

**M.E DEGREE EXAMINATIONS: DECEMBER - 2009**

First Semester

**INDUSTRIAL ENGINEERING**

IEE552: Computer Integrated Manufacturing Systems

**Time: Three hours**

**Maximum Marks: 100**

**Answer ALL questions:**

**PART A (10 x 2 = 20 Marks)**

1. What is production system?
2. In what way processing operation differs from assembly operation?
3. Define group technology.
4. List the advantages of generative CAPP.
5. What is master production schedule?
6. What are the three main inputs to the MRP processor?
7. What is the uniqueness of supervisory control system?
8. Suggest a suitable contact inspection method for checking the profile of the turbine blade.
9. What is the difference between FMC and FMS?
10. What are the roles of human workers in automated manufacturing systems?

**PART B (5 x 16 = 80 Marks)**

11. a) i) Explain the various production systems with examples. (10)  
ii) Write short note on product and part complexity. (6)  
(OR)  
b) i) Explain the reasons for automation. (10)  
ii) Write short note on flexible automation (6)
12. a) Explain the parts classification and coding system in detail.  
(OR)  
b) Explain the procedure of the retrieval type of CAPP system with suitable example.
13. a) i) Explain the three phases of shop floor control. (10)  
ii) Write short notes on economic order quantity. (6)  
(OR)  
b) i) Explain the structure of a MRP system. (10)  
ii) How an automated data collection system works in a factory? (6)

14. a) Explain the various components of direct digital control system.

**(OR)**

b) Explain any two methods of non contact inspection methods with examples.

15. a) i) Explain the various aspects of materials handling system in CIM environment. (10)

ii) How Direct Numerical Control system works in integrated manufacturing industry. (6)

**(OR)**

b) i) What are the components of FMS? Explain. (12)

ii) List the benefits of CIM. (4)

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