JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST - 1 EXAMINATION - 2026

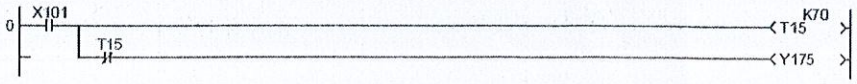
B.Tech-VIII Semester (Open Elective)

COURSE CODE(CREDITS): 25B1WEC831(2) MAX. MARKS: 15

COURSE NAME: Industrial Automation

COURSE INSTRUCTOR: Salman Raju Talluri MAX. TIME: 1 Hour

Note: (a) All questions are compulsory. (b) The candidate is allowed to make suitable numeric assumptions wherever required for solving problems. (c) Use of calculator is not allowed.

Q.No	Question	CO	Marks
Q.1	Compare three different types of controlled automation systems that are used in the industrial automation by selecting suitable examples. What is the need of all these types?	CO-1	3
Q.2	How do you choose a sensor for an application with respect to response time, sensitivity, accuracy and precision? Specify the units of these parameters with respect to any sensor of your choice.	CO-1	3
Q.3	In order to design an elevator system for a two story building, what are the different types of input sensor signals, actuator signals and output signals that are to be consider primarily? List all inputs, outputs and other devices needed for designing it with their use.	CO-1	3
Q.4	Create a logic digram to implement fire alarm system with multiple fire sensors(take minimum of three sensors). Alarm is supposed to be in ON state when one of the sensors is activated and alarm is supposed to be cleared only when it is being cleared by the user.	CO-2	3
Q.5	Draw the timing diagram for the following ladder diagram indicating all possible combinations of inputs/contacts. 	CO-2	3

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