

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT  
TEST -1 EXAMINATION, FEBRUARY 2019

B.Tech 2<sup>nd</sup> Semester (CSE/ECE/IT/CE)

Course Code: 18B11EC211  
Course Name: Electrical Sciences  
Course Credits: 04

MAX. MARKS: 15

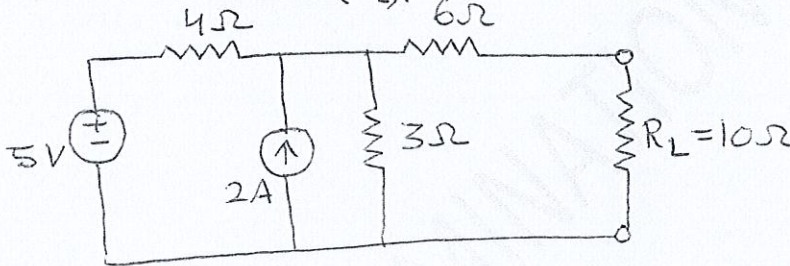
MAX. TIME: 1 Hrs

Note: All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means. Marks are indicated in square brackets against each question

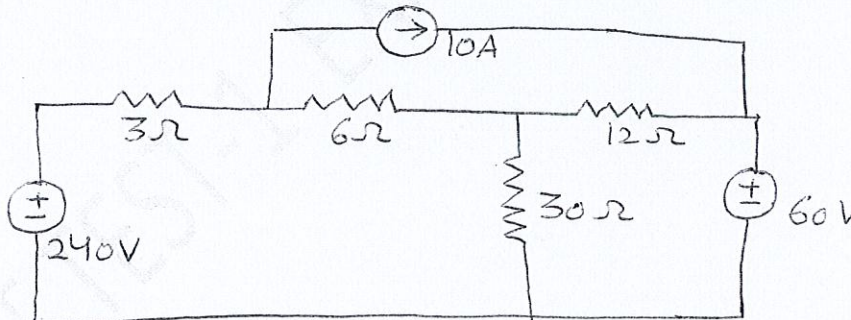
Q1. State and prove Maximum Power Transfer Theorem. [4] CO1

Q 2. (a) State Superposition Theorem. [1] CO1

(b) For the circuit given below, find the Thevenin's equivalent circuit and determine the power delivered to load resistor ( $R_L$ ). [3] CO1



Q3. Determine node voltages of the circuit given below using Nodal analysis: [3] CO1



Q4. Using Mesh analysis, determine the value of current  $i_a$  flowing through 5 Ω resistor in the circuit given below: [4] CO1

