JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATION- 2024

B.Tech-2nd Semester (CSE/IT/ECE/CE)

COURSE CODE (CREDITS): 18B11EC211 (4)

COURSE NAME: Electrical Science

COURSE INSTRUCTORS: Prof Rajiv Kumar, Prof Shruti Jain, Dr Harsh Sohal, Dr. Salman Raju and Lt. Pragya Gupta,

MAX. TIME: 1 Hour

MAX. MARKS: 15

Note: (a)All questions are compulsory. (b)Marks are indicated against each question in square brackets. (c) The candidate is allowed to make Suitable numeric assumptions wherever required for solving problems

Q1. Obtain a numerical value for the current labeled *i* in the given circuit-



[3] (CO-2)

Q2. Write the nodal equations for the following circuit.







Q3. Find the power absorbed by each element in the given circuit. Also mention the dependent and independent sources.



Q4. With the help of nodal analysis, determine node voltages v_1 and v_2 as shown on circuit diagram.



[3] (CO-2)

Q5. In the circuit shown in the given Figure, find (a) the current in 15- Ω resistance, (b) the voltage across 18- Ω resistance.



[3] (CO-1)

