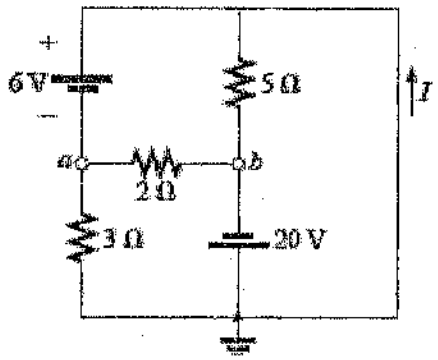
Kafrelsheikh University
Faculty of Engineering
Electrical Engineering Dept.
Year: 1st. Year
Final Exam
Academic Number:

Date: 30/12/2018
Time allowed: 90 minutes
Subject Name: Electric Circuit
Subject Code: ECE1001
Full Marks : 45
Pages : 2

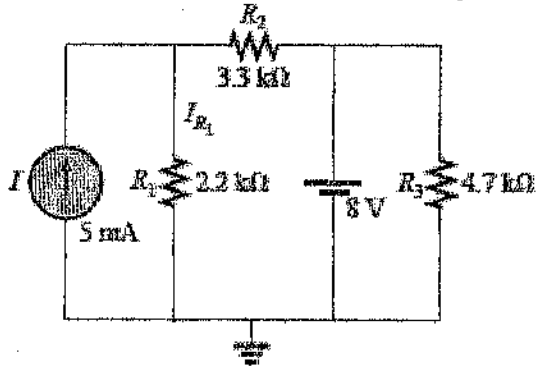
Based on ECE1001 course specification ILOS

Question No. 1 [15 Marks]

A-) By using Kirchhoff's voltage law, determine the voltage V_{ab}. **[4 Marks]**
B-) Calculate the current I. **[4 Marks]**

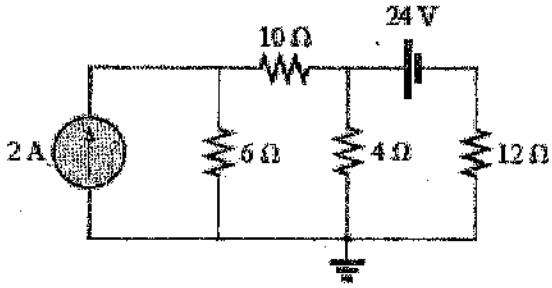


C-) Using superposition, find the current through R_1 for the following network. **[7 Marks]**



Question No. 2 [20 Marks]

A-) Using Nodal analysis method, determine the current through 12Ω resistor of the following network. **[8 Marks]**



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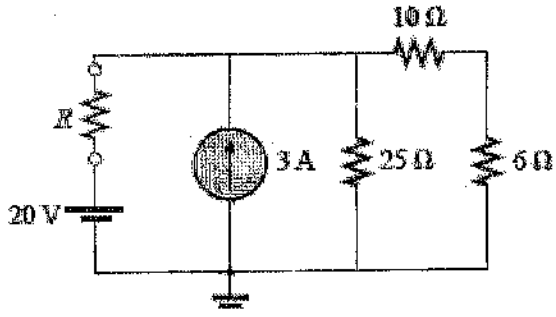
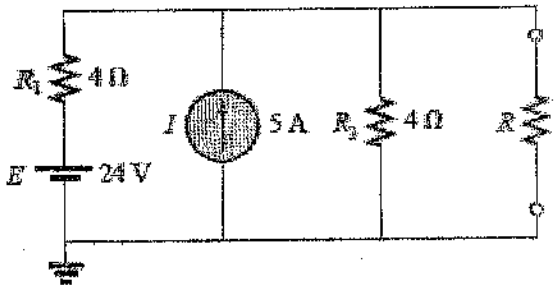
B-) Find the Thévenin equivalent circuit for the network external to the resistor R in the following Circuit: **[8 Marks]**



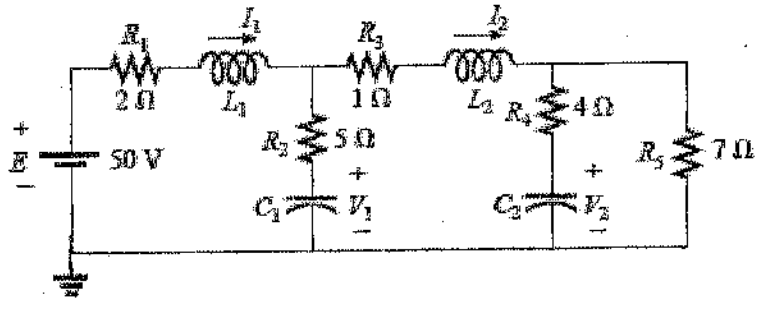
C-) For the following network, determine the value of R for maximum power to R, and determine the maximum power to R **[4 Marks]**



Question No. 3 [10 Marks]

A-) Find the currents I_1 and I_2 and the voltages V_1 and V_2 for the network of the following Fig.:

[10 Marks]



With my best wishes

Dr. Sherif Imam