

**Q 8198**

M.E. DEGREE EXAMINATION, MAY/JUNE 2006.

Second Semester

Industrial Engineering

IE 1651 — COMPUTER INTEGRATED MANUFACTURING SYSTEMS

(Regulations 2005)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. List the manufacturing planning activities.
2. What are MRP I and MRP II?
3. List the three NC-related control methods.
4. What are the components of a DNC system?
5. Enumerate the classification of networks.
6. Describe a node (in networking).
7. What are the functions of DBMS?
8. List the elements of FMS.
9. What is expert system?
10. How will you specify a robot?

PART B — (5 × 16 = 80 marks)

11. (i) Explain the principles of Lean Manufacturing. (8)
- (ii) Justify the implementation of CAD/CAM/CIM technologies in any organization. (8)

12. (a) (i) Describe the role of Computers in CIM.  
(ii) What are the methods of CAPP? Explain any one of them.

Or

- (b) (i) Explain any one parts classification and coding system, in detail. (8)  
(ii) Describe how the manufacturing module of MRP II in integrated (8)

13. (a) (i) Explain the functions of CNC. (8)  
(ii) Briefly explain the types of CNC machine tools. (8)

Or

- (b) (i) Describe the economies of usage of CNC machines. List the applications of CNC. (8)  
(ii) Explain the capabilities of CNC software. (8)

14. (a) (i) Explain the principles of networking. (8)  
(ii) Describe manufacturing automation protocol. (8)

Or

- (b) (i) Describe the importance of security in networking. (8)  
(ii) Explain various components of networking and describe the wiring methods. (8)

15. (a) (i) Explain the application of AI in vision system. (8)  
(ii) Describe the robot programming methods. (8)

Or

- (b) (i) Explain the industrial applications of robots. (8)  
(ii) Explain how robots integrated with CIM system. (8)