



# CBCS SCHEME

18MT71

## Seventh Semester B.E. Degree Examination, June/July 2023 Industrial Robotics

Time: 3 hrs.

Max. Marks: 100

**Note:** Answer any FIVE full questions, choosing ONE full question from each module.

### Module-1

- 1 a. Write a short note on automation and robotics. (10 Marks)  
b. Explain the use of robotics in science fiction. (10 Marks)

OR

- 2 a. Discuss a brief history of robotics. (12 Marks)  
b. Write a short note on robotics market. (08 Marks)

### Module-2

- 3 a. Explain robot basic configurations. (10 Marks)  
b. Explain types of drive system for commercially available industrial robots. (10 Marks)

OR

- 4 a. Describe precision of functions of features of robot. (12 Marks)  
b. Write a short note on robot programming. (08 Marks)

### Module-3

- 5 a. List basic control models. Explain any one is brief. (10 Marks)  
b. Explain the behavior of the system during the transition from initial state to final state. (10 Marks)

OR

- 6 a. Write a short note on following position sensors :  
i) Potentiometers ii) Resolvers. (10 Marks)  
b. Explain electric motors of a type of actuator. (10 Marks)

### Module-4

- 7 a. Write a short note on transducers and sensors. (10 Marks)  
b. Explain briefly about proximity and range sensors. (10 Marks)

OR

- 8 a. Explain imaging devices with suitable diagram. (10 Marks)  
b. Write a short note on robotic applications. (10 Marks)

### Module-5

- 9 a. Explain lead through programming methods. (08 Marks)  
b. Write a short note on a robot program of a path in space. (12 Marks)

OR

- 10 a. Write a short note on wait, signal and delay commands. (10 Marks)  
b. Explain capabilities of lead through methods. (10 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.  
2. Any revealing of identification, appeal to evaluator and /or equations written eg. 42-8-50, will be treated as malpractice.