KING FAHD UNIVERSITY OF PETROLEUM AND MINERALS

ELECTRICAL ENGINEERING DEPARTMENT

SECOND SEMESTER 2005/2006

EE 201 MAJOR EXAM I

LOCATION: IN CLASS

DATE: MONDAY 20-3-2006

DURATION: 50 MINUTES

Student's Name:…….

Student's I.D. Number:…….

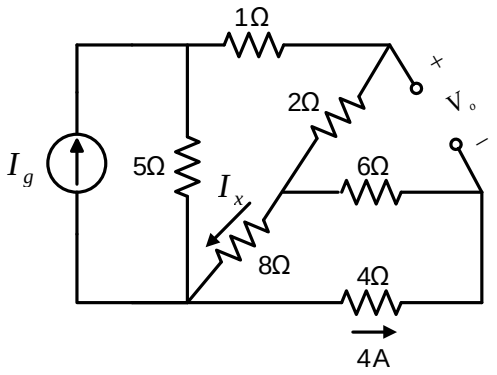
Problem 1	
Problem 2	
Problem 3	
Total	

Problem 1 [33 points]

In the circuit shown, the current through the 4Ω resistor is 4A.
Use KVL, KCL and Ohm's law **only** to calculate:

a) V_o
b) I_x
c) I_g

[Do not use Node Analysis, Mesh Analysis or Source Transformation]

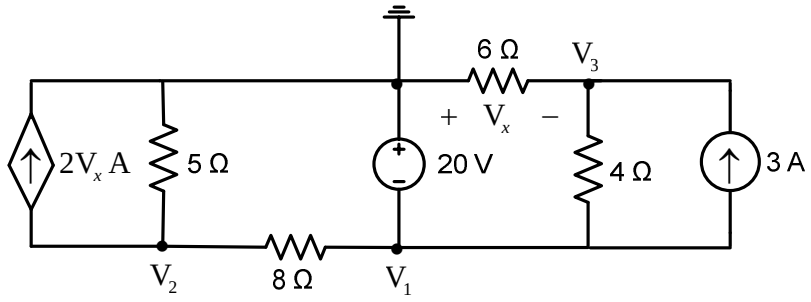


Problem 2 [34 points]

In the given circuit:

a) Calculate the node voltages V_1, V_2, and V_3.

b) The power absorbed by the independent current source.



Problem 3 [33 points]

In the given circuit, use source transformation to calculate the currents:

a) I_1 .

b) I_2 .