



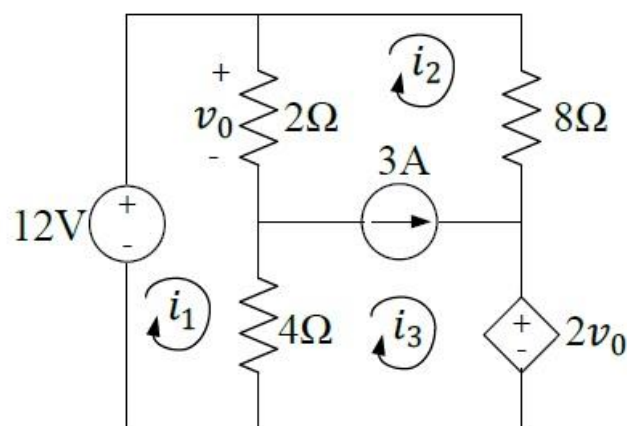
# EAST WEST UNIVERSITY

Department of Computer Science and Engineering  
B.Sc. in Computer Science and Engineering Program  
Mid Term 2, Summer 2021

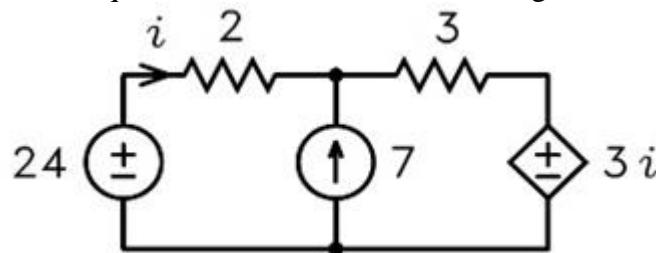
**Course:** CSE 109/209 – Electrical Circuits, Section-4  
**Instructor:** SHK, Senior Lecturer, CSE Department  
**Full Marks:** 40  
**Time:** 1 Hour and 30 Minutes [Including attachment time]

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

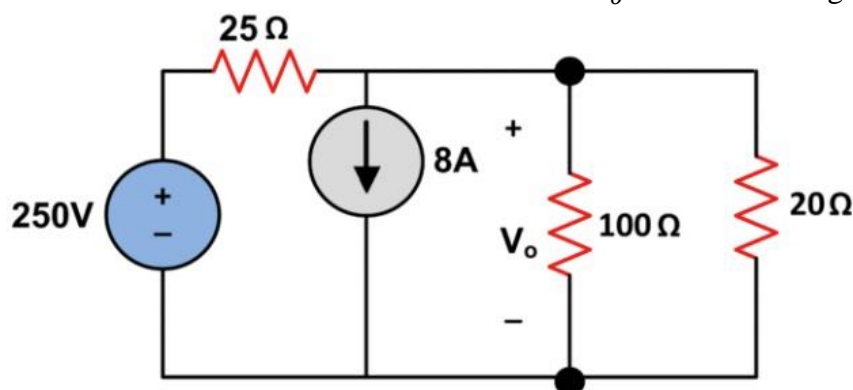
1. Using mesh currents indicated in the circuit, **determine  $i_1$ ,  $i_2$  and  $i_3$**  in the following circuit. [CO2, Mark:12]



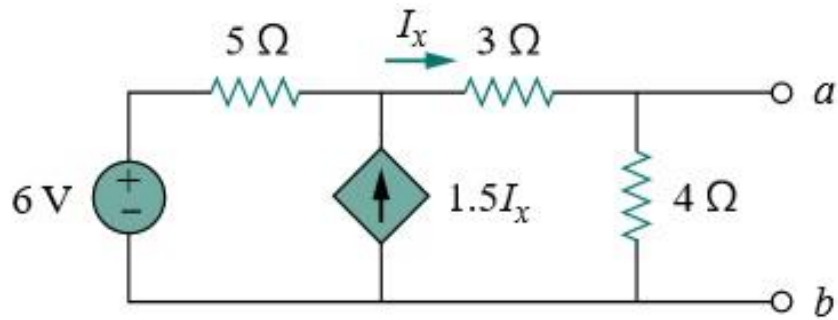
2. Use superposition technique to determine  $i$  in the following circuit. [CO2, Mark: 8]



3. Use most effective source transformation to determine  $V_o$  in the following circuit. [CO2, Mark: 6]



4. **Determine** the Thevenin equivalent of the following circuit with respect to terminals  $a$  and  $b$ . [CO2, Mark:6]



5. **Determine** the value of  $R_L$  for maximum power transfer to the load of the following circuit. **Calculate** the maximum power. [CO2, Mark: 8]

