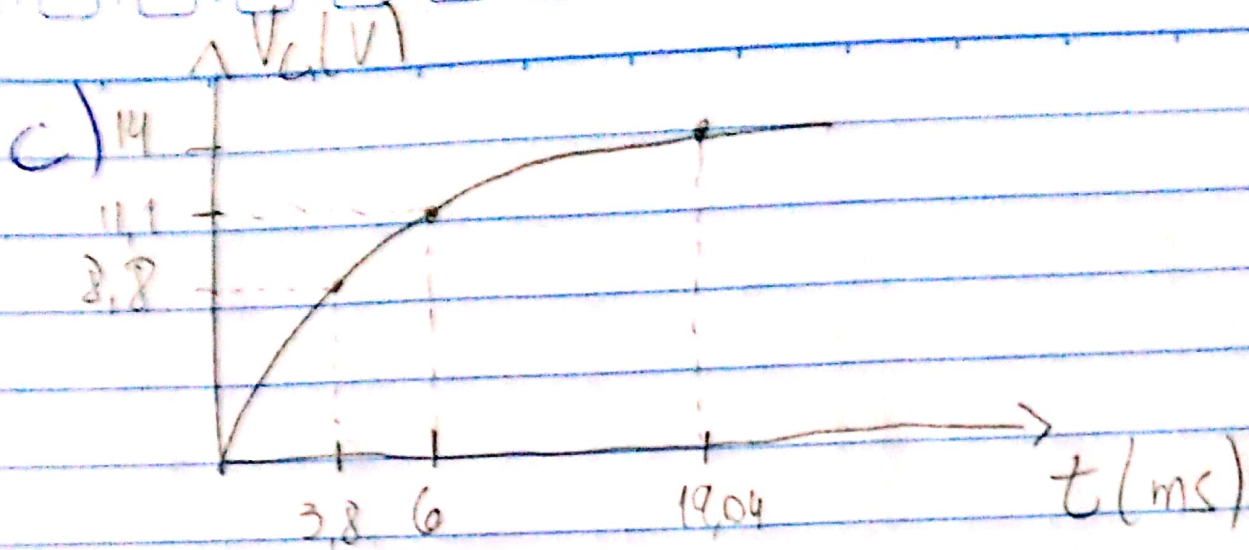
$$a) \tau = 5 \tau_0 = 5RC = 5 \cdot 5,6 \cdot 10^3 \cdot 680 \cdot 10^{-9} \approx 19,04 \text{ ms}$$

$$\tau = 19,04 \text{ ms}$$

$$b) E = 14 \quad V_C = E \left(1 - e^{-t/\tau} \right) = 14 \left(1 - e^{-t/3,808 \cdot 10^{-3}} \right)$$

$$V_C(6 \text{ ms}) = 14 \left(1 - e^{-6 \cdot 10^{-3}/3,808 \cdot 10^{-3}} \right) \approx 11,1 \text{ V}$$

$$V_C(6 \text{ ms}) \approx 11,1 \text{ V}$$



d)

$$V_c = 14 e^{-t/\tau} = 14 e^{-t/3.808 \cdot 10^{-3}}$$

$$V_c(3 \text{ ms}) = -14 e^{-3 \cdot 10^{-3} / 3.808 \cdot 10^{-3}} \approx -6.37 \text{ V}$$

$$i_c = \frac{V_c}{R} \Rightarrow i_c(3 \text{ ms}) = \frac{-6.37}{5.6 \cdot 10^{-3}} = -1.13 \text{ mA}$$

$i_c(3 \text{ ms}) = -1.13 \text{ mA}$

