(Pages : 3) **D – 3433**

Reg. No. : .....

Name : .....

Eighth Semester B.Tech. Degree Examination, December 2017
08.804 : COMPUTER INTEGRATED MANUFACTURING (MU)
(2008 Scheme)

Time : 3 Hours Max. Marks : 100

Instructions : *1) Answer **all** questions from Part – **A**.*

*2) Answer **one full** question from **each** Module of Part – **B**.*

PART – A

1. State the objectives of CIM.

2. What are the advantages of CAPP over Conventional methods ?

3. Describe the architecture of a Database Management System.

4. Explain the phenomenon of Backlash in NC machines.

5. Define NC, CNC and DNC with suitable examples.

6. Explain the Hierarchical code used in GT.

7. What are cutter compensation and tool length compensation ?

8. Explain the concept of part families.

9. Discuss the working methodology of AS/RS.

10. What is concurrent Engineering ? List its advantages. **(10×4=40 Marks)**

P.T.O.

PART – B

Module – I

11. a) Discuss the nature and role of CIM elements. **10**

    b) Discuss the role of CAPP in CAD/CAM integration. **10**

12. a) Explain the significance of MAP in CIM environment. **10**

    b) Describe the essential requirements of an RDBMS. **10**

Module – II

13. a) Explain the difference between manual and computer assisted part programming. **8**

    b) Write short on APT Language. State the ground rules to be followed while formulating APT geometry statements. **6**

    c) Explain the code used for the following in CNC part program. **6**

    i) Circular interpolation in XY plane.

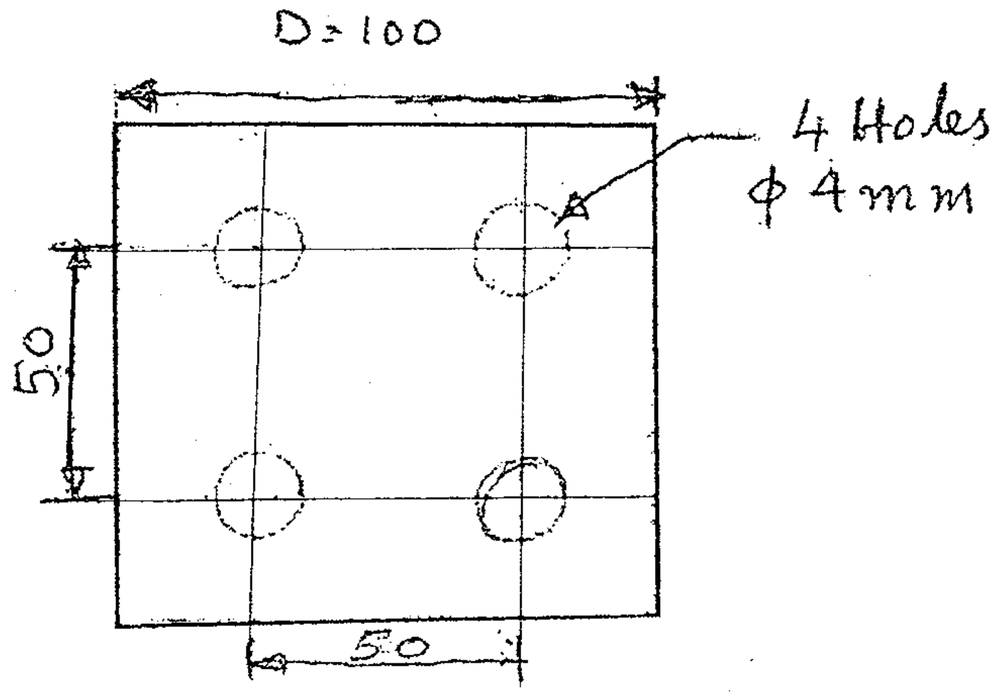
    ii) Tool length compensation.

    iii) Absolute programming.

14. a) Explain the ways to improve accuracy of NC Machines. **5**

    b) What is preloading of Ball screws ? **5**

    c) Write a Manual NC Part Program to drill holes in a plate as shown in the figure below. Drill hole diameter 20 mm, spindle speed 1400 rpm, feed rate 150 mm/min. **10**



All dimensions are in mm

Module – III

15. a) What makes FMS flexible ? Define the types of flexibility and explain its dependent factors. **10**

    b) Write short notes on OPITZ coding system. **10**

16. a) Describe the FMS Layout configuration. How do you select the material handling equipment for them ? **10**

    b) Write short notes on the following : **10**

    i) AGV

    ii) Concurrent engineering.