Reg.No: | | | | | | | |

SNS College of Technology, Coimbatore-35.
(Autonomous)
B.E/B.Tech- Internal Assessment -II
Academic Year 2023-2024 (Even)
Second Semester
Electrical and Electronics Engineering
23EET102- ELECTRIC CIRCUIT ANALYSIS

A

Time: 1 ½ Hours **Maximum Marks: 50**

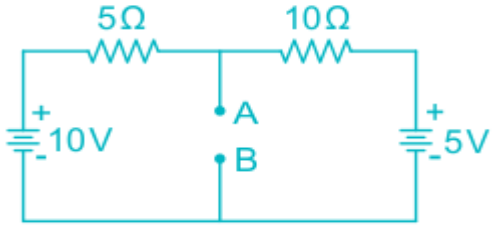
Answer All Questions

PART - A (5x 2 = 10 Marks)

1.	List the advantages of Maximum power transfer theorem.	CO2	REM
2.	What is the difference between Thevenin and superposition theorem?	CO2	REM
3.	Derive the maximum power Transfer theorem equation.	CO3	UND
4.	Distinguish between RL & RC circuit analysis.	CO3	APP
5.	Sketch the phasor diagrams of three phase four wire system.	CO3	UND

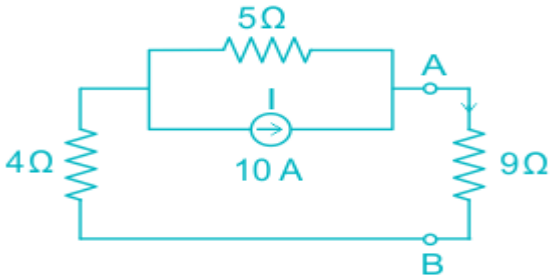
PART - B (13+13+14 = 40 Marks)

6.	(a) Obtain Thevenin's equivalent circuit with respect to the terminals of AB of the network shown in the circuit, also How to Apply Thevenin's Theorem?	13	CO2	APP

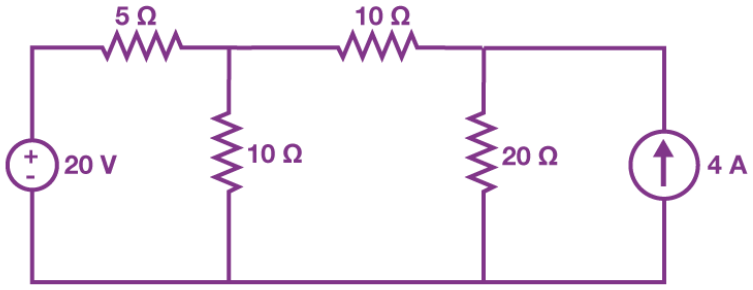


(OR)

6.	(b) Find the current through 9Ω resistor of the network shown in figure by using Norton's Theorem.	13	CO2	APP

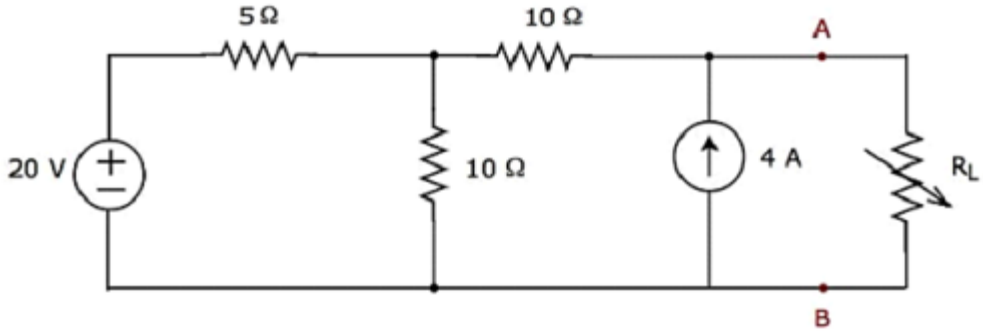


7.	(a) Find the current flowing through 20 Ω using the superposition theorem.	13	CO3	APP



(OR)

7.	(b) Find the maximum power that can be delivered to the load resistor RL of the circuit shown in the following figure.	13	CO3	APP



8.	(a) Find the reasons with proper explanation of three phase 3-wire and 4- wire circuits with unbalanced loads used in real time.	14	CO2	APP

(OR)

8.	(b) Provide a phasor diagrams of classroom connected load example to illustrate the differences between Phase and line values.	14	CO3	APP

*Abbreviations:- **REM**-Remembering, **UND**-Understanding, **APP**-Applying, **ANA**-Analyzing, **EVA**-Evaluating, **CRE**-Creating*

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23EET102- ELECTRIC CIRCUIT ANALYSIS

B

Time: 1 ½ Hours **Maximum Marks: 50**

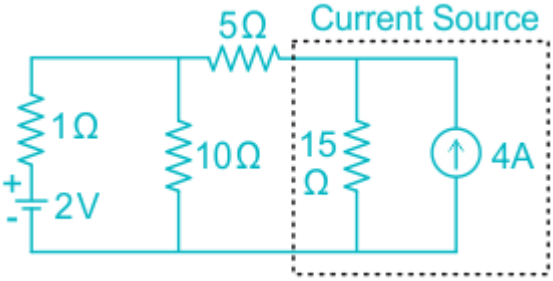
Answer All Questions

PART - A (5x 2 = 10 Marks)

1.	List the advantages of Superposition Theorem.	CO2	REM
2.	What is the duality between Thevenin and Norton theorem?	CO2	REM
3.	List the Difference Between Star and Delta Connection.	CO3	UND
4.	Identify the usage of Reactive Power in Loads.	CO3	UND
5.	Distinguish between Phase and line values of three phase circuits.	CO3	REM

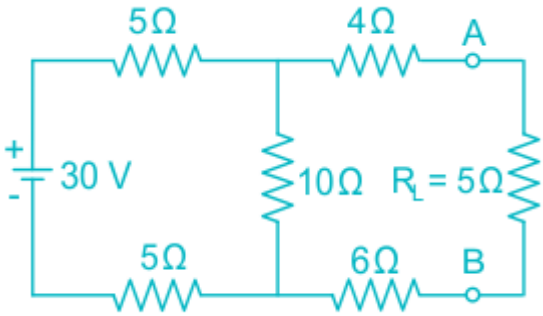
PART - B (13+13+14 = 40 Marks)

6.	(a) Find the current flowing through 5Ω resistor of the circuit shown here. By using Thevenin's Theorem.	13	CO2	APP

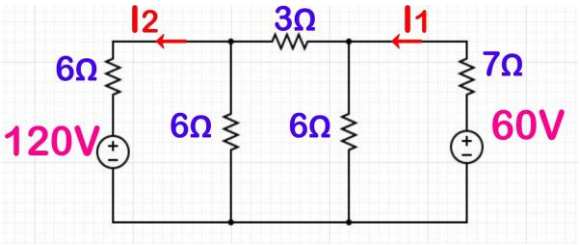


(OR)

6.	(b) In the network shown in figure, calculate the current through the load resistor RL by using Norton's Theorem.	13	CO2	APP

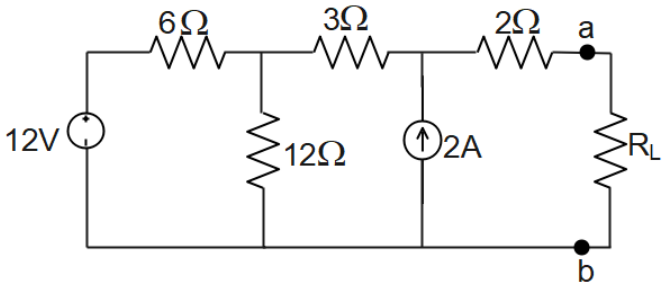


7.	(a) Find the current flowing through 3 Ω using the superposition theorem.	13	CO3	APP



(OR)

7.	(b) Find the value of RL for maximum power transfer in the circuit and find the maximum power.	13	CO3	APP



8.	(a)	Derive the expression for Power factor calculations with Real time example by using your residential loads,	14	CO2	APP

(OR)

8.	(b)	Find the reasons with proper explanation of three phase 3-wire and 4- wire circuits with balanced loads used in real time.	14	CO3	APP

*Abbreviations:- **REM**-Remembering, **UND**-Understanding, **APP**-Applying, **ANA**-Analyzing, **EVA**-Evaluating, **CRE**-Creating*