

Student Name: _____

ID # _____

Question 1:

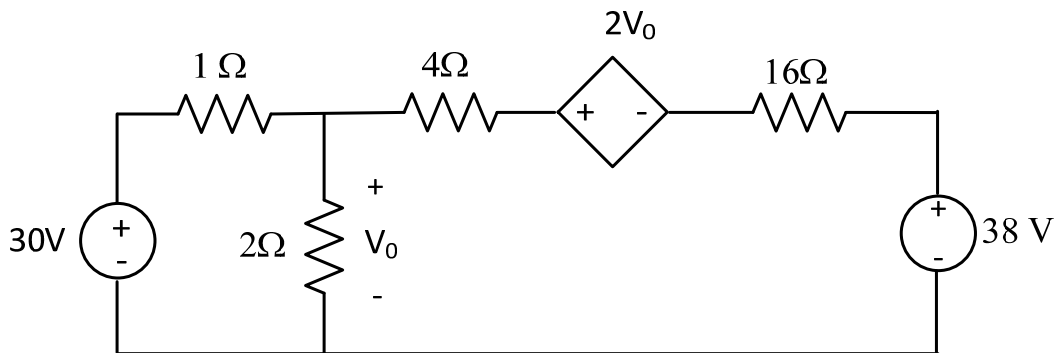


Fig. 1

In the circuit shown in **Fig. 1**, find the voltage V_0 across the $2\ \Omega$ resistor.

Question 2:

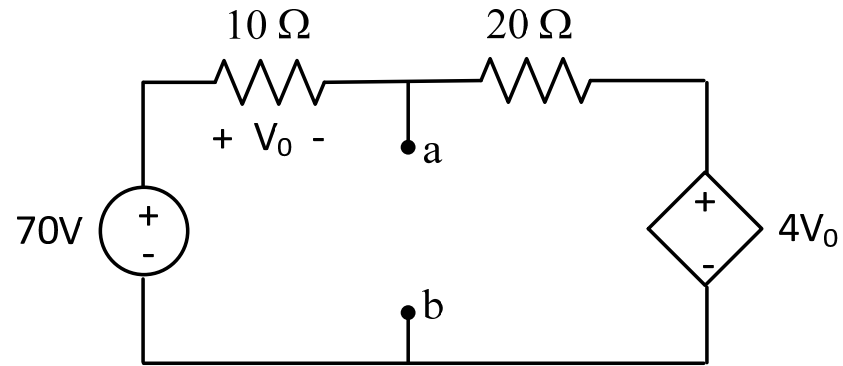


Fig. 2

For the circuit shown in **Fig.2** find:

- i) V_{th} between terminals $a-b$
- ii) R_{th} between terminals $a-b$

Question 3:

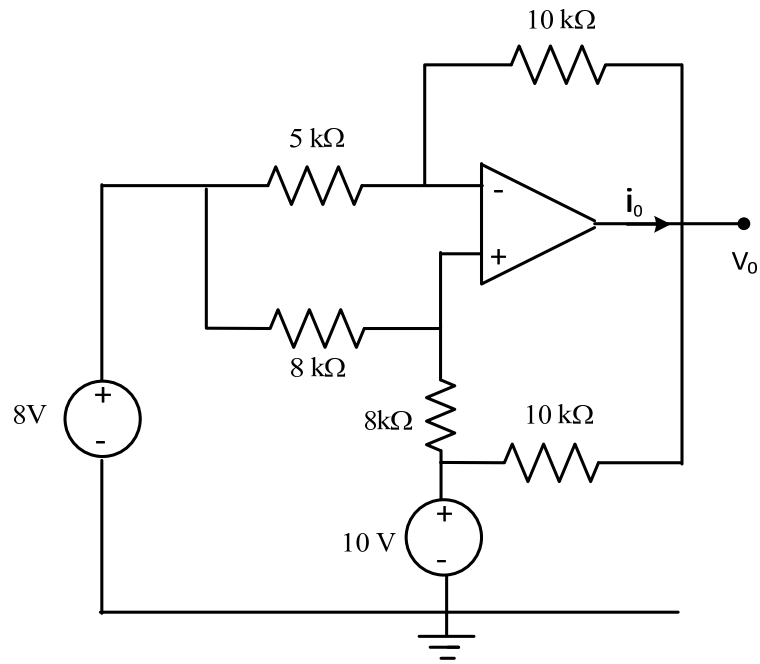


Fig. 3

In the circuit shown in **Fig. 3**, find

- i) v_o
- ii) i_o .

Question 4:

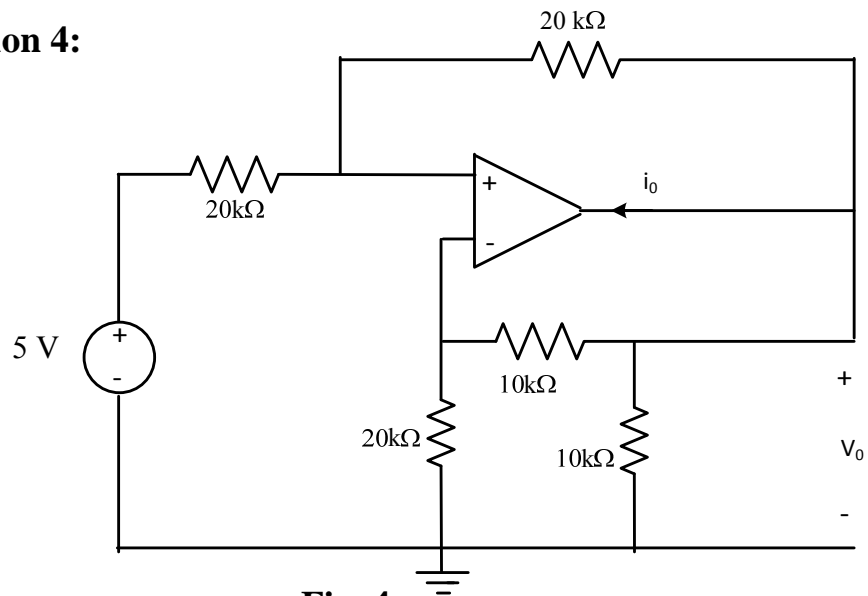


Fig. 4

In the circuit shown in **Fig. 4**, find

- i) v_0
- ii) i_0

Question 5:

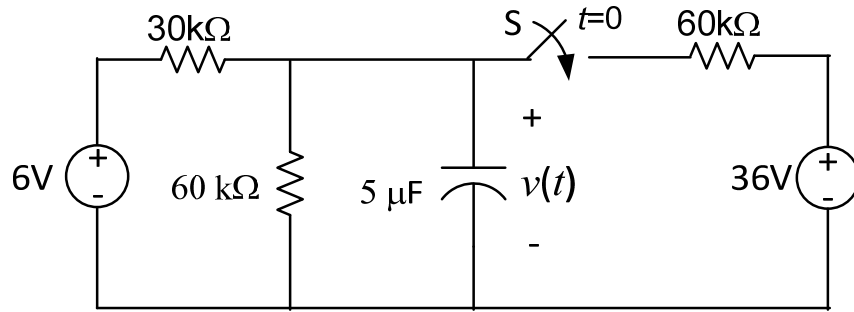


Fig. 5

In the circuit shown in **Fig. 5**, the switch is initially open for a long time. It is closed at time $t = 0$. The voltage across the capacitor is given by $v(t) = F + E e^{-at}$. Find

- i) F ii) E iii) a iv) Sketch $v(t)$ versus t .

Question 6:

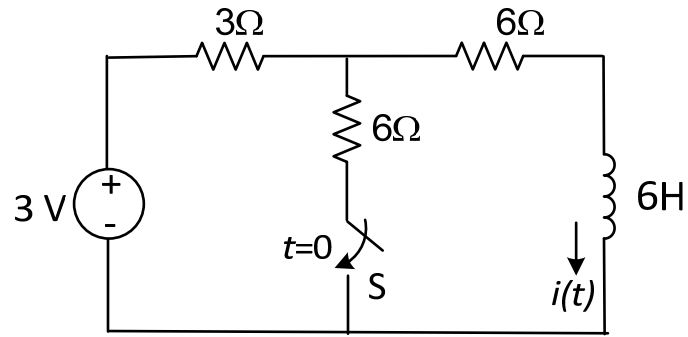


Fig. 6

In the circuit shown in **Fig. 6**, the switch S is initially open for a long time. It is closed at time $t = 0$. The inductor current $i(t)$ is given by $i(t) = F + E e^{-at}$. Find

- i) F ii) E iii) a iv) Sketch $i(t)$ versus t .