

International Islamic University Chittagong
Department of Computer Science and Engineering

Mid Term Examination, Autumn-2023

Course Code: **EEE-1121**

Time: 1 hour 30 minutes

Program: B.Sc. Engineering in CSE

Course Title: **Basic Electrical Engineering**

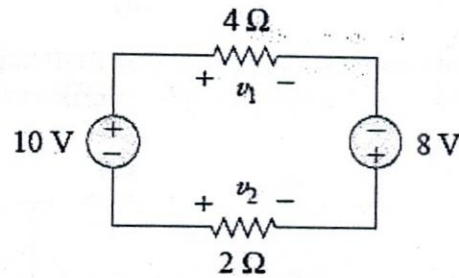
Full Marks: 30

[Answer all the questions from the followings. Figures in the right margin indicate full marks]

Course Outcomes (COs) and Blooms Levels are mentioned in additional columns.

Marks

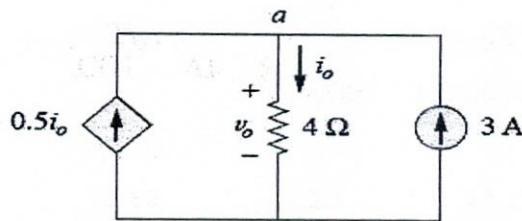
- 1) a) Explain ohm's law and Find V_1 & V_2 and in the circuit of **Fig.01**.



CO1 Ap 5

Fig.01

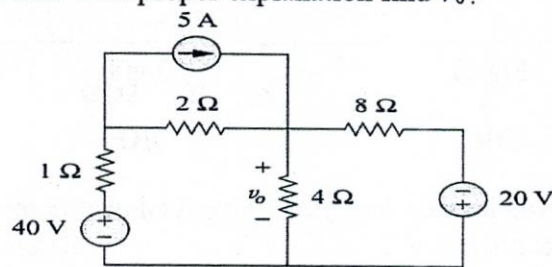
- 1) b) Explain KCL and Find current i_o and voltage v_o in the circuit shown in **Fig.02**.



CO1 AP 5

Fig.02

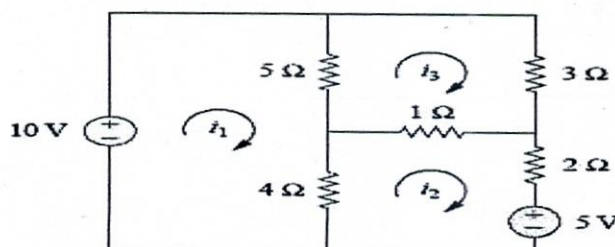
- 2) a) What type of circuit analysis do you think you should use to find V_o in the circuit of **Fig. 03** also with proper explanation find v_o .



CO2 E 5

Fig.03

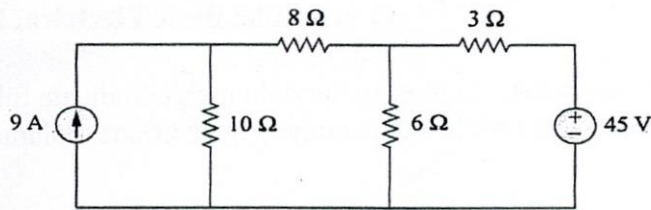
- 2) b) Using mesh analysis find i_1 , i_2 and i_3 from the circuit of **Fig.04**.



CO2 An 5

Fig. 04

- 3) a) Explain source transformation and using source transformation determine the current and power in the resistor 8Ω from Fig.05

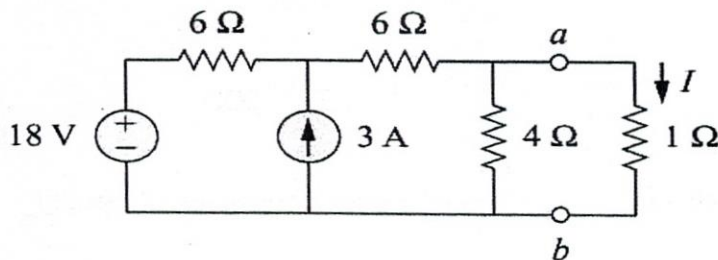


CO2 É 5

Fig.05

OR

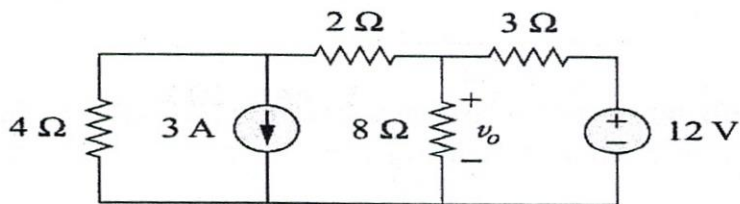
- 3) a) State Thevenin's Theorem. Find the Thevenin equivalent circuit of the circuit in Fig.06 to the left of the terminals and also find I .



CO2 E 5

Fig.06

- 3) b) Use superposition to find V_0 in the circuit of Fig.07.

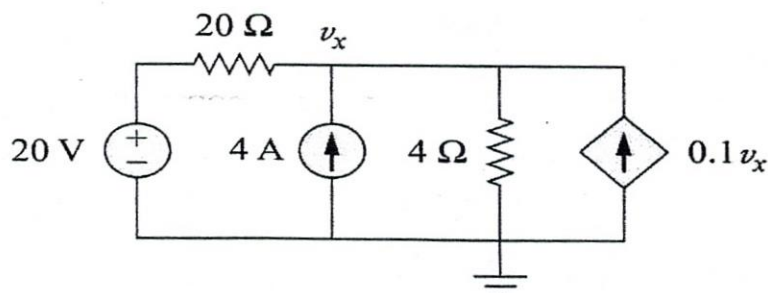


CO2 Ap 5

Fig.07

OR

- 3) b) Using any of the circuit theorem you learned find V_x in the circuit of Fig.08 also explain the theorem in details.



CO2 Ap 5

Fig.08