

CBCS Scheme

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15MA62

Sixth Semester B.E. Degree Examination, June/July 2018 Computer Integrated 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 in brief the role computers in Design and manufacturing planning and control. (08 Marks)
b. Explain the types of production system in brief with a neat sketch. (08 Marks)

OR

- 2 a. Explain the possible levels of automation. (08 Marks)
b. Explain the objectives of implementing a lean production system. (08 Marks)

Module-2

- 3 a. List the logical steps in preparing computer aided process planning. (08 Marks)
b. With a neat sketch explain aggregate plan in detail. (08 Marks)

OR

- 4 a. Explain capacity planning for long and short term periods in detail. (08 Marks)
b. Briefly explain the following :
i) Functions of Manufacturing process planning
ii) Benefits of enterprise Resource planning. (08 Marks)

Module-3

- 5 a. List the design and manufacturing attributes in parts by which part classification and coding in done. (08 Marks)
b. List and explain the steps carried out for production flow analysis. (08 Marks)

OR

- 6 a. List and explain any four types of Machine cell layout with neat sketches. (08 Marks)
b. Explain "Rank Order Clustering" method in detail. (08 Marks)

Module-4

- 7 a. Explain the functions (any 4) of computer control system in the smooth running of flexible manufacturing system. (08 Marks)
b. Explain the applications (any 4) and benefit (any4) of FMS. (08 Marks)

OR

- 8 a. Explain any four types of vehicle Guidance Technologies used in Automated Guided Vehicle. (08 Marks)
b. Explain in detail the ways in which AGV's safety and vehicle management is done. (08 Marks)

Module-5

- 9 a. With a neat sketch, explain the structure of a Robot, highlighting the different parts. (08 Marks)
b. Explain in detail the classification of robots. (08 Marks)

OR

- 10 a. Explain the various sensors (any 4) used in robots. (08 Marks)
b. Write short notes on :
i) Robot part programming methods (any 2 methods) (04 Marks)
ii) Positional accuracy of the robot. (04 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.