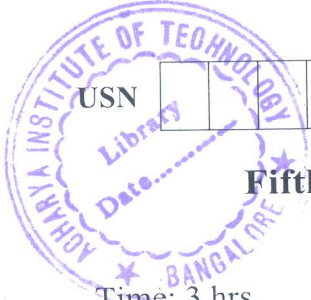


CBCS SCHEME



15MT562

Fifth Semester B.E. Degree Examination, Aug./Sept.2020 Automation in Manufacturing

Time: 3 hrs.

Max. Marks: 80

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

Module-1

- 1 a. Explain manufacturing support system. (08 Marks)
b. Explain production system facilities and its ranges. (08 Marks)

OR

- 2 a. Explain strategies of automation principle. (08 Marks)
b. Explain production concepts and mathematical models. (08 Marks)

Module-2

- 3 a. Explain the basic elements of an automated system. (08 Marks)
b. Classify and explain various level of automation with a sketch. (08 Marks)

OR

- 4 a. Explain taguchi methods in quality control. (08 Marks)
b. Explain term traditional quality control and modern quality control. (08 Marks)

Module-3

- 5 a. Briefly explain single station automated cells. (08 Marks)
b. Explain components of manufacturing systems. (08 Marks)

OR

- 6 a. Explain lean and agile manufacturing. (08 Marks)
b. Explain: i) Concurrent engineering ii) Just in time production system. (08 Marks)

Module-4

- 7 a. Describe with a neat sketch, explain components and working of coordinate measuring machine with a neat sketch. (08 Marks)
b. Illustrate the working of machine vision system. (08 Marks)

OR

- 8 a. Explain any one optical inspection techniques, with neat sketch. (08 Marks)
b. Explain automated inspection with suitable figures. (08 Marks)

Module-5

- 9 a. Define group technology, explain its benefits and application. (08 Marks)
b. Explain part classification and coding. (08 Marks)

OR

- 10 a. Explain FMS and its benefits with application. (08 Marks)
b. Explain the following: i) Production flow analysis ii) Cellular manufacturing and its advantages. (08 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.