Reg. No. : [| | | | | | | | | | |]

Question Paper Code : 50890

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2017

Seventh/Eighth Semester

Mechanical Engineering

ME 6703 – COMPUTER INTEGRATED MANUFACTURING SYSTEMS

(Common to : Mechanical and Automation Engineering/Robotics and Automation Engineering)

(Regulations 2013)

Time : Three Hours   Maximum : 100 Marks

Answer ALL questions.

PART – A   (10×2=20 Marks)

1. What is the role of CIM in manufacturing ?

2. Define fixed automation.

3. What are the approaches the CAPP will recognize ?

4. What is meant by MRP ?

5. What is part family ?

6. How the machine cells are classified ?

7. What are the components of FMS ?

8. What are functions performed to operate AGVS ?

9. 'What are the various joint types in robots ?

10. What is Robot accuracy ?

PART – B   (5×16=80 Marks)

11. a) i) What are the steps involved in designing and manufacturing a product ? **(6)**

   ii) What are the components of CIM ? **(10)**

                    (OR)

   b) Explain the following automation

   i) Programmable **(8)**

   ii) Flexible **(8)**

12. a) Write short notes on the following :
    i) Aggregate production planning. **(6)**
    ii) Master production planning. **(5)**
    iii) Capacity planning. **(5)**

                    (OR)

   b) Explain the inputs to MRP and various MRP outputs. Also list the various benefits of MRP. **(16)**

13. a) i) List out the methods for part family formation. **(12)**
    ii) Enumerate the role of GT in CAD/CAM integration. **(4)**

                    (OR)

   b) Discuss D CLASS and OPTIZ coding systems with suitable examples. **(16)**

14. a) i) What are the components of FMS ? **(8)**

   ii) List and explain the various types of machines used in FMS. **(8)**

                    (OR)

   b) Discuss the functions, application, advantage and disadvantages of a FMS. **(16)**

15. a) Explain in details Robot Anatomy and its related attributes. **(16)**

                    (OR)

   b) i) Name some industrial Robot Applications. **(6)**

   ii) Write short notes on Robot Programming and Lead through Programming. **(10)**

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