2044

October 2024

Time – Three hours
(Maximum Marks: 100)

[N.B. 1. Answer all questions under Part-A. Each question carries 3 marks.

2. Answer all the questions either (A) or (B) in Part-B. Each question carries 14 marks.]

PART – A

1. What are the benefits of CAD?

2. Write about wire frame modelling.

3. What is capacity planning?

4. What are the concepts of CIM?

5. Write about datum points.

6. What is meant by Virtual machining?

7. What do you mean by Intelligent Manufacturing system?

8. Define the functions of AS/RS.

9. Define house of quality.

10. What is the basic concept of augmented reality?

PART – B

11. (a) (i) Explain the IGES graphic standard format. (8)
        (ii) Explain about 3D transformations. (6)

    (Or)

    (b) (i) Explain about surface modelling. (10)
        (ii) Write any two Boolean operations with suitable sketches. (4)

[Turn over.....

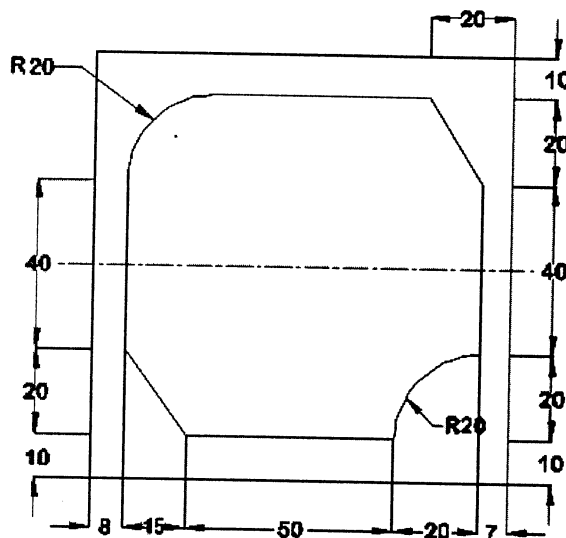12. (a) (i) Explain computer integrated production management system. (9)

   (ii) Write about the Enterprise Resource Planning. (5)

(Or)

   (b) (i) Discuss about the Opitz system of coding structure. (7)

   (ii) Discuss about the Integrated CAD/CAM system. (7)

13. (a) Write the CNC milling part programme for the given model using G00, G01, G02 and G03 code. (Raw material size 100 x 100 x 10 mm)

(Or)

   (b) (i) Explain any one rapid prototyping process with neat sketch.(9)

   (ii) Discuss about CNC tooling. (5)

14. (a) Discuss about the robot application in (i) spray coating (ii) assembly and inspection.

(Or)

   (b) Explain any two types of AGVs with neat sketches.

15. (a) (i) Explain the steps in failure modes and effects analysis. (7)

   (ii) Discuss about Quality function deployment. (7)

(Or)

   (b) (i) Discuss about the new product development process. (8)

   (ii) Discuss about value engineering. (6)