

ELEC 273 – Midterm Test

10:15 – 11:30 Thursday Feb. 18, 2016

Name:

I.D:

This is a Closed Book Test. Only standard ENCS-approved calculators are allowed.

1. For the circuit shown in Figure 1, determine the voltage V_o , using the superposition principle.

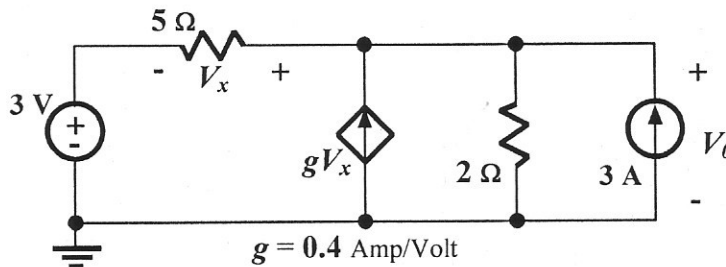


Figure 1

2. For the circuit shown in Figure 2, determine the voltage V_o , using the mesh analysis or KVL-based method.

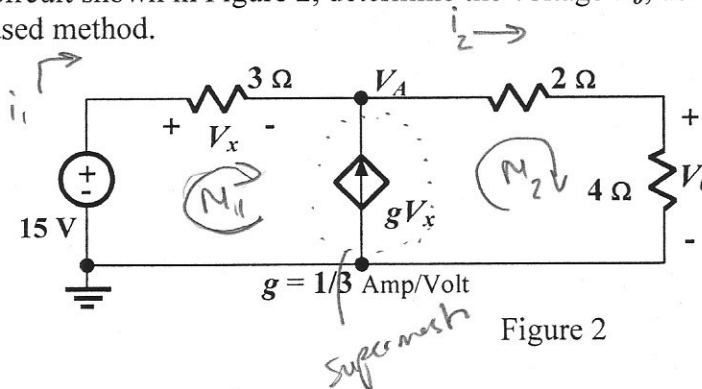


Figure 2

3. For the circuit shown in Figure 3, determine the voltage V_x , using the **nodal analysis** or **KCL-based** method.

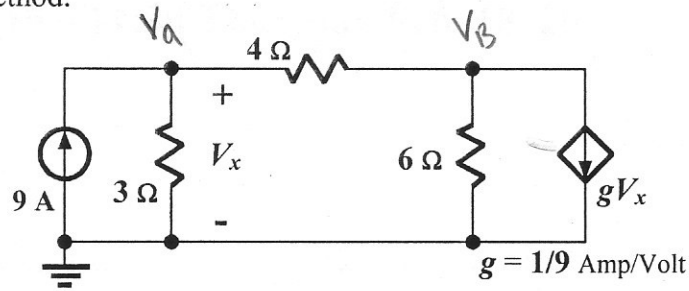


Figure 3

4. Consider the circuit shown in Figure 4, R_L is a load resistor applied to the circuit. Calculate the resistance value of R_L for the maximum power transfer and the maximum power delivered to R_L .

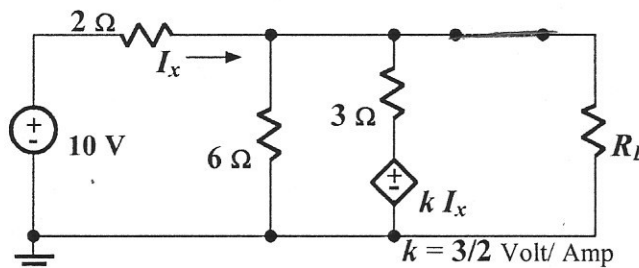


Figure 4