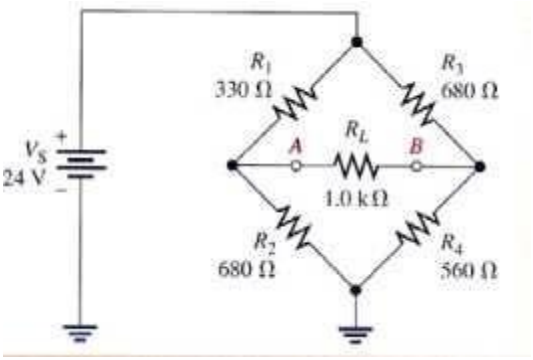
EE 287-CIRCUIT THEORY

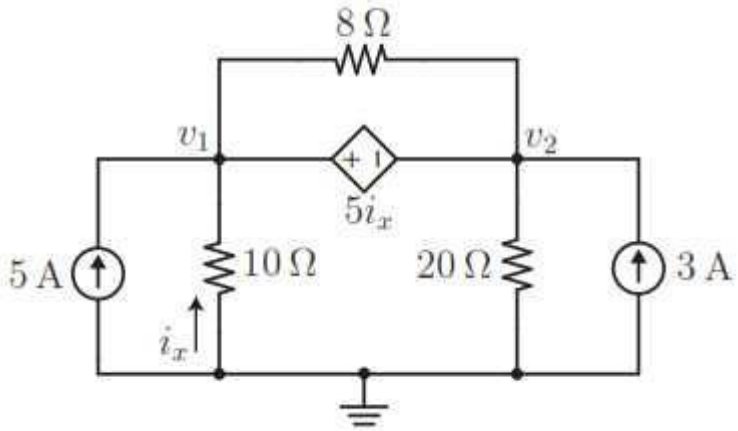
GROUP ASSIGNMENT 1

Due Date: 18/11/2019 (To be submitted in groups of 3 or 4 members)

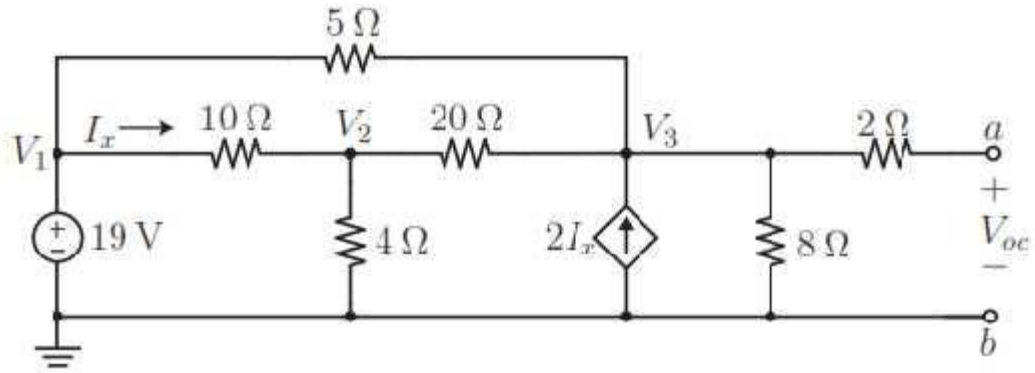
1. Evaluate the Thevenin equivalent circuit for the network external to the load resistance R_L and find the current through same.



2. Using Nodal analysis, solve for the power delivered to the 8 ohms resistance and for the node voltages in the following circuit



3. FInd the Thevenin equivalent for the following circuit



4. A DC source of **100 V** and internal resistance **25 Ohms** is to deliver power to a resistive load.

i. Determine the load resistance for maximum power transfer.

ii. Determine the value of this power

iii. Using **Matlab**, plot the **load power** versus the **resistance** for the resistance range **0 - 100 Ohms** for increments of **5 Ohms**

G. Adom-Bamfi