	InSem Examination-IISummer2024	
	Exam Seat No.:	
	Academic Year:2023-2024	Semester:IV
	Name of Programme: S.Y.B.Tech Electrical	Pattern:2022
	Name of Course: Electrical Network Analysis	Course Code:ELE222011
	Max. Marks:30	Duration:1 hr

Instructions: Candidates should read carefully the instructions printed on the Question Paper
and on the cover page of the Answer Book, which is provided for their use.

1. This question paper contains 2 page(s).
2. Answer to each new question is to be started on a new page.
3. Assume suitable data wherever required, but justify it.
4. Draw the neat labelled diagrams, wherever necessary.
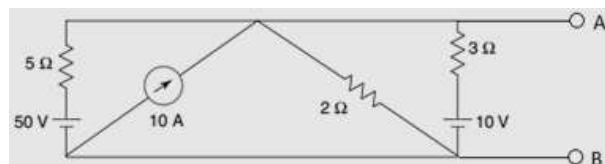5. The last columns indicates the Course Outcome and level of Blooms Taxonomy of the Question/sub-question.

Question No. 1 Attempt following Question

a) List all independent and dependent sources. Draw their symbols and explain the concept of source transformation   (7)   CO1
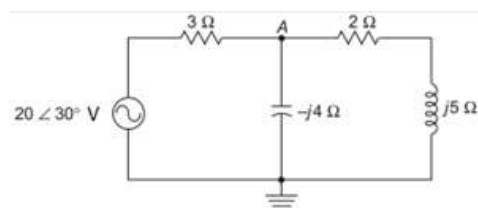
<p align="center">OR</p>

b) Explain the concept of   1) Supermesh   2) Supernode   (7)   CO1

c) Reduce the network shown in figure into a single voltage source and a single resistor between terminals A and B   (8)   CO2

<p align="center">OR</p>
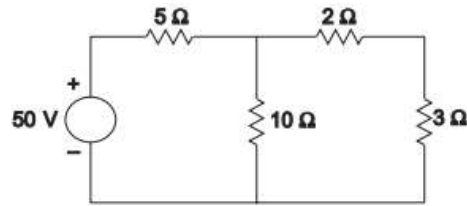
d) For the circuit shown in Figure, determine the voltage at node A   (8)   CO2

Question No. 2 Attempt following Question

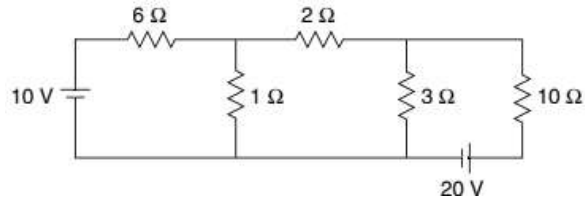a) Use Thevenin's theorem to find the current in 3 Ohm resistor   (7)   CO2

OR

b) Find the current through the 2 Ohm resistor by Mesh analysis   (7)   CO2

c) State and explain Maximum Power Transfer Theorem   (8)   CO1

OR

d) State and explain Superposition Theorem   (8)   CO1

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