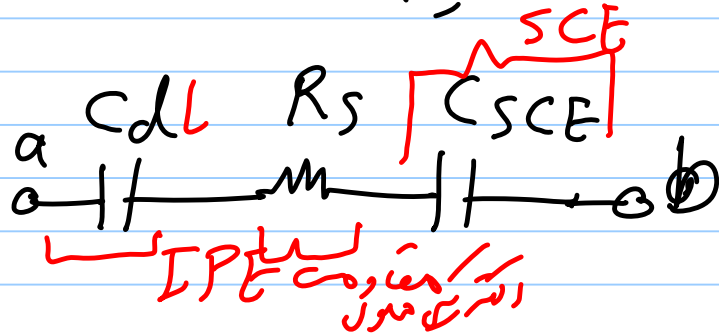
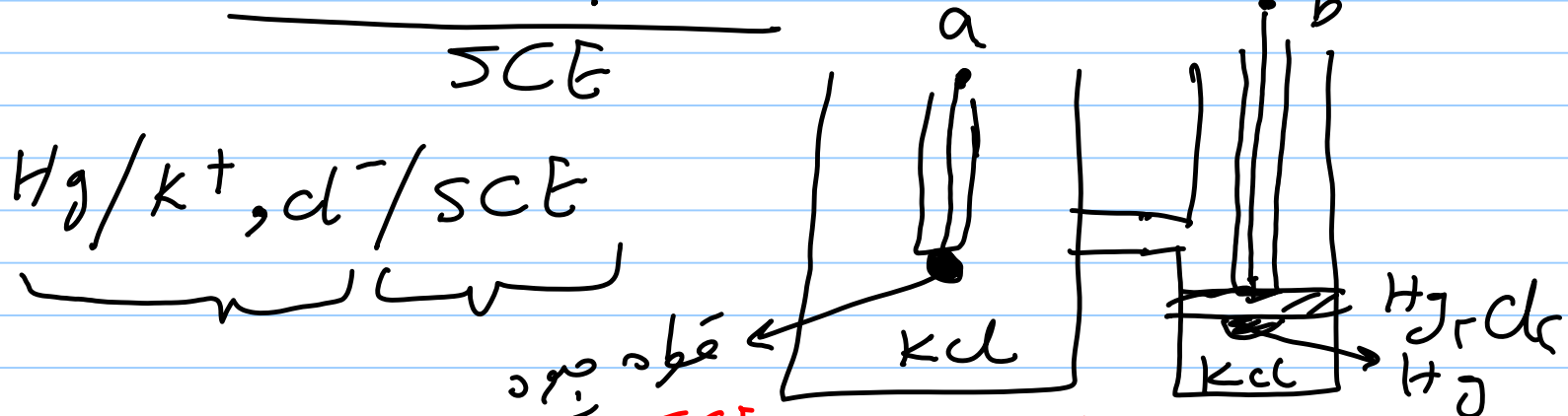


بناؤ

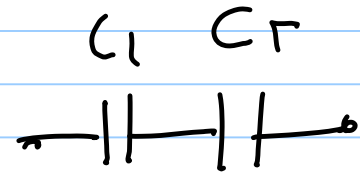
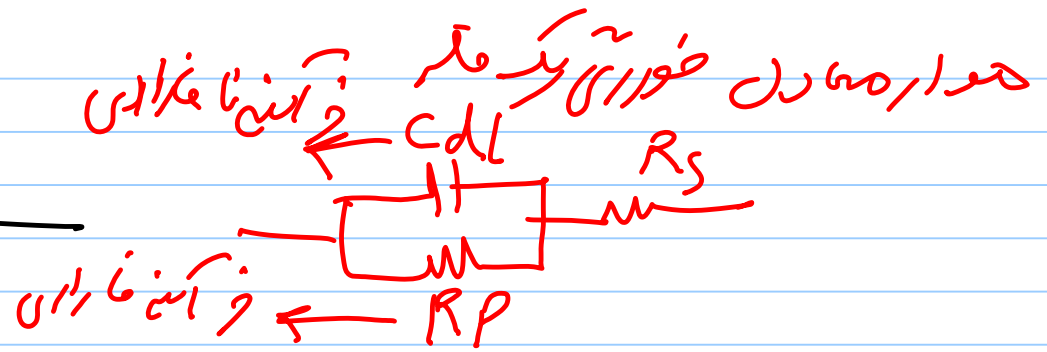
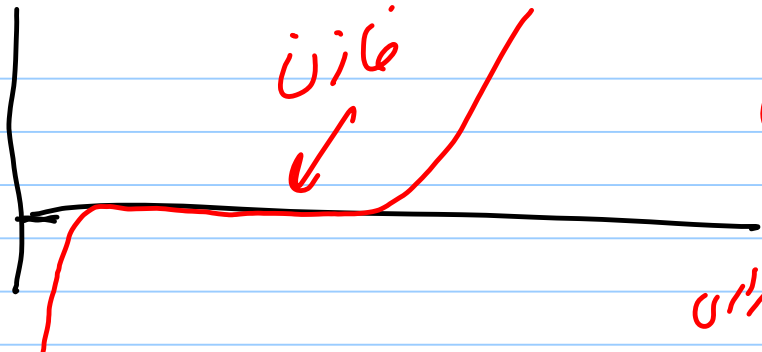
د نامہ نیم سل IPE ویک نیم سل ہرٹس بنو سہ اول



SCE

IPE

SCE

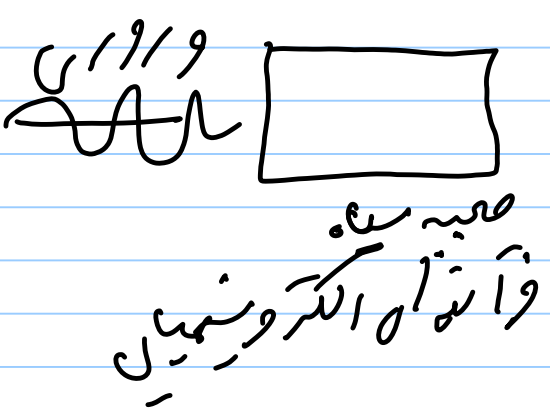
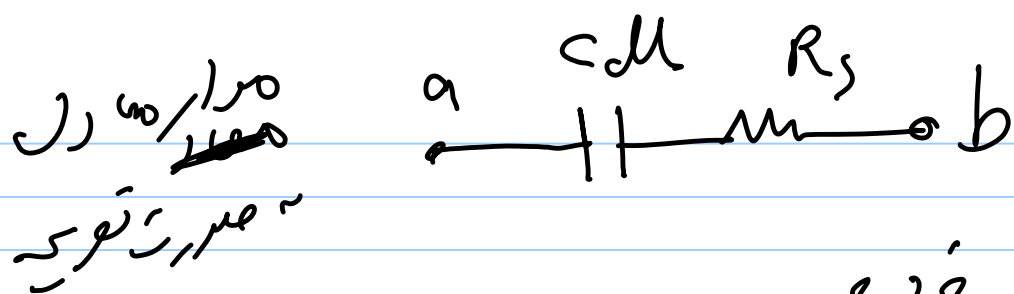


$$\frac{1}{C_t} = \frac{1}{C_1} + \frac{1}{C_c}$$

$$C_{dl} \ll C_{SCE}$$

$$\frac{1}{C_t} = \frac{C_c + C_1}{C_1 C_c} \Rightarrow C_t = \frac{C_1 C_c}{C_1 + C_c}$$

$$C_t = \frac{C_{dl} C_{SCE}}{C_{dl} + C_{SCE}} \Rightarrow C_t \approx C_{dl}$$

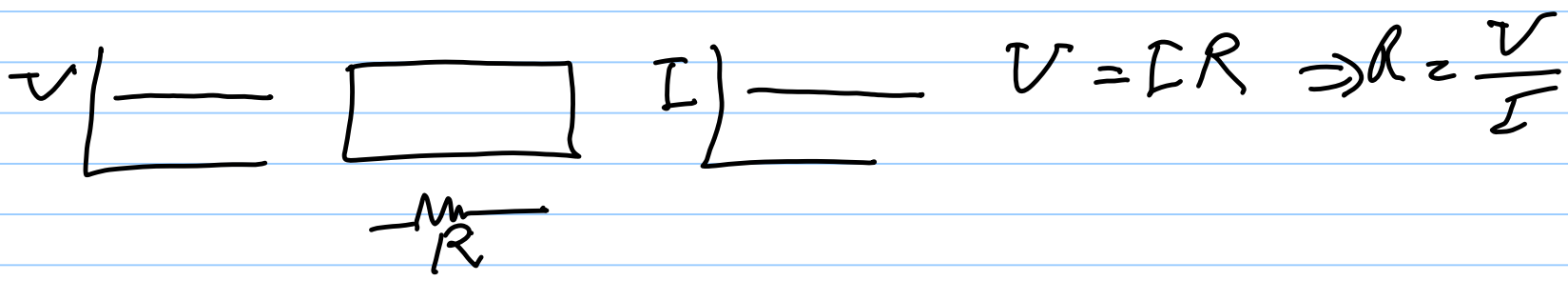


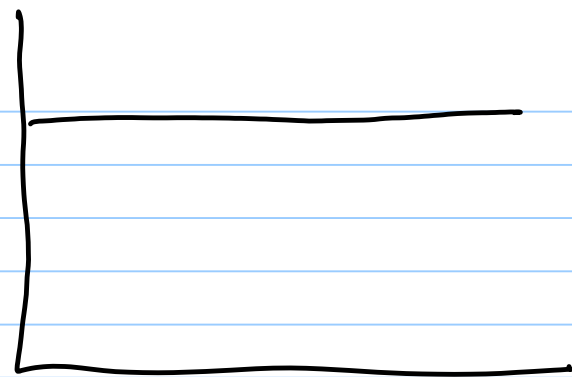
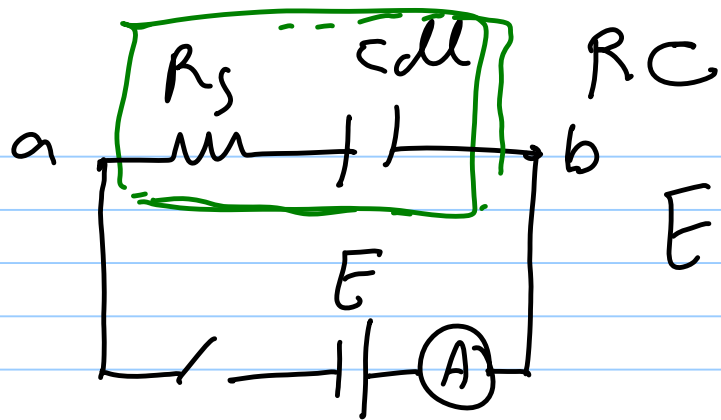
خوب و

حقاقتی و درونیست و در ۱۱۱۹

هم کار در صیبه و نیز در ۱۱۱۹

فانتاز الکترونیکی در ۱۱۱۹





$i_{C_{dl}} \approx i_{R_s}$
 (17/19)

$$\frac{dq}{z} = dt \Rightarrow dq = z dt \quad \frac{E}{R_s} - \frac{q}{R_s C_{dl}} = z$$

$I - t$ nice graph

$$dz = -\frac{dq}{R_s C_{dl}} \Rightarrow -\frac{dz R_s C_{dl}}{z} = dt$$

$$\frac{dz}{z} = -\frac{dt}{R_s C_{dl}} \Rightarrow z = a \exp\left(-\frac{t}{R_s C_{dl}}\right)$$

B.C $\left\{ \begin{array}{l} t=0 \\ q=0 \end{array} \right.$

$$Q = \frac{E}{R_s} \Rightarrow Z = \frac{E}{R_s} \exp\left(\frac{-t}{R_s C_{dl}}\right)$$

$$\boxed{\frac{E}{R_s} - \frac{q}{R_s C_{dl}}} = \frac{E}{R_s} \exp\left(\frac{-t}{R_s C_{dl}}\right)$$

Z

$$q = E C_{dl} \left(1 - \exp\left(\frac{-t}{R_s C_{dl}}\right)\right)$$

$$y = e^x$$

$$\frac{dy}{dx} = e^x$$

$$\frac{dq}{dt} = i \Rightarrow q = E C_{dl} - E C_{dl} \exp\left(\frac{-t}{R_s C_{dl}}\right)$$

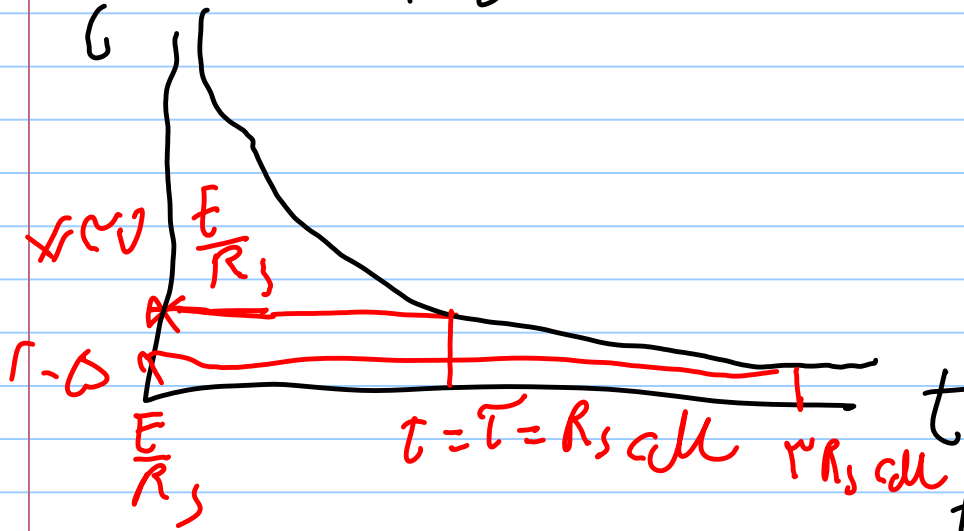
$$i = \frac{dq}{dt} = + \frac{E C_{dl}}{R_s C_{dl}} \exp\left(\frac{-t}{R_s C_{dl}}\right)$$

$$i = \frac{E}{R_s} \exp\left(-\frac{t}{R_s C_{dl}}\right)$$

$$\tau = R_s C_{dl}$$

$$t = \tau = R_s C_{dl}$$

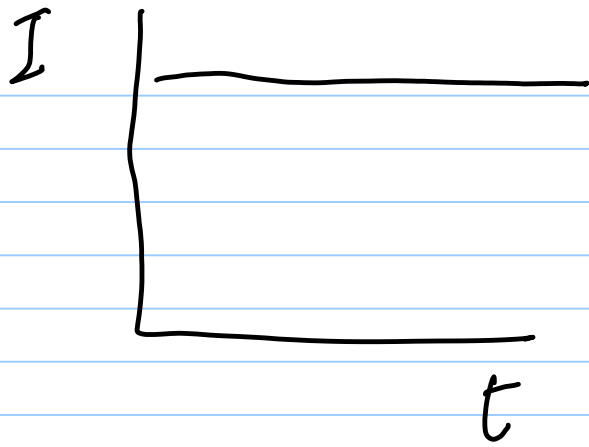
$$i = \frac{E}{R_s} \cdot 10V$$



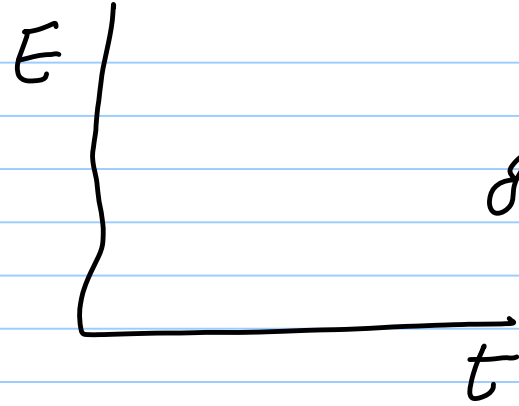
$$C_{dl} = 1 \mu F \quad R_s = 1 \Omega$$

$$t = 1 \mu s$$

$$t = 4 \mu s \Rightarrow \dots \Rightarrow i = 10 \frac{E}{R_s}$$



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