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Question Paper Code: BCC006



**INSTITUTE OF AERONAUTICAL ENGINEERING**  
(Autonomous)

M.Tech II Semester End Examinations (Regular / Supplementary) - July, 2018

Regulation: IARE-R16

**FLEXIBLE MANUFACTURING SYSTEMS**  
(CAD/CAM)

Time: 3 Hours

Max Marks: 70

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Answer ONE Question from each Unit

All Questions Carry Equal Marks

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

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**UNIT – I**

1. (a) Explain the concepts and functions of Flexible Manufacturing Systems. [7M]  
(b) Discuss the basic components of Flexible Manufacturing Systems with examples. [7M]
2. (a) Explain innovations that have advanced the manufacturing industry. [7M]  
(b) Discuss the aims of Flexible Manufacturing Systems. [7M]

**UNIT – II**

3. (a) Differentiate between forward and backward scheduling approaches. [7M]  
(b) Explain briefly the distributed control system in view of Flexible Manufacturing Systems. [7M]
4. (a) Explain system modeling issues in detail applicable for Flexible Manufacturing Systems. [7M]  
(b) Differentiate between conflicts, concurrency and synchronization. [7M]

**UNIT – III**

5. (a) Write about issues related to deterministic method for obtaining relation in Flexible Manufacturing Systems. [7M]  
(b) Explain the concept of system modeling tools and techniques involved in manufacturing. [7M]
6. (a) Explain the issues related to stochastic models with a neat sketch. [7M]  
(b) Explain briefly Monte Carlo method with an example. [7M]

**UNIT – IV**

7. (a) Explain the manufacturing system analysis in detail mention any two applications. [7M]  
(b) What are the merits and demerits of performance analysis? [7M]
8. (a) Explain briefly the tools, equipment or resource capabilities required in manufacturing. [7M]  
(b) Briefly explain the applications of performance analysis. [7M]

**UNIT – V**

9. (a) Discuss the benefits and limitations of preventive maintenance in manufacturing. [7M]  
(b) What does an unscheduled stop cost you? What is so problematic with “Break down maintenance”? [7M]
10. (a) What benefits can you realize with a dealer preventive maintenance? [7M]  
(b) Are all maintenance items now eligible for federal aid funding if yes justify. [7M]

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