Reg. No. :

Question Paper Code: 37704

B.E. / B.Tech. DEGREE EXAMINATION, MAY 2022

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. List the techniques of geometric modeling.

2. Define pivot point rotation in transformation.

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. How does FMS classified based on level of flexibility?

9. List the inputs to the MRP system.

10. Differentiate lean production and agile manufacturing.

11. (a) Explain 2D geometric transformation matrix for translation and rotation with a simple example. (16)

Or

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

12. (a) (i) Sketch and explain CASA/SME's model of CIM. (10)

(ii) Discuss the synchronous and asynchronous data transmission in CIM. (6)

Or

(b) Explain the functions of each layer in ISO-OSI model. (16)

13. (a) (i) Demonstrate in brief of the following part classification and coding techniques. (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) (i) Describe the benefits of FMS. (8)

(ii) Describe the principle of an automated storage and retrieval system. (8)

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)

_____

37704