

Problem sheet-2

IEC102

Q1. Use nodal analysis to find I_0 in the circuit shown in Fig. Q1

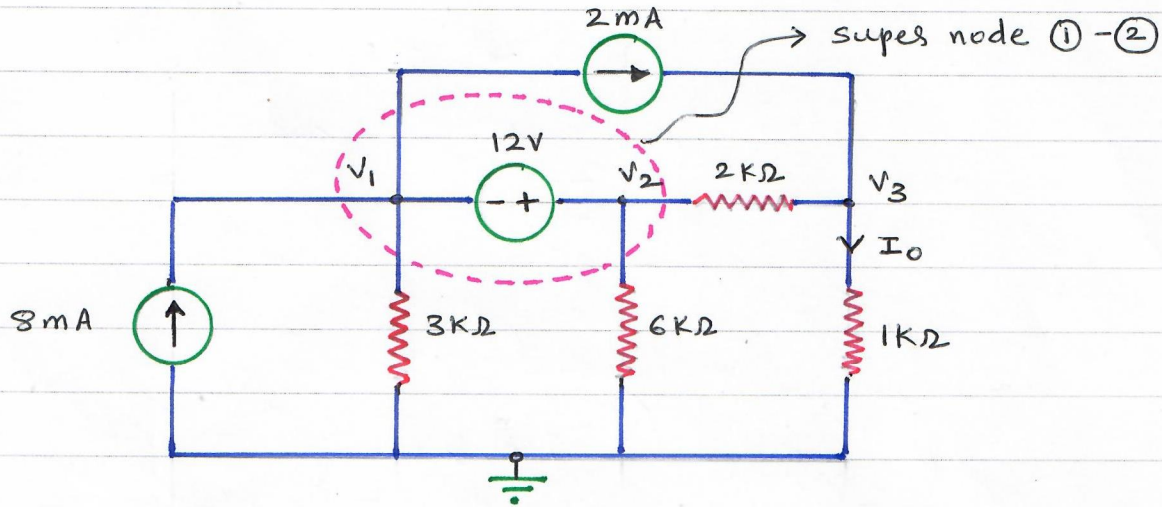


Fig. Q1

Q2 Using mesh analysis, calculate I_0 in the circuit shown in Fig. Q2

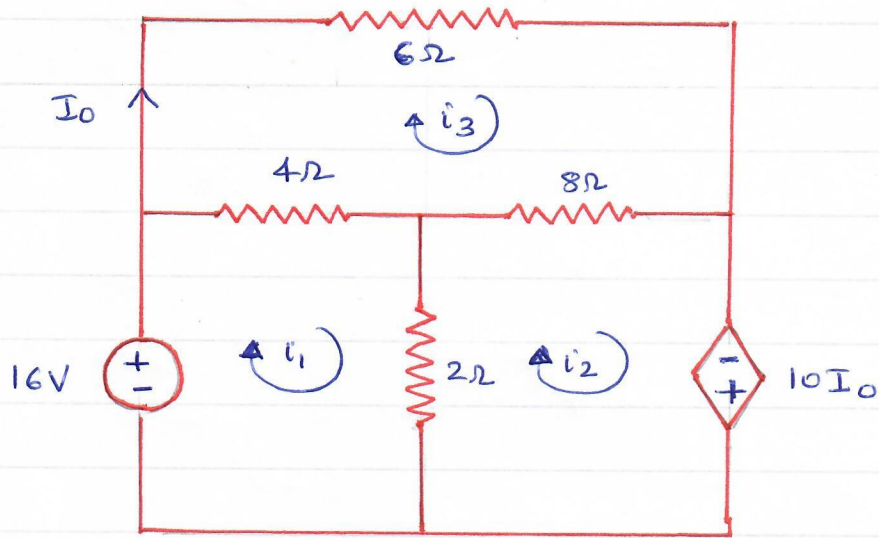


Fig. Q2

(Q3) Use superposition to find V_x in the circuit shown in Fig. Q3

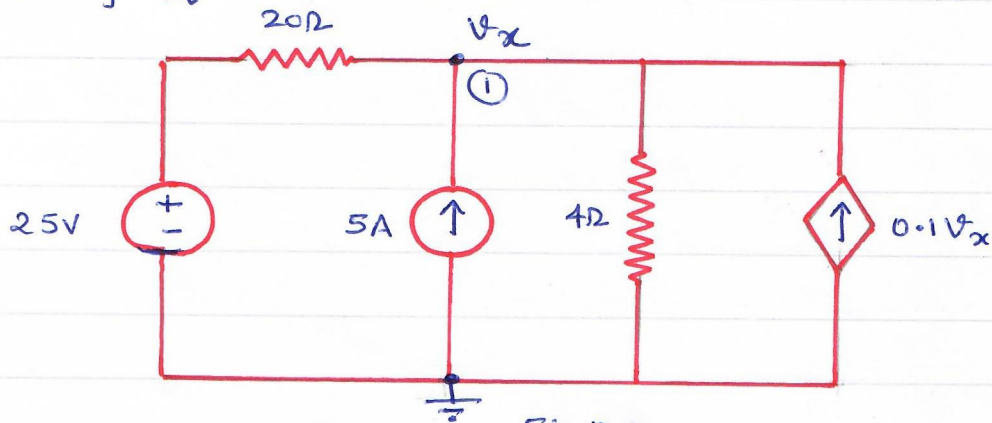


Fig. Q3

Q4 calculate V_x using source transformation (Fig. Q4)

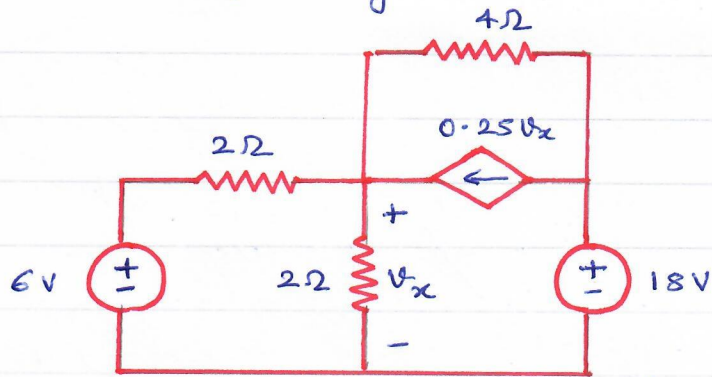


Fig. Q4

Q5 Using Thevenin's theorem, find the equivalent circuit to the left of the terminals (a-b) in the circuit of Fig. Q5. Then find I .

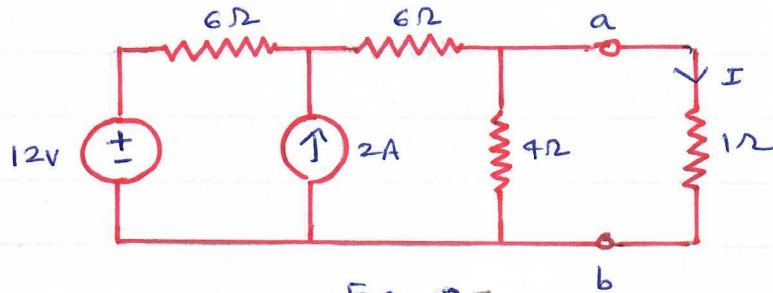


Fig. Q5