



SCHOOL OF ELECTRICAL ENGINEERING CONTINUOUS ASSESSMENT TEST - I WINTER SEMESTER 2024-2025

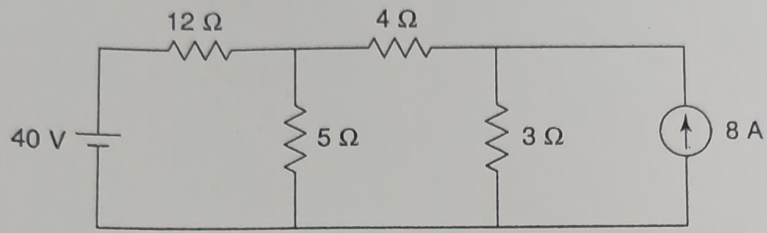
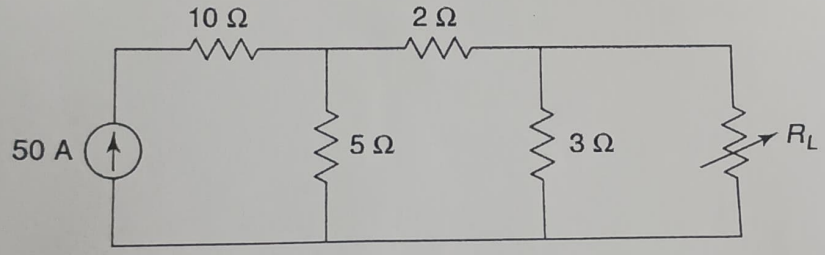
Programme Name & Branch : B.Tech & BME/ BMM/ BMV
 Course Code and Course Name : BEEE102L - Basic Electrical and Electronics Engineering
 Faculty Name(s) : Dr. Dhanamjayulu C, Dr. Arun N, Dr. Mageshvaran R,
 Dr. Subramanian K, Dr. Satyajit Mohanty, Dr. Gayathri V
 Class Number(s) : VL2024250504493
 Date of Examination : 01-Feb-25
 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
CO1- Evaluate DC and AC circuit parameters using various laws and theorems

Q. No	Question	M	CO	BL
1.	<p>For the circuit in Fig. 1, find the branch currents I_1, I_2 and I_3 using mesh analysis.</p> <p style="text-align: center;">Fig.1</p>	10	CO1	BL3
2.	<p>Find the voltage at nodes 1 and 2 for the network shown in Fig. 2.</p> <p style="text-align: center;">Fig. 2</p>	10	CO1	BL3

3.	<p>Find the current through the $4\ \Omega$ resistor in Fig. 3 using superposition theorem.</p>  <p style="text-align: center;">Fig. 3</p>	10	CO1	BL3
4.	<p>Find the value of the resistance R_L in Fig. 4 for maximum power transfer and calculate the maximum power.</p>  <p style="text-align: center;">Fig. 4</p>	10	CO1	BL3
5.	<p>The voltage and current in a circuit are given by $V = 150\angle 30^\circ\text{ V}$ and $I = 2\angle -15^\circ\text{ A}$. If the circuit works on a 50 Hz supply, determine impedance, resistance, reactance, power factor and power loss considering the circuit as a simple series circuit.</p>	10	CO1	BL3
