Reg. No. : | | | | | | | | | | | | |

Question Paper Code : 21864

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2015.

Seventh Semester

Mechanical Engineering

ME 2402/ME 72/10122 ME 703 — COMPUTER INTEGRATED MANUFACTURING

(Regulations 2008/2010)

(Common to PTME 2402/10122 ME 703 — Computer Integrated Manufacturing for B.E. (Part-Time) Sixth Semester – Mechanical Engineering – Regulations 2009/2010)

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. List the types of wire frame geometric modeling.

2. Define the term concatenation.

3. List the components of a data communication system.

4. What is MAP?

5. Write the reasons for using a coding scheme in group technology.

6. Define Route sheet.

7. Write the difference between FMC and FMS systems.

8. Write any four commonly used bar codes.

9. Define MRP II.

10. Define the term direct digital control.

PART B — (5 × 16 = 80 marks)

11. (a) (i) Discuss any two basic approaches of solid modeling. (10)

(ii) What is CAD? Discuss the fundamental reasons for implementing the CAD. (6)

Or

(b) (i) Compare the computer graphics display device techniques (6)

(ii) A points is defined by (3,1), and it might be one of several points defining a geometric element. Express the point in matrix notation and perform the following transformations.

(1) Scale the point by the factor of 2.0

(2) Rotate the original point by 45°

(3) Concatenated transformation matrix for the sequence. (10)

12. (a) (i) Explain briefly about the functions of PDM software. (10)

(ii) Compare the characteristics of various LAN topologies (6)

Or

(b) (i) Discuss the various components of LAN (connectivity devices) (10)

(ii) Compare the characteristics of various guided transmission media. (6)

13. (a) (i) Explain briefly about the MCLASS system (8)

(ii) List the advantages and dis-advantages of Retrieval CAPP system. (8)

Or

(b) (i) List the benefits of CAPP. (10)

(ii) List the factors that considered in selecting a suitable classification and coding system. (6)

14. (a) Compare the advantages and dis-advantages of the various automatic identification systems. (16)

Or

(b) (i) List and explain the various types of machines used in FMS workstations. (10)

(ii) What are the points to be considered while planning for FMS? (6)

15. (a) (i) Explain about the four classes of users in MRP. (8)

(ii) How the input and output variables are classified in structural model of manufacturing? (8)

Or

(b) (i) List the benefits of MRP. (6)

(ii) Explain briefly about the functions of PPC. (10)