JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATION- 2025

B.Tech-I Semester (CSE/IT/ECE/CE)

COURSE CODE (CREDITS): 24B11EC211(4) / 18B11EC211 (4) MAX. MARKS: 15

COURSE NAME: Basic Electrical Engineering/ Electrical Sciences

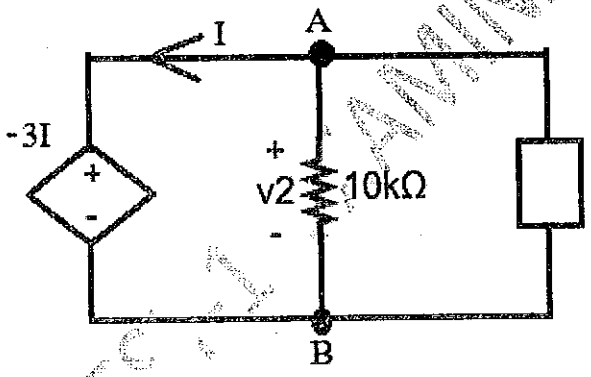
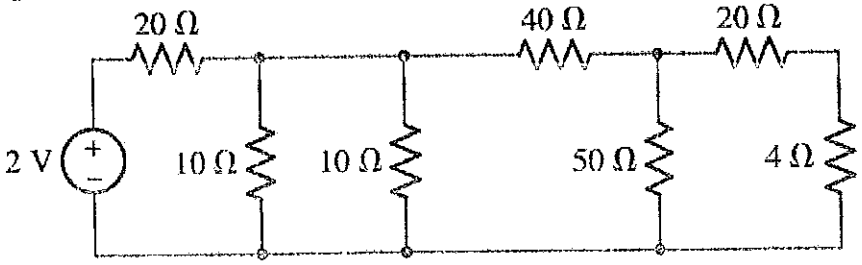
COURSE INSTRUCTORS: Dr. Rajiv, Dr. Shweta, Dr. Salman, Dr. Harsh, Dr. Nishant, Lt Pragya

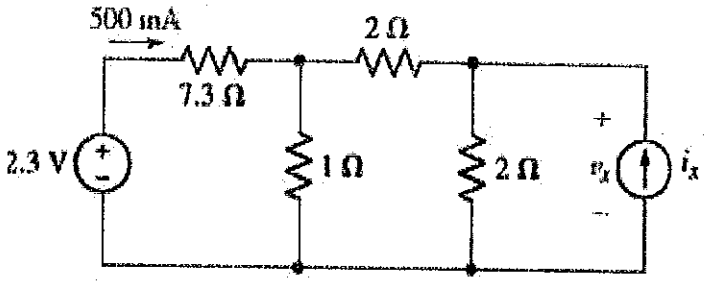
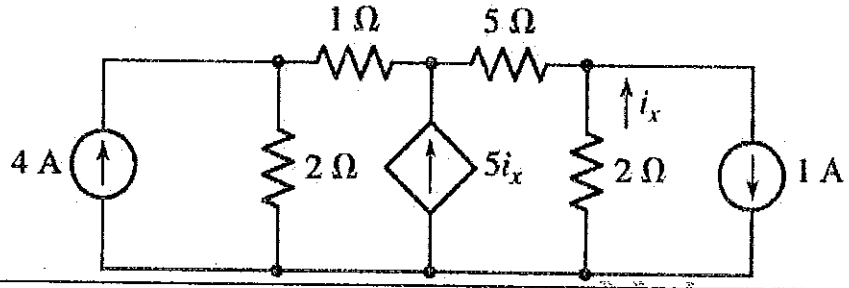
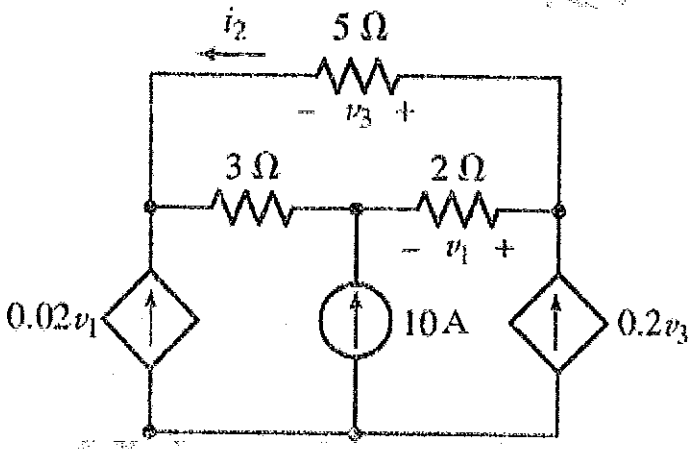
MAX. TIME: 1 Hour

Note: *(a) All questions are compulsory.*

(b) The candidate is allowed to make Suitable numeric assumptions whereever required for solving problems

(c) Scientific calculator is allowed.

Q.No	Question	CO	Marks
Q1	(a) For the circuit given below, what value of I is required for the dependent source to be supplying 12W? (b) Determine the value of v2. (c) Determine the magnitude and the direction of the current flowing through the 10 kΩ resistor. 	CO1	3
Q2	With regard to the circuit shown below, using only current division/ voltage division rule, determine the power dissipated by the 4Ω resistor. 	CO1	3

Q3.	Determine the value of v_x as labeled in the circuit given below: 	CO1	3
Q4	Using nodal analysis. determine i_x in the following circuit: 	CO2	3
Q5	Determine the current i_2 as labeled in the circuit below, using mesh analysis. 	CO2	3