COLLEGE OF ENGINEERING & TECHNOLOGY

Department : **Electrical & Control Engineering**

Lecturer : **Staff**

Course : **Electrical Circuits II** **Marks: 40**

Course Code : **EE 232** **Time: 2 hours**

Date : **1/ 6 / 2015** **Starting time: 14:00**

Final Exam

Answer the following questions

1. For the circuit shown in Fig. 1, find the current I_x.

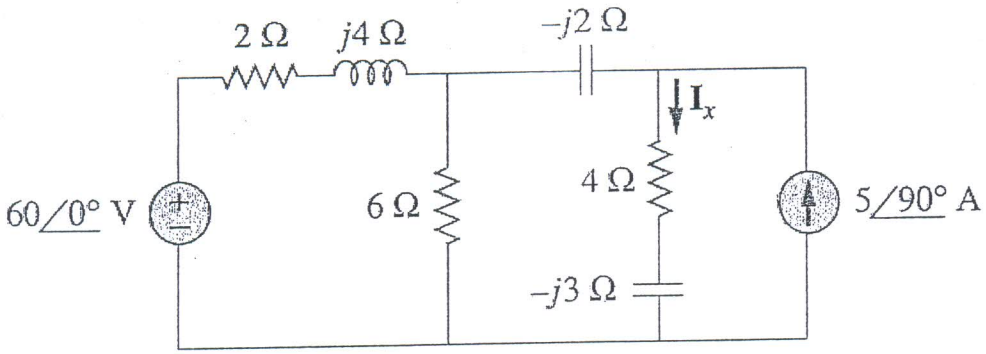

Figure 1

(8 marks) *[A.30,B.2]*

2. For the circuit shown in Fig. 2, Determine I_s , if the voltage source supplies 2.5 kW and 0.4 kVAR (leading).

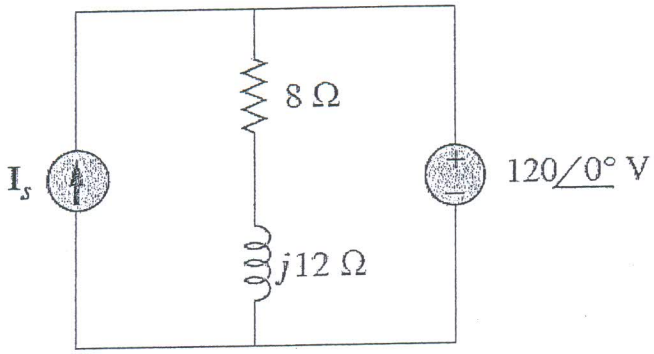

Figure 2

(8 marks) *[A.13]*

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Head of Department: Prof. Hamdy Ashour	Hamdy	6/5/2015

3. A balanced star connected load with a phase impedance of 10-j16 Ω is connected to a balanced three phase generator with a line voltage of 220 V. Determine the line current and the complex power absorbed by the load.

(8 Marks)*[A.5]*

4. For the unbalanced circuit shown in Fig. 3, find the phase current I_{AB} and the line current I_{aA}.

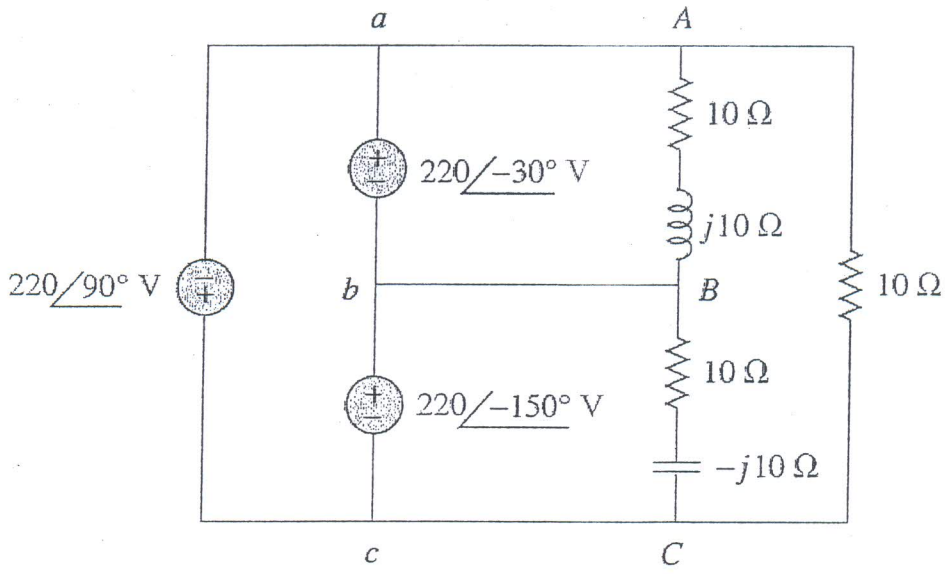

Figure 3

(8 marks) *[A.5]*

5. For the circuit shown in Fig. 4, the switch has been open for a long time. At t=0 the switch is closed. Find:
   a) $v(t)$ for $t > 0$
   b) $i(t)$ for $t > 0^+$

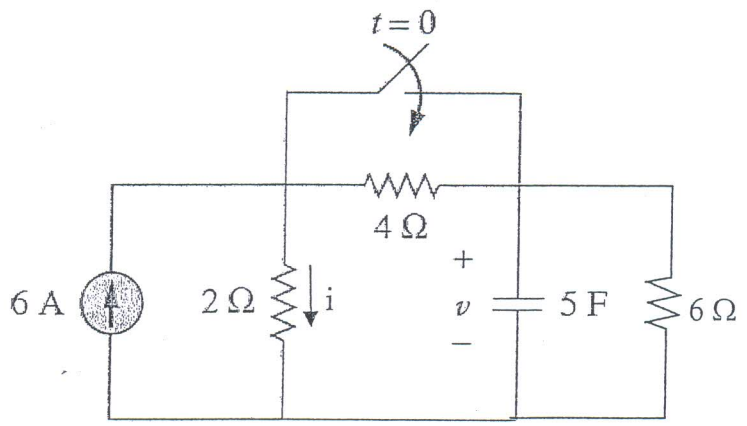

Figure 4

(8 marks) *[A.30,B.2]*

Good Luck

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