JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATIONS-2022

B.Tech-II Semester (CE)

COURSE CODE (CREDITS): 18B11EC211 (4)                     MAX. MARKS: 15
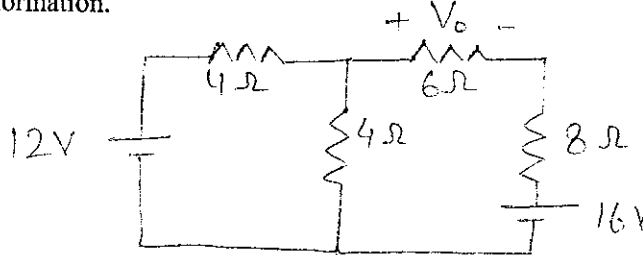
COURSE NAME: ELECTRICAL SCIENCE

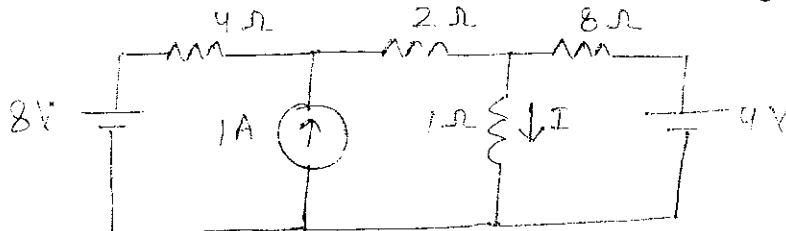COURSE INSTRUCTORS: ANUJ KUMAR MAURYA          MAX. TIME: 1 Hour

*Note:* *All questions are compulsory. Marks are indicated against each question in square brackets.*

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Q1. (a) What do you understand by active and passive component?           [CO1] [1]
(b) Explain voltage dividing and current dividing rule in electric circuits.           [CO2] [2]

Q2. What is source transformation? Solve following circuit to find the value of $V_0$ using source transformation.           [CO1, CO2] [3]



Q3. Define superposition principle and apply it to get the value of I in following circuit. [CO2, CO3] [3]



Q4. What do you understand by star-delta connection? Develop the relation between different components of star-delta connection.           [CO1, CO2] [3]

Q5. Using Norton's theorem, find the current through A-B in the following circuit.           [CO2, CO3] [3]