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

Question Paper Code: 37704

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2018

Seventh Semester

Mechanical Engineering

01UME704 - COMPUTER INTEGRATED MANUFACTURING

(Regulation 2013)

Duration: Three hours Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 2 = 20 Marks)

1. What is meant by wire frame modeling?
2. Differentiate between redraw and regenerate.
3. What is meant by MAP?
4. Define network topology and explain its classification.
5. Define Part family.
6. What is meant by process planning?
7. List out the components of FMS.
8. Outline the advantages of implementing FMS..
9. List the inputs to the MRP system.
10. Define agile manufacturing.

PART - B (5 x 16 = 80 Marks)

11. (a) (i) Explain 2D geometric transformation matrix for translation and rotation with a simple example**.** (10)

(ii) Scale the rectangle A(-1, -1), B(1, -1), C(1, 1) and D(-1, 1) by 2 units in X and Y direction about the origin. (6)

Or

(b) Discuss about surface modeling in detail with suitable sketch. (16)

12. (a) Discuss the changes in manufacturing and management scenes in the recent past that led to the development of CIM. (16)

Or

(b) (i) Briefly discuss about the network topologies. (8)

(ii) Explain about the seven layers of OSI model. (8)

13. (a) (i) Describe about the MCLASS coding system. (8)

(ii) Explain the benefits of implementing a group technology in a firm. (8)

Or

(b) Discuss about the two main approaches of CAPP systems with suitable sketch. (16)

14. (a) Describe the principle of an automated storage and retrieval system. (16)

Or

(b) (i) Explain the major components of an FMS in detail. (8)

(ii) Discuss the various aspects of FMS layout configurations. (8)

15. (a) Explain the different strategies of process control. (16)

Or

(b) (i) Compare the lean and agile manufacturing. (8)

(ii) Describe the components of direct digital control with neat sketch. (8)

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