Vellore Institute of Technology
(Deemed to be University, under section 3 of UGC Act, 1956)
CHENNAI

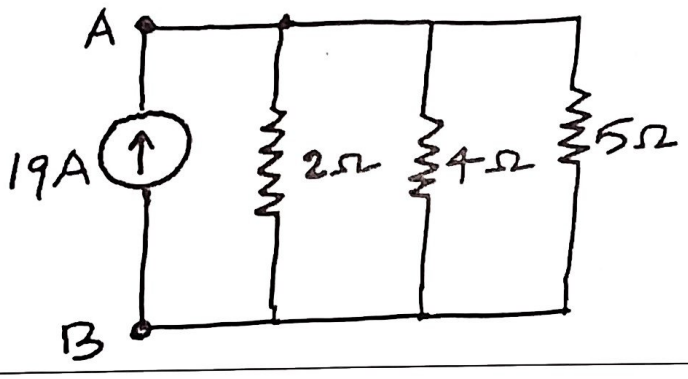
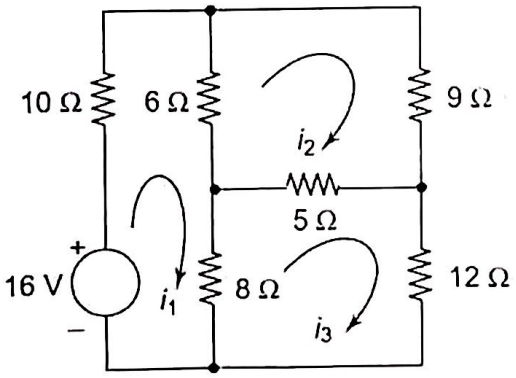
Continuous Assessment Test (CAT) – I AUGUST 2025

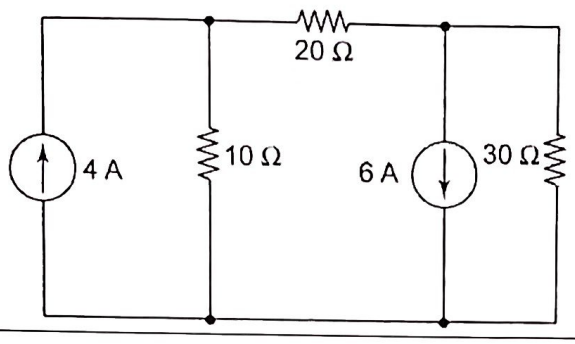
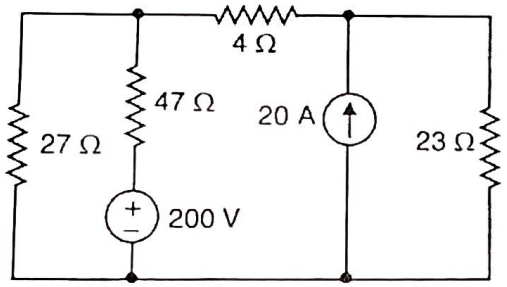
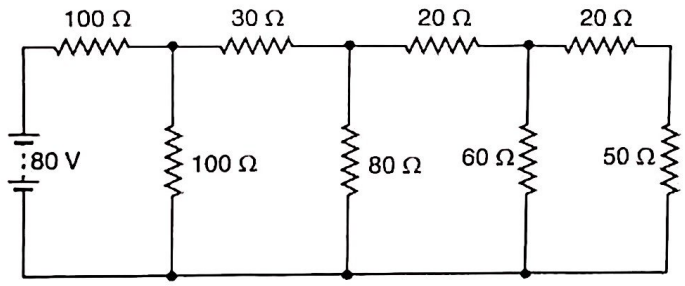
Programme	:	Integrated M. Tech	Semester	:	Fall 2025-26
Course Code & Course Title	:	IAEEE101L Basic Electrical and Electronics Engineering	Class Number	:	CH2025260102877
Faculty	:	Dr. M. Prabhakar	Slot	:	A2 + TA2
Duration	:	1 Hour and 30 Minutes	Max. Mark		50

General Instructions:

- Write only your registration number on the question paper in the box provided and do not write other information
- Use statistical tables supplied from the exam cell as necessary
- Use graph sheets supplied from the exam cell as necessary
- Only non-programmable calculator without storage is permitted

Answer all questions

Q. No	Sub Sec.	Description	Marks	CO	BT Level
1		For the circuit given below, use current division and find the three branch currents. What is the voltage across A-B? 	10	1	BT2
2		In the circuit given below, find the mesh currents and current through the 5Ω resistor. 	10	1	BT2

3		For the circuit given below, mark the unknown node voltages and a reference node. Find the unknown node voltages using nodal analysis. 	10	1	BT2
4		Calculate the current through the 23Ω resistor using Superposition theorem for the circuit given below. 	10	1	BT2
5		For the circuit given below, using Thevenin's theorem, find the current through the 50Ω resistor. Find the power dissipated across it. 	10	1	BT2

**********All the best **********