Mansoura University	Electric Circuits (1)
Faculty of Engineering	1st Year Elec. Engineering Dept.
January 2011	Time allowed: 3 Hours

<div align="center">PART "A"(each part Carries 60 Marks)</div>

PLEASE ANSWER ALL QUESTIONS

First Question (6 Marks)

For the shown circuit;
a-determine V_o.
b-is the 4A-current source active or passive element?
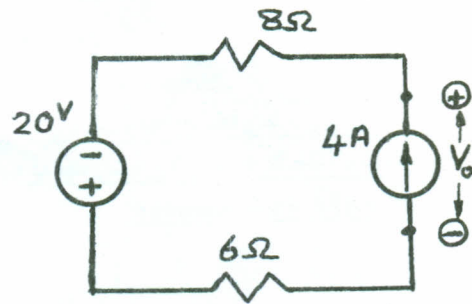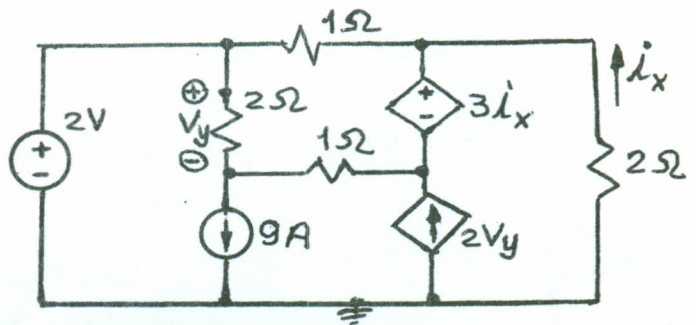
Second Question (18 Marks)

For the shown circuit, write the necessary and enough equations to get

V_y and i_x' (without solving it) using;

    a- Mesh-current analysis method.
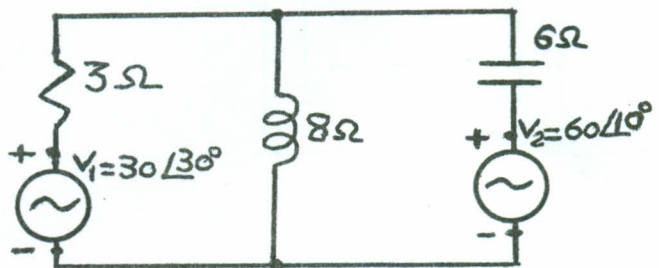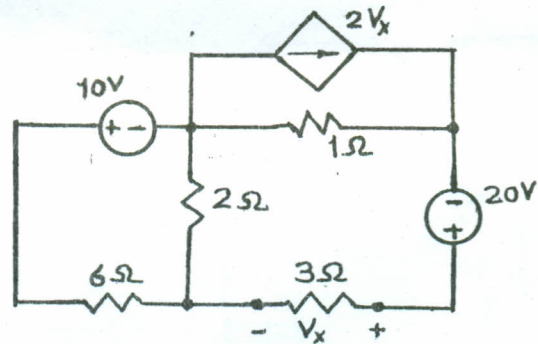   b- Nodal-voltage analysis method.

Third Question (12 Marks)

For the shown circuit, determine the current passing through the 2Ω-resistor using **Thevenin"s theorem**.
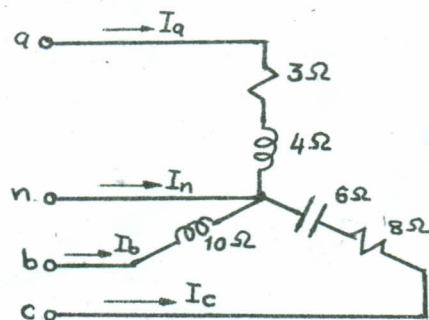
Fourth Question (12 Marks)

Determine the current passing through the inductance given in the shown circuit.

Fifth Question (12 Marks)

The voltage supplying for the shown three-phase load is 200 volt. Determine;
a-the line currents.
b-the neutral-wire current.
c-the three-phase power.

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Good luck........

Kamal shebl

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