



# EAST WEST UNIVERSITY

Department of Computer Science and Engineering

B.Sc. in Computer Science and Engineering Program

Mid Term 2, Fall 2021

**Course:** CSE 109/209 – Electrical Circuits, Section-5

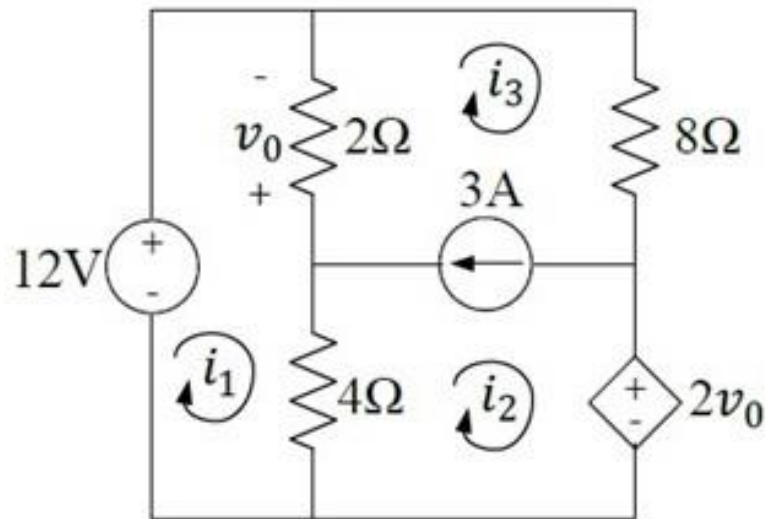
**Instructor:** M. Saddam Hossain Khan, Senior Lecturer, CSE Department

**Full Marks:** 20

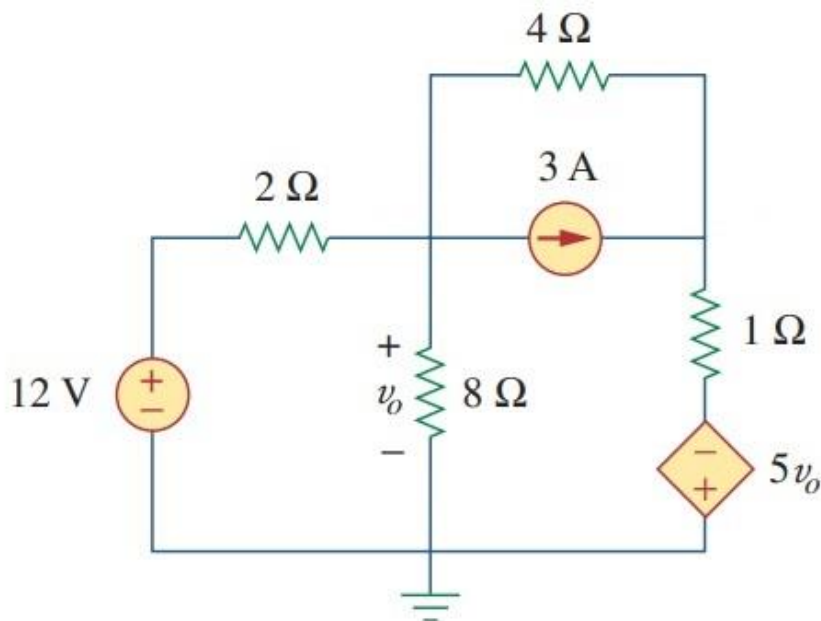
**Time:** 1 Hour and 30 Minutes [Including attachment time]

**Note:** There are FIVE questions, answer ALL of them. Course outcomes (CO), Cognitive level and marks of each question are mentioned at the right margin.

1. Using mesh currents indicated in the circuit, **determine**  $i_1$ ,  $i_2$  and  $i_3$  in the following circuit [Using Cramer's rule]. [CO2,C4, Mark: 6]

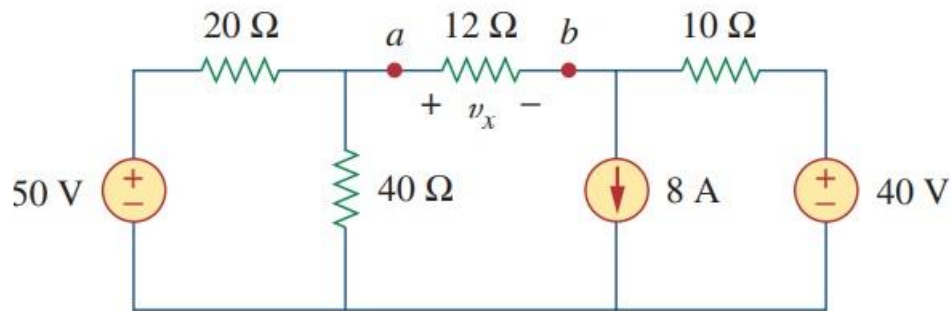


2. Use superposition technique to determine  $v_o$  in the following circuit. [CO2,C4, Mark: 4]



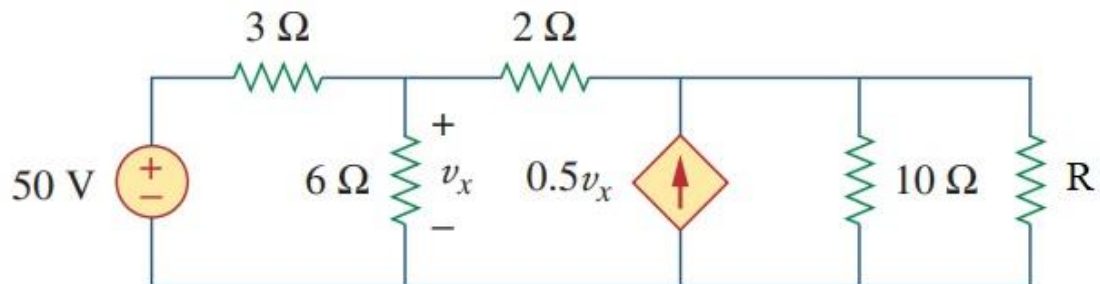
3. Use most effective source transformation to determine  $v_x$  in the following circuit.

[CO2,C4,  
EP1,  
Mark: 3]



4. Find the Thevenin's equivalent of the following circuit. Consider, the resistor R as the load.

[CO2,C4,  
EP1,EP2,  
Mark: 4]



5. Determine the value of  $R_L$  for maximum power transfer to the load of the following circuit. Calculate the maximum power.

[CO2,C4,  
EP1,EP2,  
Mark: 3]

