



United International University
Department of CSE
CSE 2113: Electrical Circuits
Final Examination
Fall 2022

Time: 1 Hour 45 Minutes Full Marks: 30

1.

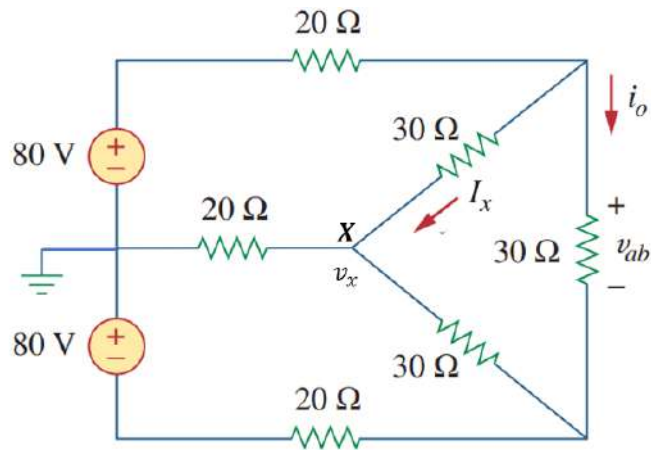


Figure 1 for Question 1.

For the above circuit shown in **Figure 1**, determine i_o , v_{ab} and v_x & I_x at the node X using Node Analysis. [8]

2.

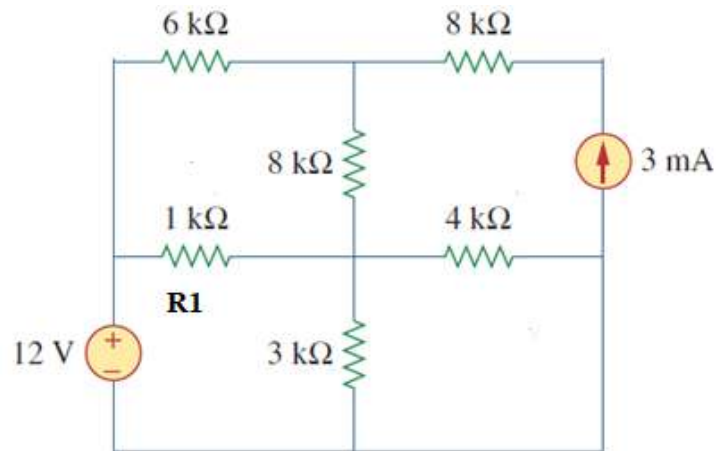


Figure 2 for Question 2.

Answer the following questions for the above circuit shown in **Figure 2**,

- (a) Determine the currents in all resistors using Mesh Analysis. [7]
- (b) Determine the power absorbed the in R1 resistor. [3]

3.

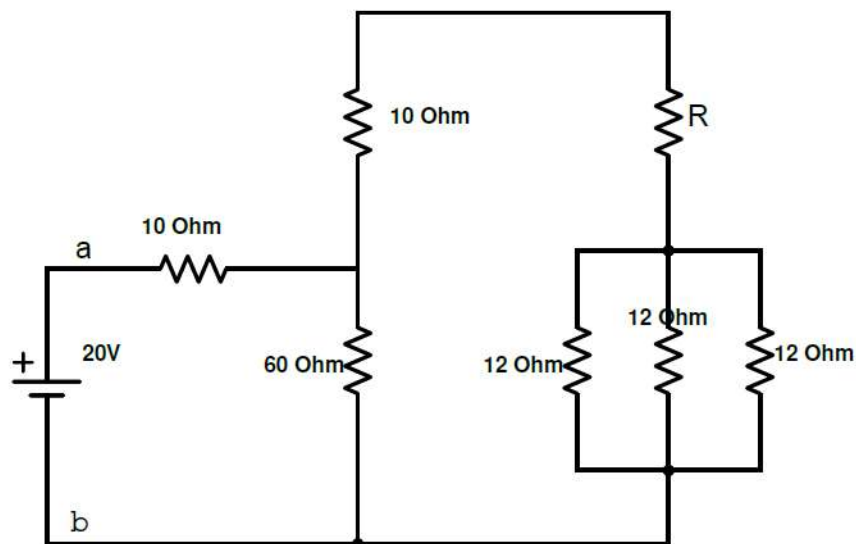


Figure 3 for Question 3.

Answer the following questions for the above circuit shown in **Figure 3**,

- (a) If the equivalent resistance between a and b terminal is 50 Ohm find R. [5]
- (b) Find the voltage and current across 12 Ohm resistors using the voltage and current divider rule. [7]