MALLA REDDY UNIVERSITY

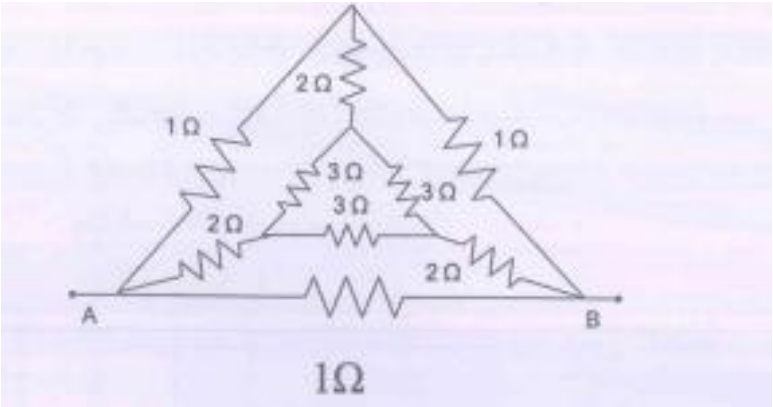
Maisammaguda, Near Kompally, Hyderabad 500100. TS., India.

BASIC ELECTRICAL AND ELECTRONICS ENGINEERING

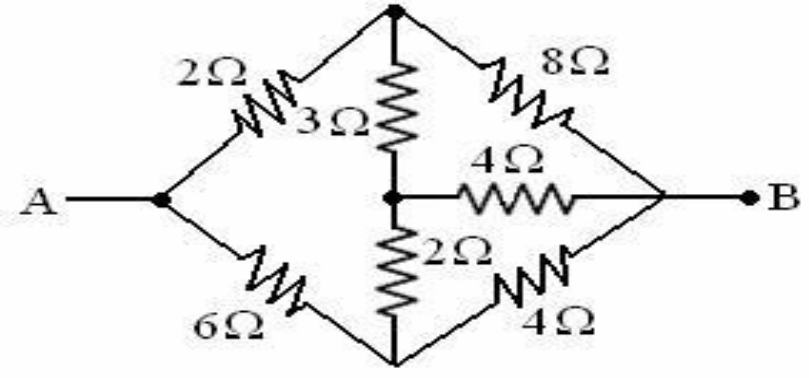
QUESTION BANK FOR MINOR-I

UNIT-I

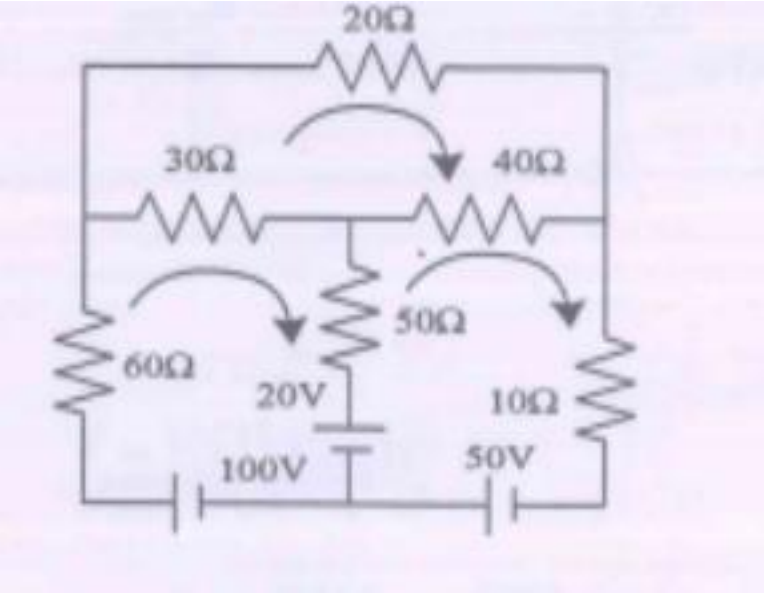
1. Explain about the different types of sources.
2. State and explain Kirchhoff's laws with an example.
3. Derive necessary expressions for star to delta and delta to star transformation.
4. Determine the equivalent resistance across AB terminals.



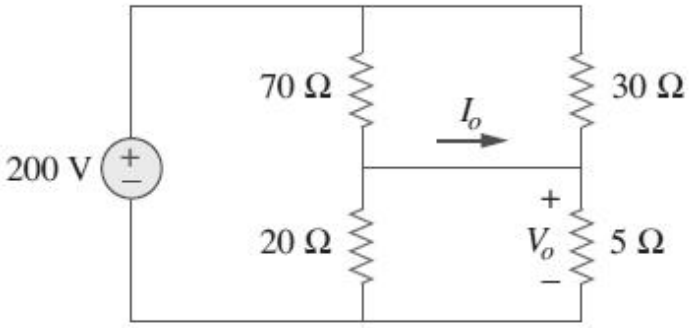
5. Determine the equivalent resistance across AB terminals.



6. Determine current flowing through 50ohms resistor using mesh analysis.



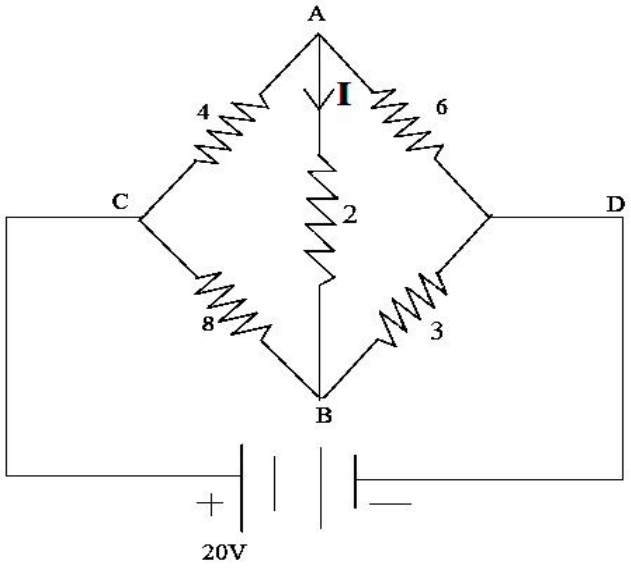
7. Calculate V_o and I_o in the circuit shown in figure by using mesh analysis.



UNIT-II

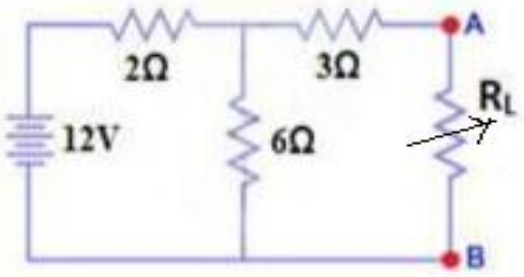
1. a) State and explain Thevenin's theorem with an example.

b) Using Thevenin's theorem calculate the current I shown in below network.(all resistors are in ohms)

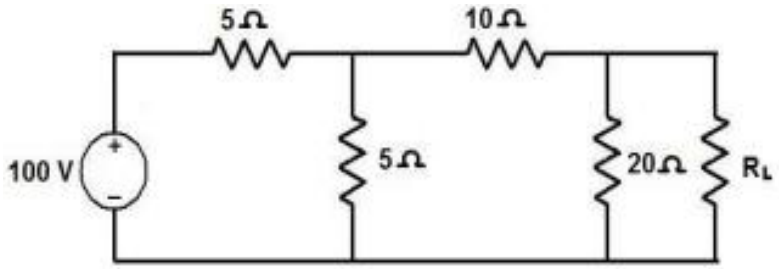


2. a) State and explain Maximum power transfer theorem with an example.

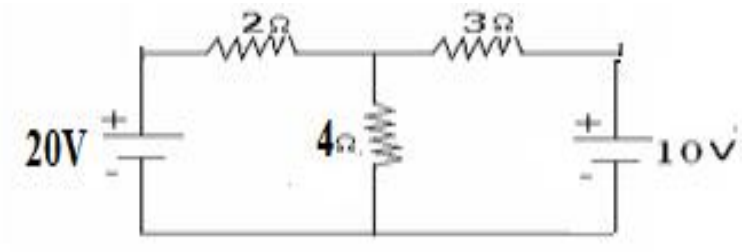
b) When the load resistance receives maximum power. Determine the maximum power delivered to the load resistance by using maximum power transfer theorem for the circuit shown in fig.



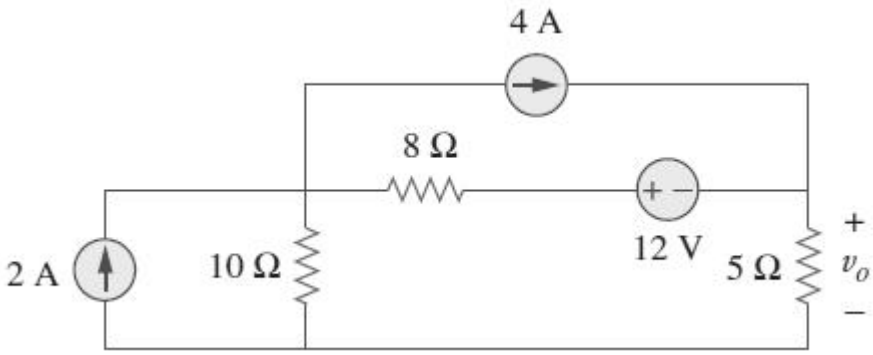
3. Find the value of R_L so that maximum power is delivered to the load resistance and also find the maximum power delivered for the figure shown below.



3. a) State and explain superposition theorem with an example.
b) Find the current through 4 ohms resistor by using superposition theorem.



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



5. Define
a) Cycle b) Frequency c) Time period d) Amplitude e) Instantaneous value

6. Derive the expressions for Average value, RMS value, Peak factor and Form factor of sinusoidal waveform $V(t)= V_m \sin\omega t$