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Question Paper Code: BCCB12



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

M.Tech II Semester End Examinations (Regular) - May, 2019

Regulation: IARE-R18

COMPUTER INTEGRATED MANUFACTURING

Time: 3 Hours

(CAD/CAM)

Max Marks: 70

Answer ONE Question from each Unit

All Questions Carry Equal Marks

All parts of the question must be answered in one place only

UNIT – I

1. (a) What are the various benefits of CIM? Describe the need for CIM and the issues addressed by CIM. [7M]
- (b) What are the different types of manufacturing systems. Make an assessment of the extent of computer control in specific cases of each types of manufacturing. [7M]
2. (a) What are the various activities of a manufacturing plant which can be carried out through computer control? [7M]
- (b) Draw the block diagram of CIM wheel. Discuss the role of CIM in manufacturing. [7M]

UNIT – II

3. (a) What is SQL? Give an example of the use of SQL to access a database. [7M]
- (b) What are the desirable features of a database management system? [7M]
4. (a) What are the essential requirements of a relational database management system? [7M]
- (b) Explain the three database models with neat block diagrams. [7M]

UNIT – III

5. (a) What are the various innovations introduced in tooling for flexible manufacturing systems? [7M]
- (b) Discuss the importance of in-process monitoring of work piece quality in FMS. [7M]
6. (a) Describe the types of materials handling systems used in a FMS [7M]
- (b) Discuss the relevance of FMS from the point of view of Work Centre utilization. [7M]

UNIT – IV

7. (a) Compare variant and generative process planning methodologies. [7M]
- (b) Discuss how group technology is used in designing manufacturing cells. [7M]
8. (a) What is process planning function? Explain the need for CAD based process plans. [7M]
- (b) Discuss the principle and advantages of group technology coding. [7M]

UNIT – V

9. (a) What is process control? Discuss the integration of CAD database and CMM operation. [7M]
(b) Discuss the important benefits of computer-aided quality control. Explain various process control strategies. [7M]
10. (a) Discuss major non-contact inspection methods. Explain how image processing is useful for inspection. [7M]
(b) What is meant by flexible inspection system? Explain the method of part inspection using a CMM. [7M]

