(Pages : 2) **B – 2557**

Reg. No. : .....

Name : .....

Eighth Semester B.Tech. Degree Examination, December 2016
(2008 Scheme)
08.804 : COMPUTER INTEGRATED MANUFACTURING (MU)

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. Discuss the aspects that one should consider in implementing CIM.
2. What is relational database ? Give an example.
3. Explain the various benefits and limitations of MRP.
4. List out the areas of applications and benefits of CAD.
5. Distinguish between point to point and continuous path CNC control.
6. How does FMS classified based on level of flexibility ?
7. Discuss the advantages and disadvantages of using a ball screw and nut assembly in CNC machines.
8. Explain the principle of working of AGV.
9. Compare NC and CNC systems.
10. What are the methods adopted to group the parts into part families in GT ?

(10×4=40 Marks)

PART – B

Module – I

11. a) Discuss the nature and role of CIM elements. **10**
    b) Explain MAP. **5**
    c) Explain the structure of a MRP system. **5**

12. a) List some CIM hardware and CIM software and bring out the various benefits of implementing a CIM system. **8**
    b) What are the desirable features of a DBMS ? **6**
    c) Explain the general procedure for using one of the variant CAPP system. **6**

P.T.O.

Module – II

13. a) Explain briefly the different types of statements used in APT language. **10**
    b) Write short notes on MACRO statement. **4**
    c) Write a NC part program for the part shown in Figure 1. **6**
    All dimensions are in mm.

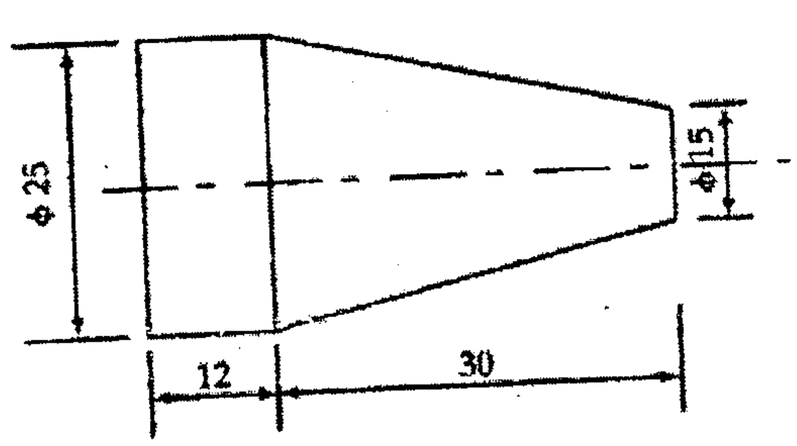

Figure 1

14. a) Explain closed loop control with help of block diagram. **5**
    b) What are canned cycles ? Explain their use. **5**
    c) Write a manual NC Part program to drill holes in a plate of thickness 10 mm as shown in the figure 2. All dimensions are in mm. **10**

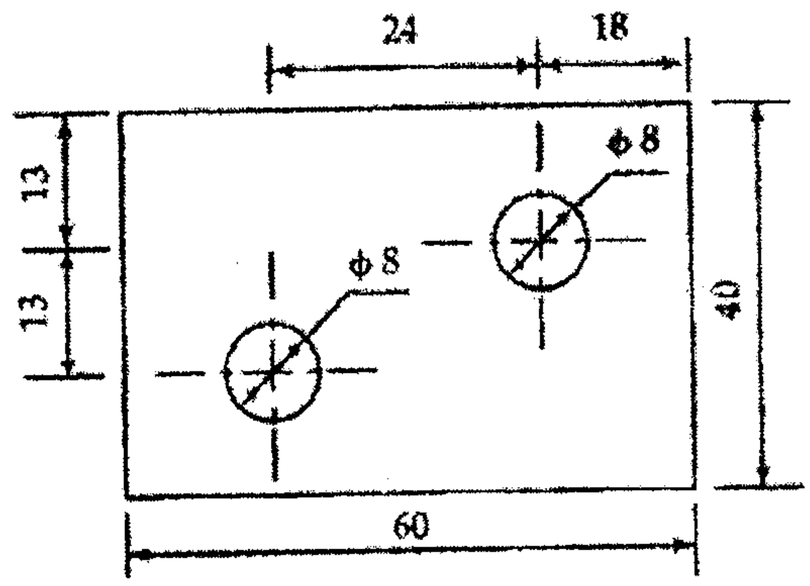

Figure 2

Module – III

15. a) Briefly discuss the various benefits of implementing a GT in a firm. Also bring out the advantages and limitations of using GT. **10**
    b) Write short notes on the following : **10**
    i) AS/RS
    ii) Expert system in CIM.

16. a) Write short notes on various material handling equipment that are commonly found in a FMS. **10**
    b) Write short notes on the following : **10**
    i) Robotic controls
    ii) Computer vision.