ourdiu.com | Shared by Syed Mahi Hossen

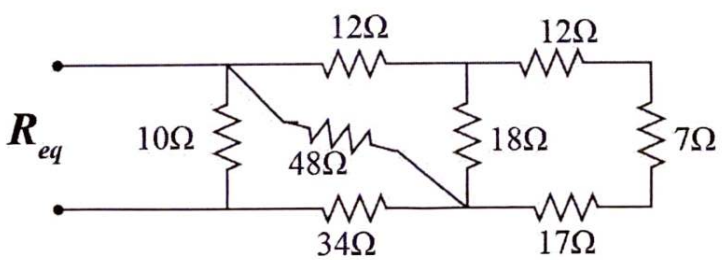
Daffodil International University

Faculty of Science & Information Technology
Department of Computer Science and Engineering
Midterm Examination, Spring-2024
Course Code: CSE121, Course Title: Electrical Circuits
Level:1 Term: 2 Batch: 65

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

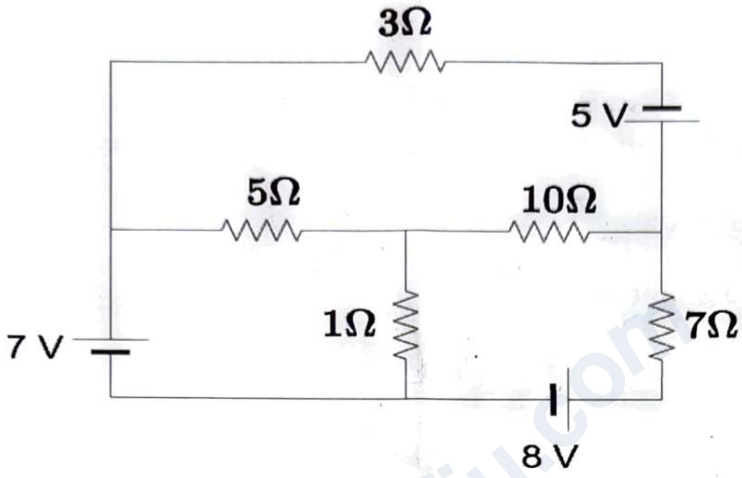
Answer ALL Questions

[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 'Conductance' in an electric circuit.	**5×1=5**	**CO1**
	b)	**Show** the difference between an open and short circuit.		
	c)	**Illustrate** the Norton equivalent circuit.		
	d)	**Recall** some applications of the maximum power transfer theorem.		
	e)	**Show** the peak-to-peak voltage of a sinusoidal wave using a graphical representation.		
2.	*a)*	**Relate** that maximum power is transferred to the load when the load resistance equals the Thevenin resistance of the network.	**2×5=10**	**CO2**
	b)	**Solve** the following circuit to determine the total resistance R_{eq}. 		

ourdiu.com

ourdiu.com | Shared by Syed Mahi Hossen

3.	*a)*	**Analyze** the following circuit to determine the mesh currents using mesh analysis, and the value of current through the 7 Ω resistor. 	**2×5=10**	**CO3**
	b)	**Examine** the following circuit to determine the current through the 10 Ω resistor using the superposition theorem. 