

JAYPEE INSTITUTE OF INFORMATION TECHNOLOGY
Electronics and Communication Engineering
Electrical Science-II (15B11EC211)
Tutorial Sheet: 1

Q1. [CO1] Find I for $t=0^+$ for the circuit shown below in fig.1:

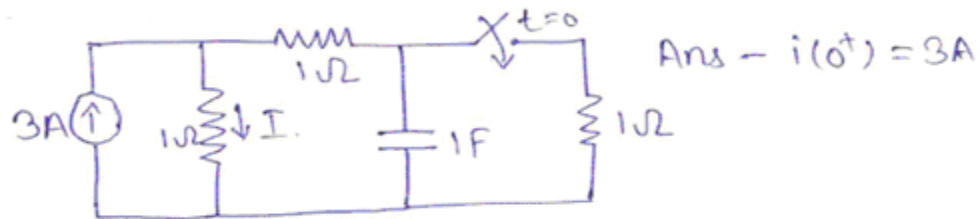


Fig.1

Q2. [CO1] The switch in the circuit shown below in fig.2 has been closed since dinosaurs last walked the earth. If the switch is opened at $t=0$, Find $i_L(0^+)$ and $V(0^+)$, the instant after the switch changes.

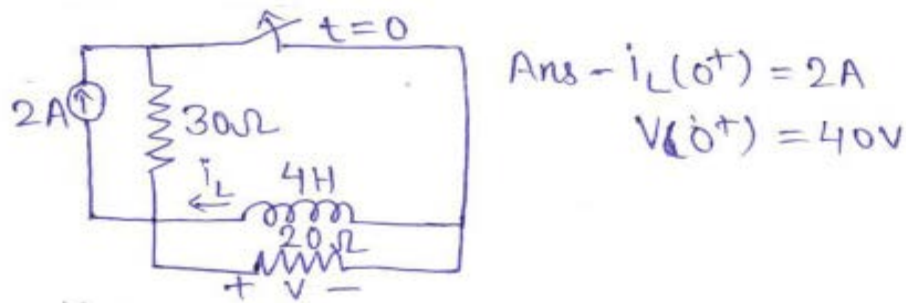


Fig. 2

Q3. [CO1] Determine $V_C(t)$ for the circuit shown below in fig.3 .

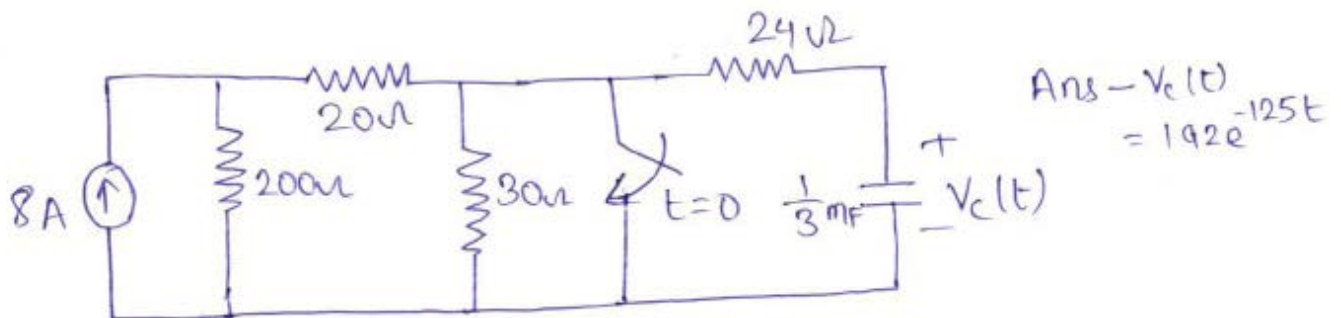


Fig. 3

Q4. [CO1] Find $V(t)$ across capacitor for circuit given below in fig.4.

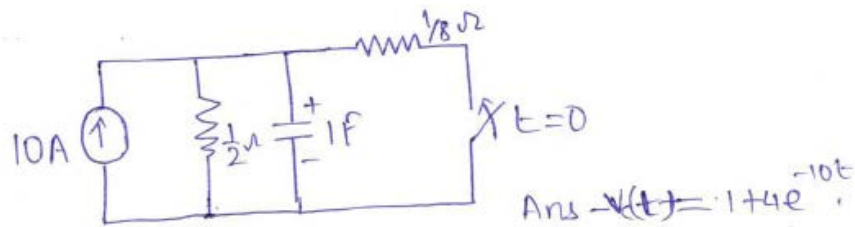


Fig. 4

Q5. [CO1] Find $i(t)$ for $t > 0$ for circuit given below in fig.5.

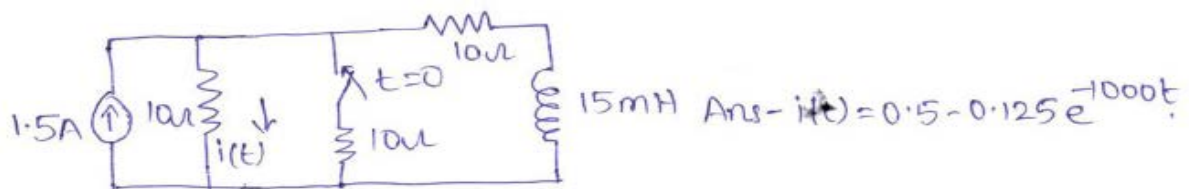


Fig.5

Q6. [CO1] Find $i(t)$ for $t > 0$ for circuit given below in fig.6.

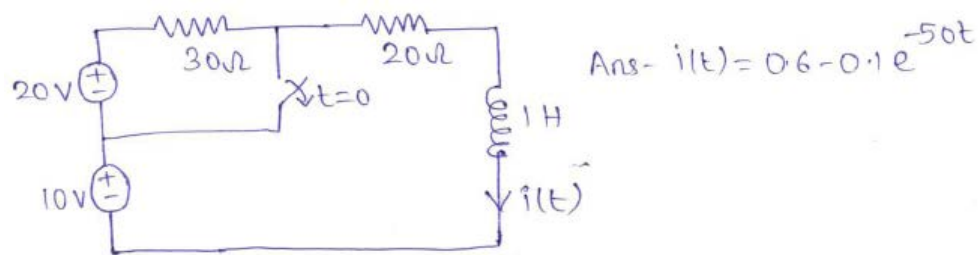


Fig.6

Q7. [CO1] In the circuit shown below in fig.7, the switch is moved from position A to B at time $t=0$. The current i through the inductor satisfies the following conditions:-

$$i(0^-) = -8A, \quad di(0^+)/dt = 3A/\text{sec}, \quad i(\alpha) = 4A. \text{ Find } R.$$

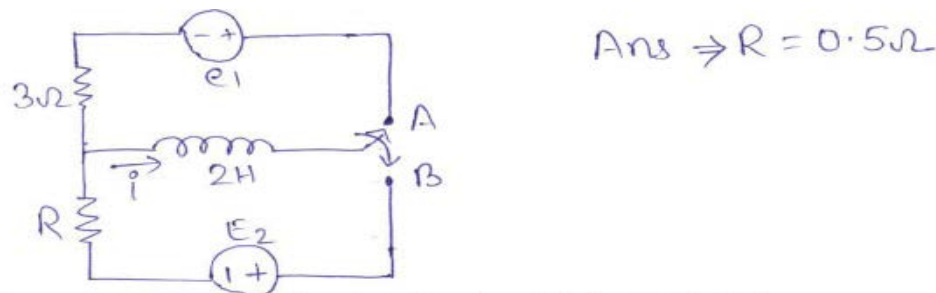


Fig. 7