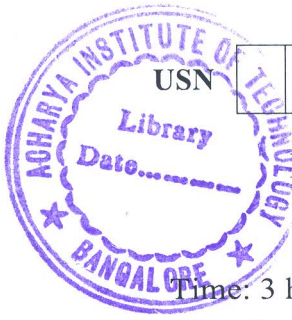


CBCS SCHEME

17MT562



--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Fifth Semester B.E. Degree Examination, Dec.2019/Jan.2020 Automation in Manufacturing

Time: 3 hrs.

Max. Marks: 100

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

Module-1

- 1 a. Define automation. Explain the types of automation. (10 Marks)
b. List and explain the strategies for automation and process improvement. (10 Marks)

OR

- 2 a. Explain the advantages and disadvantages of automation. (10 Marks)
b. Define and give the mathematical models for :
i) Production rate ii) Production capacity iii) Manufacturing lead time
iv) Work in progress v) Cycle time. (10 Marks)

Module-2

- 3 a. Explain feedback control for an automated system. (10 Marks)
b. With a neat sketch, explain five levels of automation and control in manufacturing. (10 Marks)

OR

- 4 a. Differentiate between traditional and modern view of quality. (10 Marks)
b. Explain the Robust design and Taguchi loss function. (10 Marks)

Module-3

- 5 a. Explain the components of a manufacturing system. (10 Marks)
b. Explain advanced manufacturing planning system. (10 Marks)

OR

- 6 a. Explain retrieval type of computer aided process planning system. (10 Marks)
b. Explain the following: i) Just In Time (JIT) ii) Agile Manufacturing. (10 Marks)

Module-4

- 7 a. What is Inspection? Explain construction and working of Coordinate Measuring Machine (CMM). (10 Marks)
b. Explain the application and benefits of CMM. (10 Marks)

OR

- 8 a. With a neat sketch, explain the working principle of Laser device for inspection. (10 Marks)
b. Write a short note on Computer Aided Inspection and Computer Aided Testing (CAT). (10 Marks)

Module-5

- 9 a. Define Group Technology. Explain the benefits of group technology. (10 Marks)
b. Define FMS. Explain the basic components of FMS. (10 Marks)

OR

- 10 a. Explain the features of part classification and coding system. (10 Marks)
b. Explain the application of group technology. (10 Marks)

* * * * *

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.