ourdiu.com | Shared by Md. Ferdous Foysal Hridoy

Daffodil International University

Faculty of Science & Information Technology

Department of Computer Science and Engineering

Midterm Examination, Fall-2024

Course Code: CSE121, Course Title: Electrical Circuits

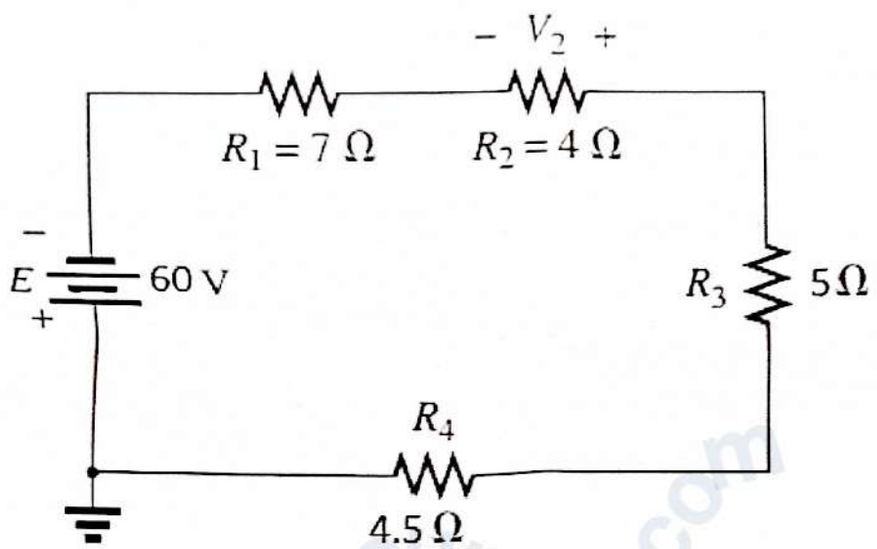
Level: 1 Term: 2 Batch: 66

Time: 1 Hour and 30 Minutes **Marks: 25**

Answer ALL Questions

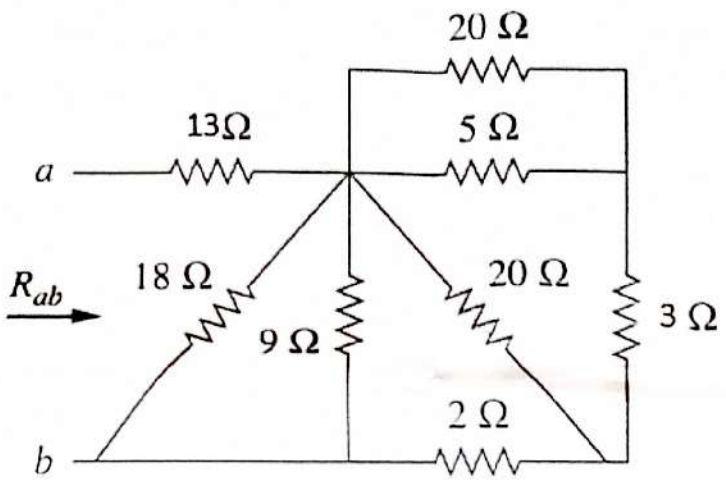
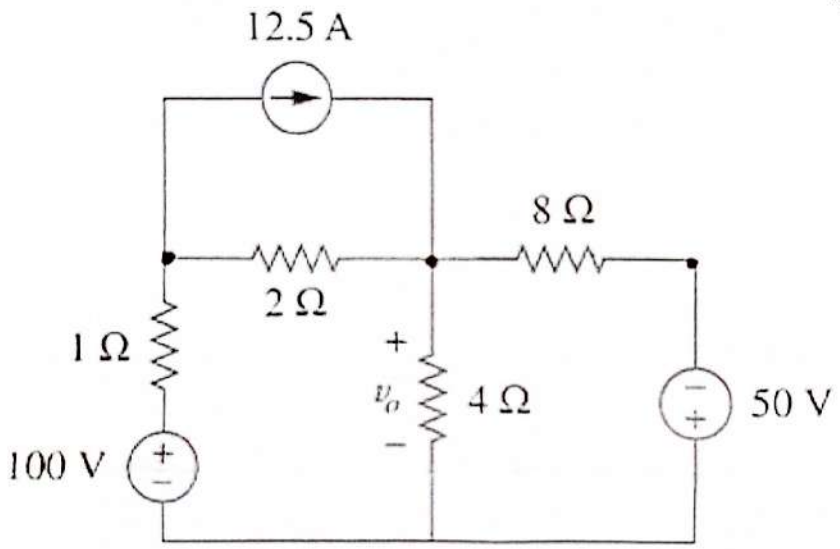
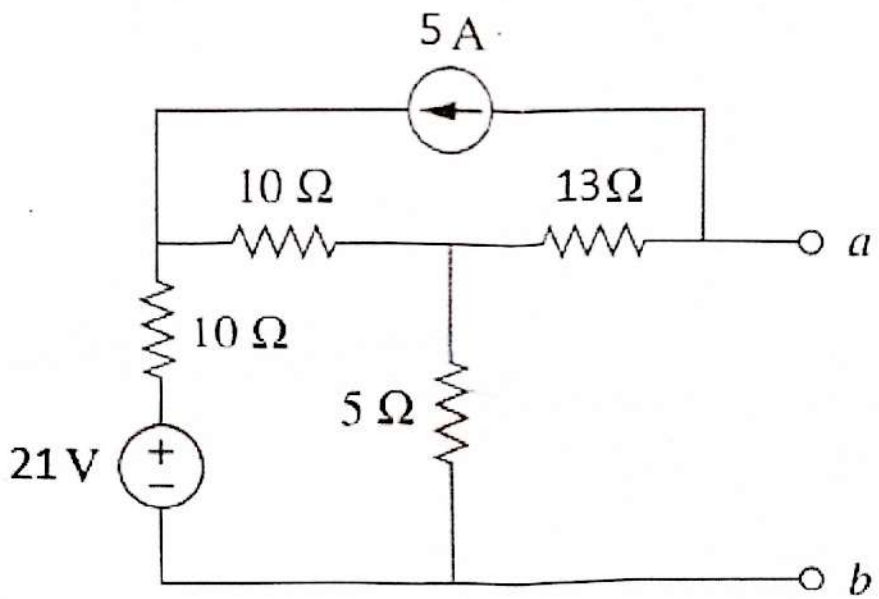
[The figures in the right margin indicate the full marks and corresponding course outcomes. All portions of each question must be answered sequentially.]

1.	a)	**Define** the term 'Branch' in an electric circuit.	5×1=5	CO1
	b)	**List** the factors that affect the resistance of a conductor.		
	c)	**Illustrate** the Thevenin equivalent circuit.		
	d)	**Recall** Kirchhoff's Voltage Law.		
	e)	**Show** the 'Node and Loop' in an electric circuit.		
2.	a)	**Solve** the following circuit to determine a. The total resistance R_T. b. The source current I_s and indicate its direction on the circuit. c. The voltage across resistor R_2.	2×5=10	CO2



ourdiu.com

ourdiu.com | Shared by Md. Ferdous Foysal Hridoy

	b)	**Solve** the following circuit to determine the total resistance R_{ab}. 2.40 		
3.	g)	**Analyze** the following circuit to determine the voltage V_0 using nodal analysis. 3.50 	2×5=10	CO3
	b)	**Examine** the following circuit to obtain the Thevenin equivalent at terminals a-b using the Thevenin theorem. 		

ourdiu.com