MAR ATHANASIUS COLLEGE OF ENGINEERING, KOTHAMANGALAM

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

First Sessional Examination October 2026

Introduction to Electrical Engineering (B24EE1T01)

(S1_ EA&EB)

Max. Marks: 40 Time : 1.5 Hours

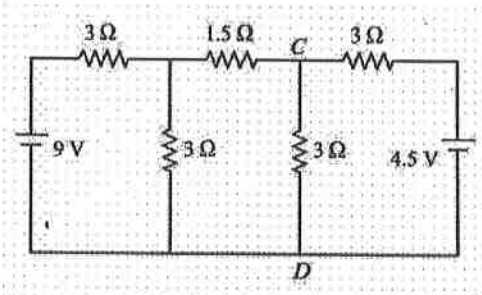
Answer all questions from Part A and Part B

PART A (4X3=12 Marks)

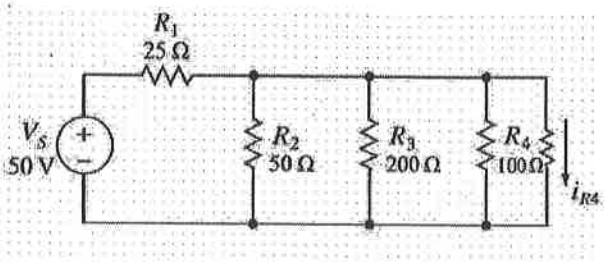
1. State Kirchhoff's laws with suitable examples. (CO1)
2. Three resistors 10 Ω, 5 Ω, and 20 Ω are connected in Delta configuration. Find the equivalent resistance in Star configuration. (CO1)
3. State and prove Maximum Power Transfer Theorem. (CO2)
4. List down the steps to apply Superposition Theorem with a suitable example. (CO2)

PART B (2 X14=28)

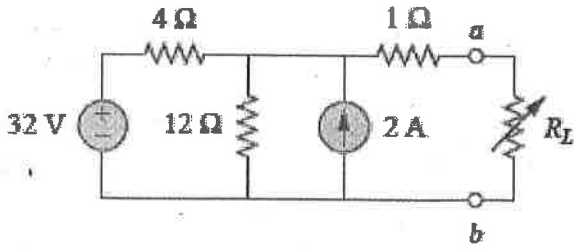
5. a. Using Mesh Analysis, determine all mesh currents. Also, find the voltage across 1.5 Ω resistor. (CO1) (8 Marks)



b. By applying source transformation, calculate the current passing through the resistor (R_4) . (CO1)(6 Marks)



6. a. Determine Thevenin's equivalent to the left of terminals a-b. Find the current through R_L= 2 Ω and 6 Ω. (CO2) (8 marks)



(P.T.O)