



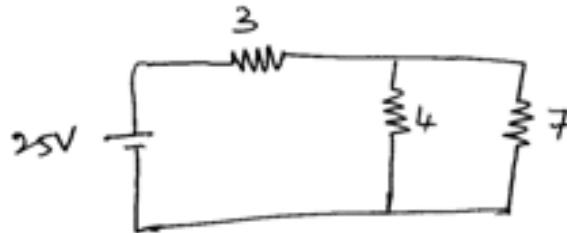
MALLA REDDY UNIVERSITY
Maisammaguda, Near Kompally, Hyderabad 500100. TS., India.

BASIC ELECTRICAL AND ELECTRONICS ENGINEERING

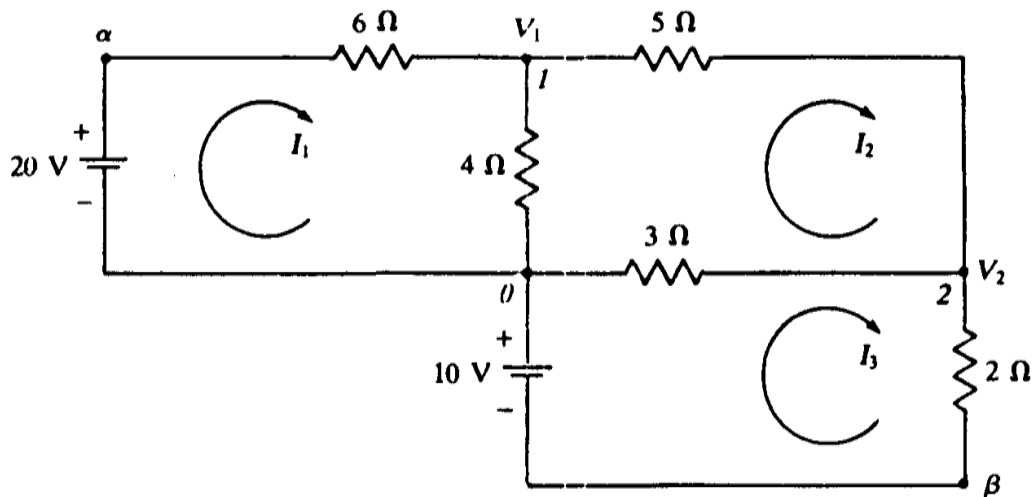
QUESTION BANK FOR MINOR-I

UNIT-I

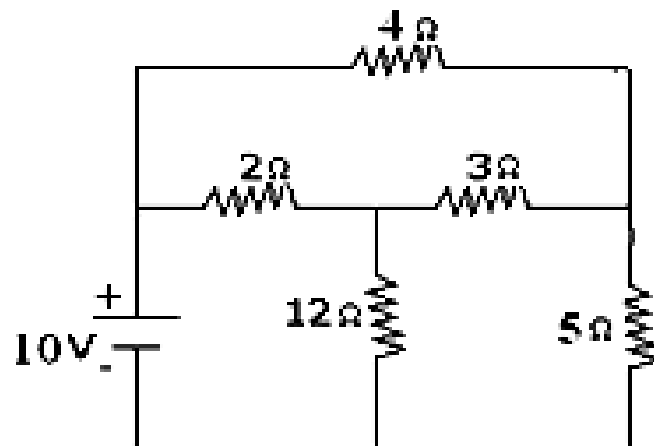
1. a) State and explain Kirchhoff's laws.
b) For the circuit as shown in following figure, calculate the current in the various branches? (All resistances are in ohms).



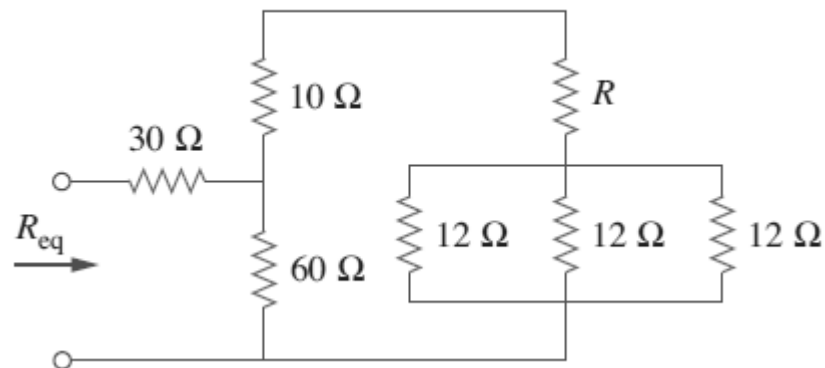
- 2.a) Explain about different types of sources.
b) Find the value of current I_1 , I_2 and I_3 from the circuit given below figure



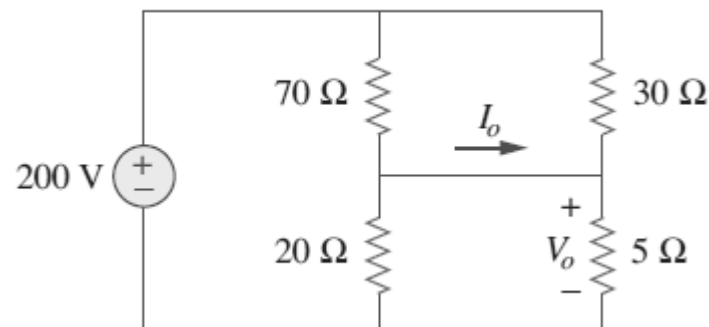
3. Find the current supplied by 10V battery for the following network shown in figure.



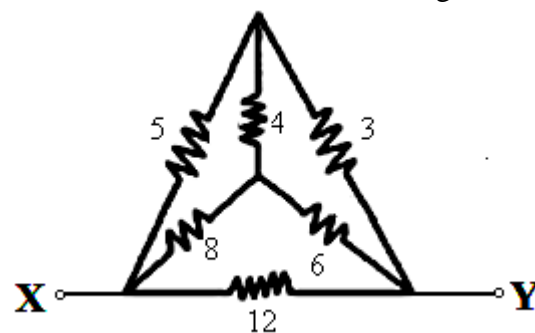
4.a) If $R_{eq} = 50 \text{ ohm}$, in the circuit shown in figure 3 find R ?



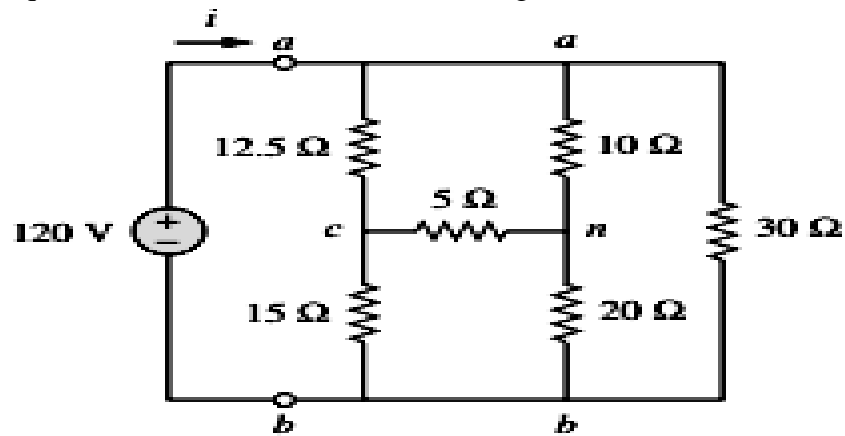
b) Calculate V_o and I_o in the circuit shown in figure



5. Find the equivalent resistance across X, Y terminals of figure below.

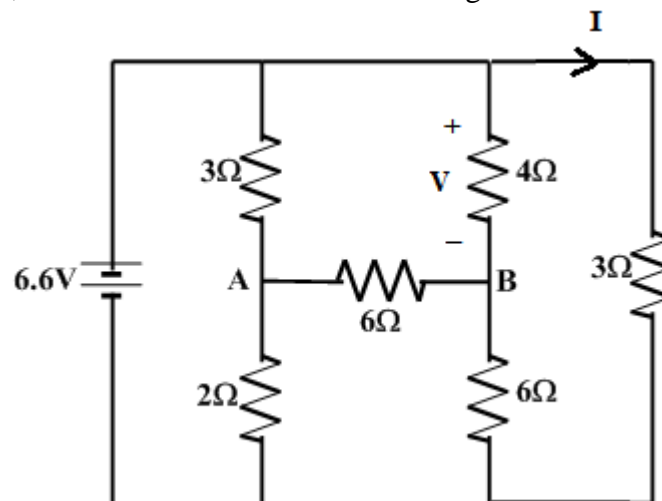


6. Obtain the equivalent resistance for the circuit in figure 1 and u



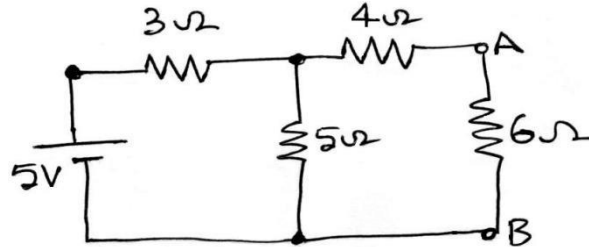
7. Three equal resistors each of R ohms are connected in delta. Derive the value of resistors in equivalent star.

8. Using Mesh analysis, find V and I in the circuit below figure

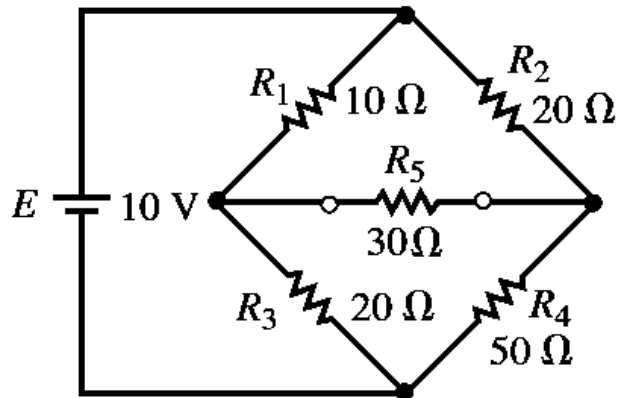


UNIT-II

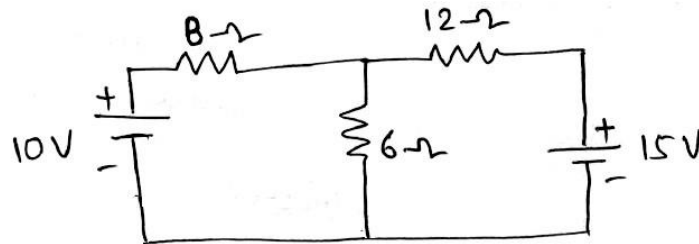
1. a) State and explain Thevenin's theorem.
 b) By using Thevenin's theorem shown in figure, find the current in 6Ω resistor.



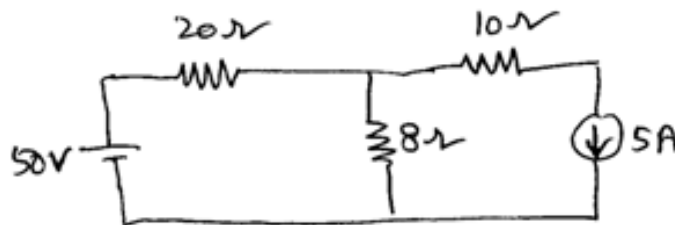
2. Using Thevenin's theorem find current passing through R_5 resistor for the circuit shown



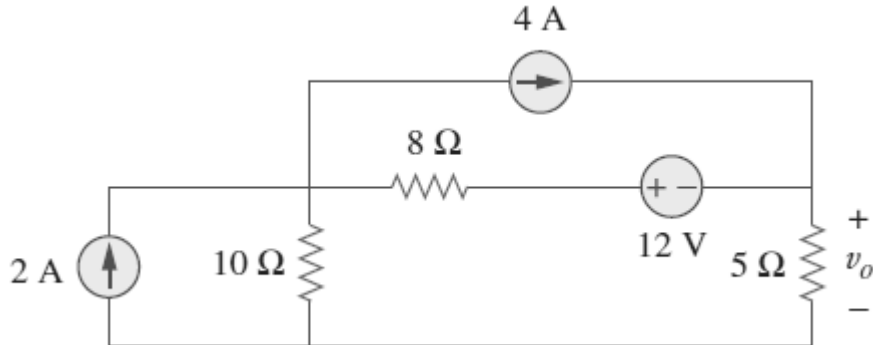
3. a) State and Explain Superposition theorem.
 b) Using superposition theorem, determine the current through 12Ω resistor shown in following figure.



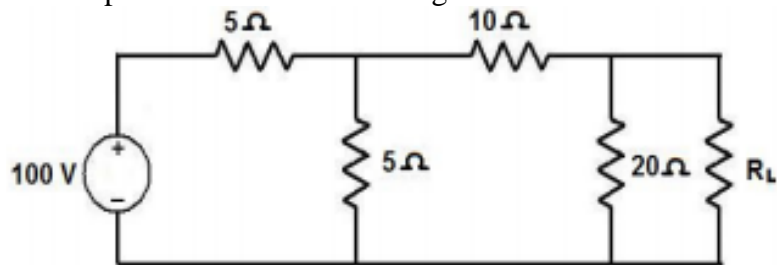
4. a) Using superposition theorem, find the current through the 8Ω resistor, as shown in below figure .



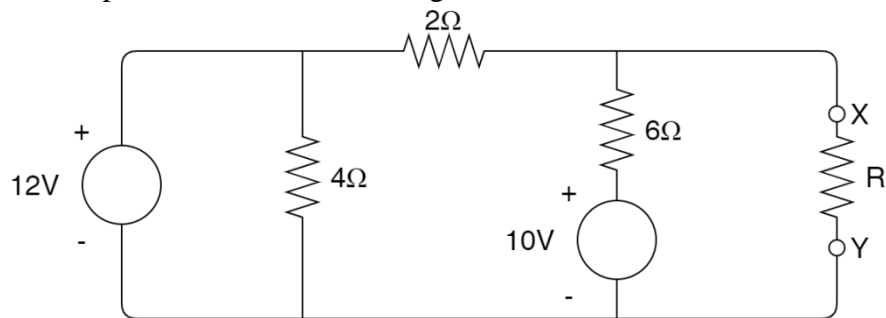
b) Find v_o using superposition theorem in the circuit shown in figure below.



5. Find the value of R_L so that maximum power is delivered to the load resistance and also find the maximum power delivered for the figure shown below.



6. Find the value of R so that maximum power is delivered to the load resistance and also find the maximum power delivered for the figure shown below.



7. Define the following terms:

- i) Cycle
- ii) Frequency
- iii) Time period
- iv) Amplitude
- v) Peak factor
- vi) Form factor of an alternating quantity.

8. Define RMS value and Average value of an alternating quantity. Determine these values for a half wave rectified sine wave.