

CBCS SCHEME

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18RA55

Fifth Semester B.Tech. Degree Examination, Jan./Feb. 2023 Robot Programming

Time: 3 hrs.

Max. Marks: 100

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

Module-1

- 1 a. Explain in detail, the coordinate systems used in Robots. (10 Marks)
b. With an example, explain Robot Flow chart. (10 Marks)

OR

- 2 a. Explain the SUB Routines. (10 Marks)
b. Explain the position control in robot programming. (10 Marks)

Module-2

- 3 a. Define programming and briefly explain the ONLINE method of programming. (10 Marks)
b. Discuss the WAIT, SIGNAL and DELAY commands. (10 Marks)

OR

- 4 a. Along with advantages, explain OFFLINE method of programming. (10 Marks)
b. Explain Manual Lead through method. (10 Marks)

Module-3

- 5 a. What are the First and Second generation Robot languages? (10 Marks)
b. Explain the END Effector and Sensor commands. (10 Marks)

OR

- 6 a. Explain the structure of Robot program. (10 Marks)
b. Briefly explain communication and Data processing in robot language. (10 Marks)

Module-4

- 7 a. Explain Monitor Commands in VALII. (10 Marks)
b. Explain Interlock Commands. (10 Marks)

OR

- 8 a. Explain Hand Control in VALII (10 Marks)
b. Explain INPUT/OUTPUT controls (10 Marks)

Module-5

- 9 a. What are AML statements? (10 Marks)
b. Explain Grip Sensing capabilities. (10 Marks)

OR

- 10 a. What are program control statements? (10 Marks)
b. Write an AML program for PEG IN A HOLE. (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.