

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATION- 2023

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

COURSE CODE (CREDITS): 20B1WEC731 (3)

MAX. MARKS: 15

COURSE NAME: Automation and Robotics

COURSE INSTRUCTORS: Dr. Emjee Puthooran

MAX. TIME: 1 Hour

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*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*

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Q1. List the various factors that contribute to the cost/unit and overall production time in an industry. Describe how industrial automation can maximize the profit of an industry.

[CO1, 2M]

Q2. What are the different types of industrial production systems? Briefly explain each one.

[CO1, 3M]

Q3. What are the different layers in an automation pyramid? Sketch the automation pyramid and briefly explain about the layers in the automation pyramid.

[CO1, 4M]

Q4. Write short notes on the following terms related to sensors.

[CO3, 3M]

(a) Accuracy (b) Resolution (c) Response time

Q5. With a neat sketch explain the construction and working of an accelerometer. Explain how it can be calibrated.

[CO3, 3M]

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