



CBCS SCHEME

15MT562

Fifth Semester B.E. Degree Examination, June/July 2019

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 briefly about manufacturing support system. (08 Marks)
b. Explain : i) Mathematical models ii) Costs of manufacturing operations. (08 Marks)

OR

- 2 a. Explain types of automation in production system. (08 Marks)
b. Explain the ten strategies of automation principles. (08 Marks)

Module-2

- 3 a. Explain advanced automation functions and levels of automation. (06 Marks)
b. Explain the basic elements of an automated system. (10 Marks)

OR

- 4 a. Explain about traditional and modern quality control methods. (08 Marks)
b. Explain Taguchi methods in quality engineering. (08 Marks)

Module-3

- 5 a. List and example classification of manufacturing system. (08 Marks)
b. Explain the following : (08 Marks)
i) Computer Aided Process Programming (CAPP)
ii) Just In Time (JIT) Production system.

OR

- 6 a. Explain briefly about the lean and Agile manufacturing. (08 Marks)
b. Explain the following : (08 Marks)
i) Concurrent engineering
ii) Design for manufacturing system.

Module-4

- 7 a. Explain the construction and operation of Coordinate Measuring Machine (CMM) (08 Marks)
b. Explain any one optical inspection techniques with neat sketch. (08 Marks)

OR

- 8 a. Explain the operation and working of machine vision system with neat sketch. (08 Marks)
b. Explain the application and benefits of CMM. (08 Marks)

Module-5

- 9 a. Define group technology. Explain its benefits and application. (08 Marks)
b. Explain the following : (03 Marks)
i) Production flow analysis (05 Marks)
ii) Cellular manufacturing and its advantages.

OR

- 10 a. Define FMS. Explain application and benefits of FMS. (08 Marks)
b. Explain about the FMS planning and FMS operational issues. (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.