

Mahindra University École Centrale School of Engineering Hyderabad

Program: B.Tech. Branch: AI/CSE/CM/CE/ME/MT/NT Year: I Semester: I

End term Examination

Subject: EC1101 Introduction to Electrical Engineering

Date: 19.09.2023

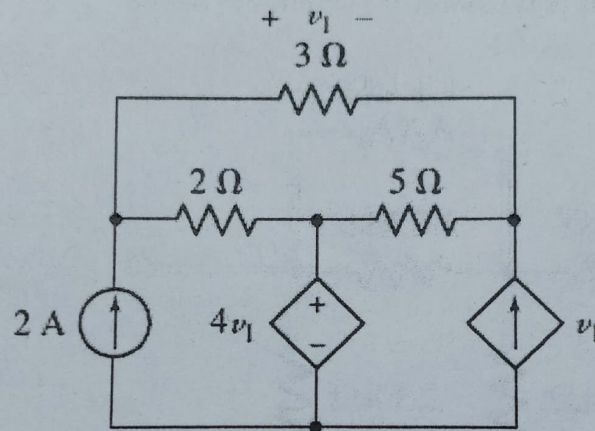
Time: 10.00 AM to 11.30 AM

Time Duration: 1:30

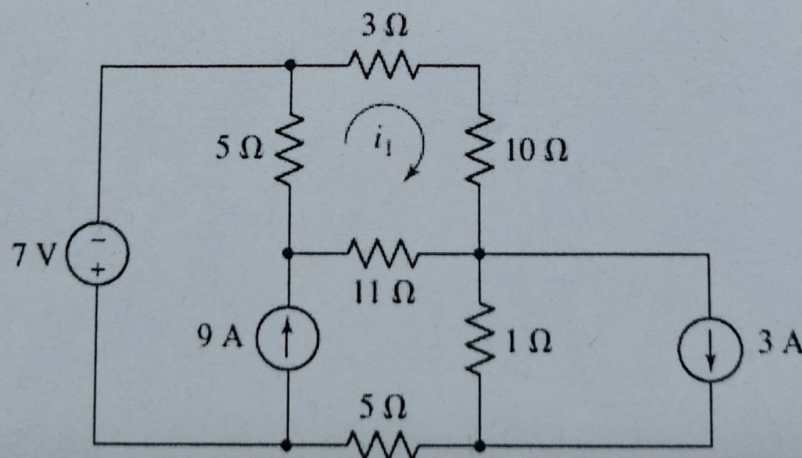
Max. Marks: 40

Note: There are 4 questions, all of which are compulsory.

- Q 1 Determine the voltage labeled v_1 across the 3Ω resistor using nodal analysis. 10 marks

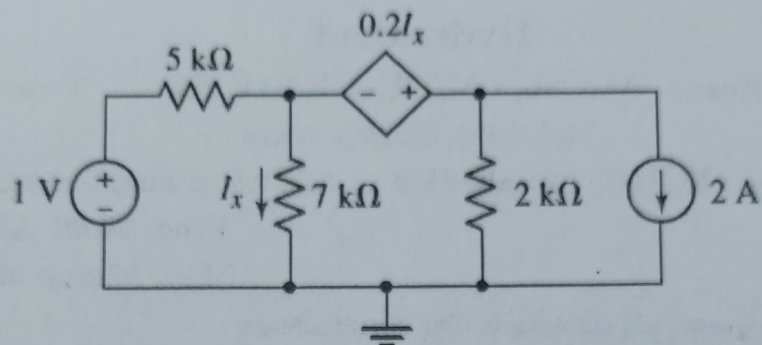


- Q 2 Determine the mesh current i_1 and the power dissipated by the 1Ω resistor. 10 marks



- Q 3 Use superposition to find the current I_x . (*You must use the principle of superposition only to solve this problem.* You may verify your solution using other methods)

10
marks



- Q 4 Determine the Thévenin equivalent of the circuit below.

10
marks

