

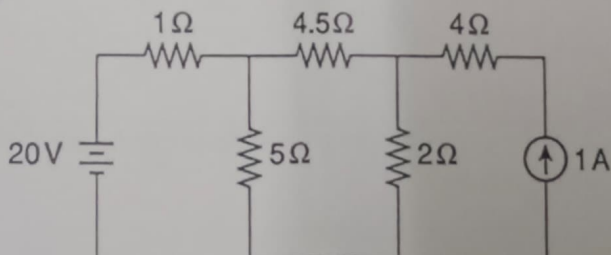
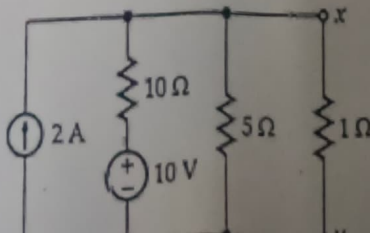


SCHOOL OF COMPUTER SCIENCE AND ENGINEERING
CONTINUOUS ASSESSMENT TEST - I
FALL SEMESTER 2025-2026

Programme Name & Branch : B.Tech Computer Science and Engineering
Course Code and Course Name : BAE101 – Basic Engineering
Faculty Name(s) : Profs. Rajasekar, Jakeer Hussain, Marimuthu, Yuvapriya, Himadri Lala, Gokulakrishnan, Washima Tasnin, Gayathri V
Class Number(s) : VL2025260106176, VL2025260106179, VL2025260106189, VL2025260106181, VL2025260106185, VL2025260106187, VL2025260106183 , VL2025260106191
Date of Examination : 19-08-2025
Exam Duration : 90 minutes
Maximum Marks: 50

General instruction(s):

- Answer All Questions
- M - Max mark; CO – Course Outcome; BL – Blooms Taxonomy Level (1 – Remember, 2 – Understand, 3 – Apply, 4 – Analyse, 5 – Evaluate, 6 – Create)
- Course Outcomes:
CO-1: Analyse the electrical circuits, electrical motors and the role of power electronics in industrial applications.

Q. No	Question	M	CO	BL
1.	Using mesh current analysis, find the current through 5Ω resistor for the circuit shown in Fig.1  Fig. 1	10	1	3
2.	Using Thevenin's theorem, calculate the current through 1Ω load resistance in the given circuit shown in Fig. 2. 	10	1	3



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	Fig. 2			
3.	Using Superposition theorem, calculate the current through 4Ω resistance in the given circuit shown in Fig. 3. Fig. 3	10	1	3
4.	Determine the total impedance, current, phase angle, power factor and the voltage across each element for the circuit shown in Fig. 4. Fig. 4	10	1	3
5.	Explain basic working principle, constructional details and control mechanism of brushless DC (BLDC) motor.	10	1	2
