



United International University (UIU)
 Dept. of Computer Science & Engineering (CSE)
Midterm Exam: Trimester: Spring 2018

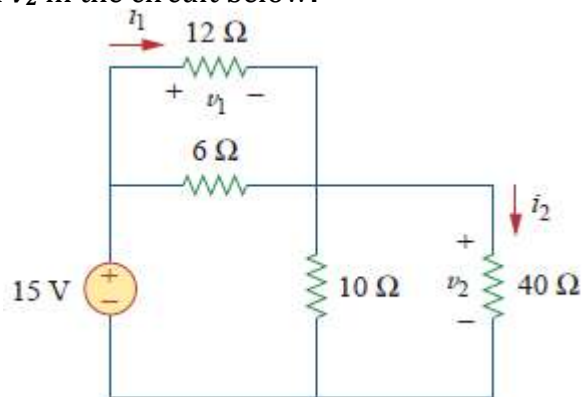
Course: CSE 113, Electrical Circuits

Marks: 30, Time: 1 hour 45 minutes

Figures in the right-hand margin indicate full marks.
Only Question 2 has an alternative

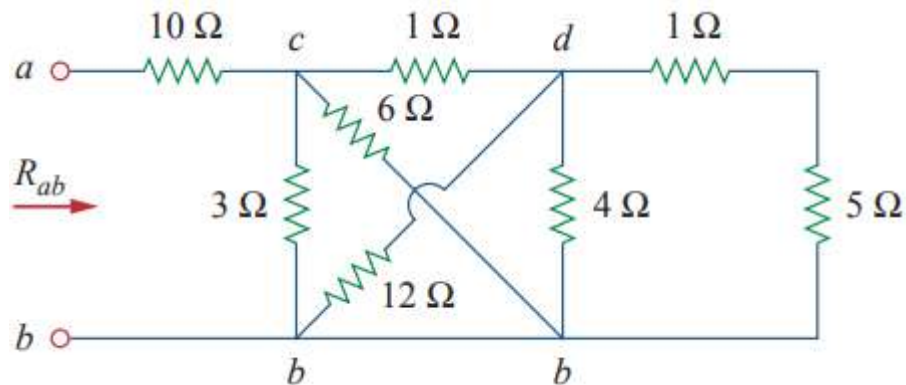
1. a) Find i_1 , i_2 , v_1 and v_2 in the circuit below:

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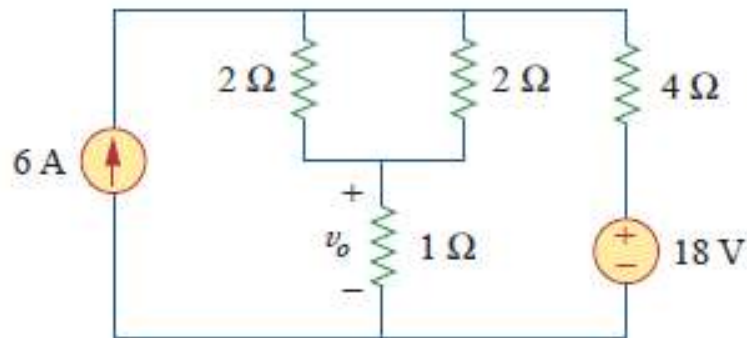
- b) Find R_{ab} for the following circuit:

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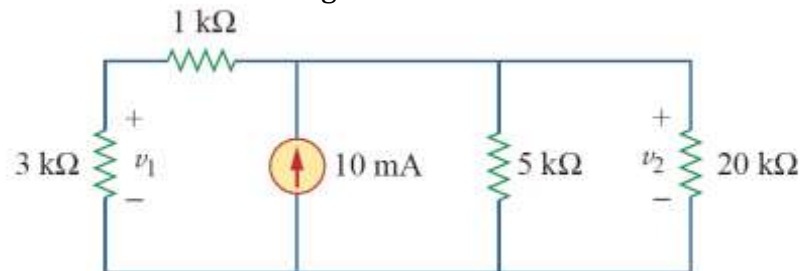
2. a) For the following circuit, use superposition theorem to find v_o

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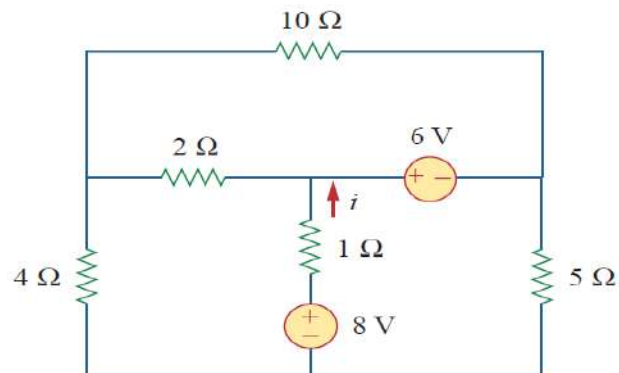
- b) Find v_1 and v_2 in the circuit using Kirchhoff's law and Ohm's law.

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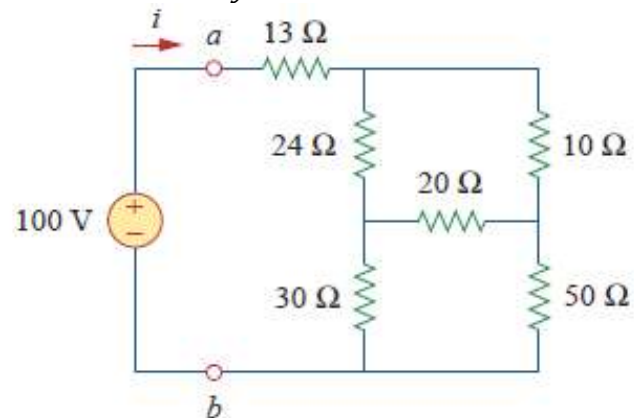
- or a) Using **Mesh Analysis**, find out i in the following circuit:

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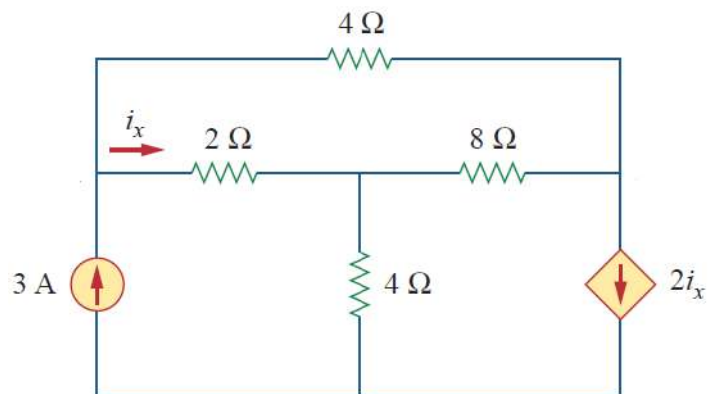
- b) Find R_{ab} , i and **power** absorbed by $13\ \Omega$ for the network below:

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3. a) Find out i_x using **Nodal analysis**.

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- b) Find the voltage drop (V_o) across 10 kΩ resistor and the power associated with the 5 kΩ resistor in the following circuit:

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