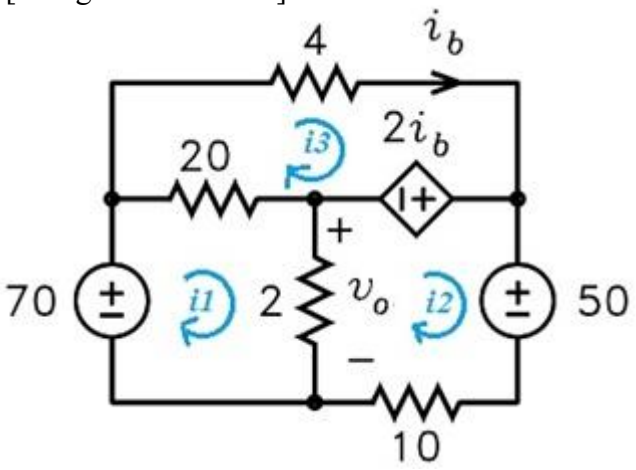
EAST WEST UNIVERSITY
Department of Computer Science and Engineering
B.Sc. in Computer Science and Engineering Program
Mid Term 2, Summer 2021

Course: CSE 109/209 – Electrical Circuits, Section-5
Instructor: SHK, Senior Lecturer, CSE Department
Full Marks: 40
Time: 1 Hour and 30 Minutes [Including attachment time]

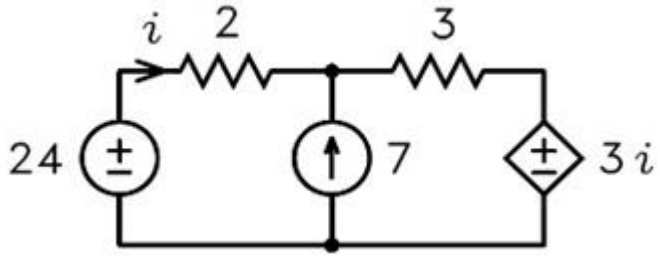
Note: There are FIVE questions, answer ALL of them. Course outcomes (CO), and marks of each question are mentioned at the right margin.

---

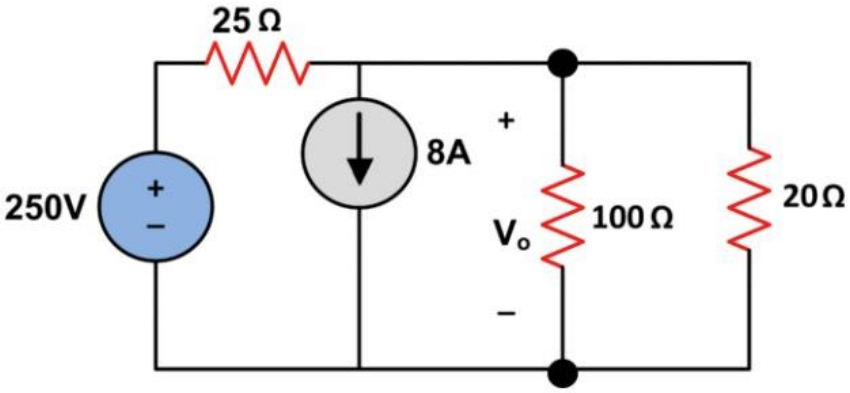
1. Using mesh currents indicated in the circuit, **determine** i_1 , i_2 *and* i_3 in the following circuit [Using Cramer's rule]. [CO2, Mark:12]



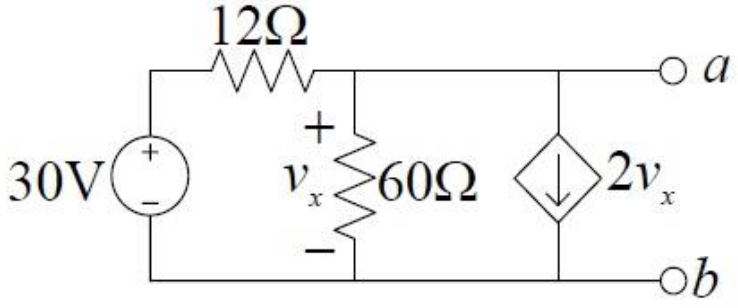
2. **Use** superposition technique to determine i in the following circuit. [CO2, Mark: 8]



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]