



COLLEGE OF ENGINEERING & TECHNOLOGY

Department : Electrical & Control Engineering

Lecturer : Staff

Course : Electric Engineering Fundamentals

Course Code : EE 239

Marks : 40

Date : 22/1/2015

Time : 2 hour

Final Exam

Answer all the following questions

1. For figure (1), apply source transformation to find v_x in the circuit shown. (8 marks)

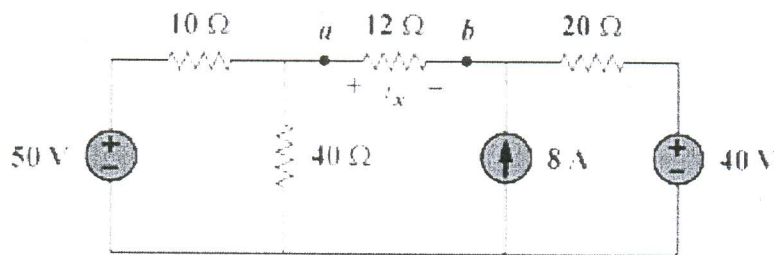


Figure (1)

2. Given the circuit shown in figure (2), use superposition to get i_o . (8 marks)

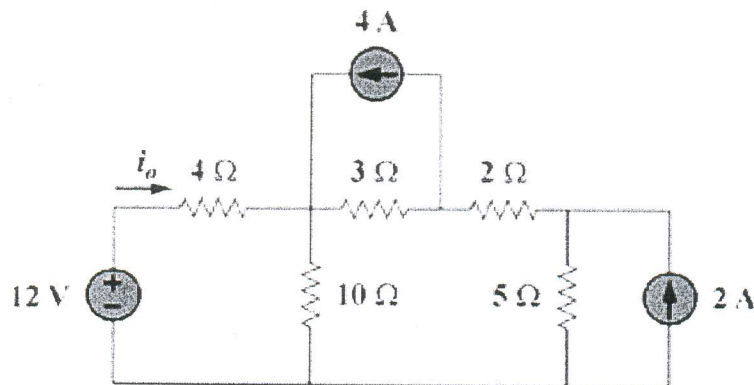
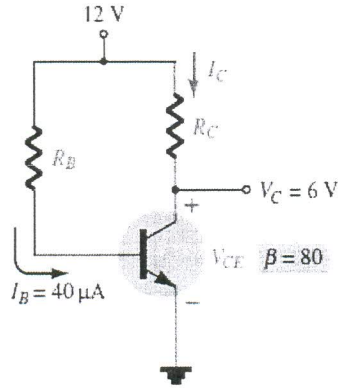


Figure (2)

Members of course Examination Committee:	Signature:	Date:
Lecturer:		
Course Coordinator :		
Head of Department:		

3. For the silicon transistor amplifier shown in figure (3), determine: (8 marks)
- I_C
 - R_C
 - R_B
 - V_{CE}

Figure (3)



4. Find the average and the effective (RMS) values for the periodic wave form given in figure 4. (8 marks)

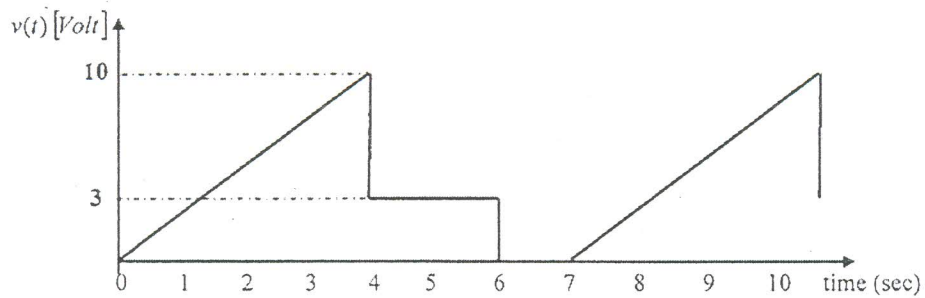


Figure (4)

5. For the circuit shown in figure 5, determine: (8 marks)
- The supply voltage $v(t)$ in the instantaneous form and vector form.
 - The voltage across the resistance $v_R(t)$, the inductance $v_L(t)$, and the capacitance $v_C(t)$.
 - The circuit power factor.
 - The active power.

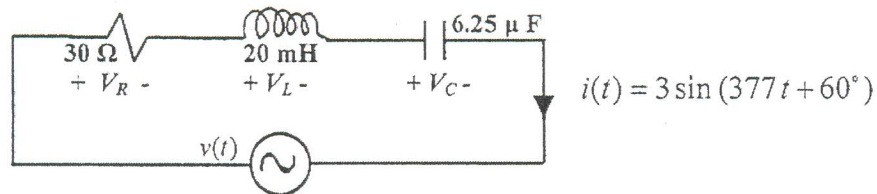


Figure (5)

GOOD LUCK

Members of course Examination Committee:	Signature:	Date:
Lecturer:		
Course Coordinator :		
Head of Department:		