**A** **Reg. No. :** | | | | | | | | | | |

**Question Paper Code: 59724**

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

Elective

Mechanical Engineering

15UME924 - Computer Integrated Manufacturing

(Regulation 2015)

Duration: Three hours Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 1 = 10 Marks)

1. Computer Integrated Manufacturing is___.. CO1- U

   (a) Extension of CAM (b) Management philosophy

   (c) A type of automation (d) Link between CAD and CAM

2. CAD prepares models with computer which are CO1- U

   (a) Dynamic patterns (b) Static patterns (c) Geometric patterns (d) None

3. In OSI model accounting, addressing and routing functions of the systemare provided by: CO2- R

   (a) application layer (b) network layer

   (c) transport layer (d) physical layer

4. _____ is the technology that connects the machines and people within a site in a small area. CO2- R

   (a) LAN (b) MAN (c) WAN (d) None of the above

5. Computer aided process planning is . CO3- U

   (a) Extension of CAM (b) first step in design before CAD

   (c) a type of automation (d) link between CAD and CAM

6. Material Requirements Planning DOES NOT include CO3- U

   (a) material price (b) bill of material

   (c) inventory level (d) production schedule

7. Which of the following is phases of shop floor control CO4- U

(a) Order release (b) Order scheduling

(c) Order progress (d) All of the above

8. Which is not a component of FMS system CO4- U

(a) Work stations (b) Material handling

(c) Computer control system (d) process planning

9. What are all the effect of production planning and control CO5- U

(a) Material factors (b) Human factors (c) Both A and B (d) Either A or B

10. LOB stands for CO5- U

(a) Line of benefit (b) Line of balance

(c) Law of balance (d) None of the above

PART – B (5 x 2= 10 Marks)

11. List the available CAD packages CO1- U

12. Explain the types of communication system CO2- U

13. Explain the group technology concept CO3- U

14. Explain about SFC CO4- U

15. State the Concept of material Requirement Planning CO5- U

PART – C (5 x 16= 80 Marks)

16. (a) Explain the surface modeling in detail with neat sketch. CO1- U (16)

Or

(b) Compare the CSG and B – rep modeling in solid modeling CO1- U (16)

17. (a) Explain the Seven layers of OSI Model in detail CO2- U (16)

Or

(b) Explain the different types of communication system in CIM CO2-U (16)

18. (a) What is Part Families Classification and Coding? CO3- U (16)

Or

(b) Explain facility design using G.T and its benefits of GT. CO3- U (16)

19. (a) Explain the Barcode Technology in automatic data collection system? CO4- U (16)

Or

| | | | | |
|---|---|---|---|---|
| | (b) | Explain the material handling and data storage system | CO4- U | (16) |
| 20. | (a) | Explain lean production and waste in manufacturing | CO5- U | (16) |
| | | Or | | |
| | (b) | Explain computer integrated production management system | CO5- U | (16) |