Reg. No. : ....

Name : ....

Eighth Semester B.Tech. Degree Examination, November 2013
(2008 Scheme)
08.804 : COMPUTER INTEGRATED MANUFACTURING (MU)

Time : 3 Hours

Max. Marks : 100

Instructions : 1) Answer **all** questions of Part – **A**.
2) Answer **one** question from **each** Module of Part – **B**.

PART – A

1. Explain integration in manufacturing technology.

2. Differentiate between DBMS and RDBMS.

3. Bring out the benefits of CAPP System.

4. How can we avoid stick-slip and back lash in machine tools ?

5 Describe the significance of MAP in CIM environment.

6. Explain briefly about the APT language.

7. Enumerate the factors to be considered in selecting a suitable material handling method for a particular manufacturing operation.

8. Describe the role of management in CIM.

9. What are basic robot motions ? Explain briefly.

10. Give the basic structure of an expert system.   **(10×4=40 Marks)**

PART – B

Module – I

11. a) In what ways have computers had an impact on manufacturing ?   **10**

    b) Explain the CAD/CAM system activities.   **10**

OR

12. a) Give a specific example in which the variant system of CAPP is desirable, and one in which generative system is desirable. Explain.   **10**

     b) Explain the role of computers in MRP.   **10**

Module – II

13. a) List the steps involved to produce an NC program. Briefly explain sequence number, preparatory function, miscellaneous function and canned cycle.   **10**

     b) Describe the open loop and closed loop controls with examples.   **10**

OR

14. a) Explain with block diagrams the application of an adaptive control suitable for a turning operation.   **10**

     b) Prepare a CNC program to machine the component shown in figure. Billet size $\phi 40 \times 80$ mm.   **10**
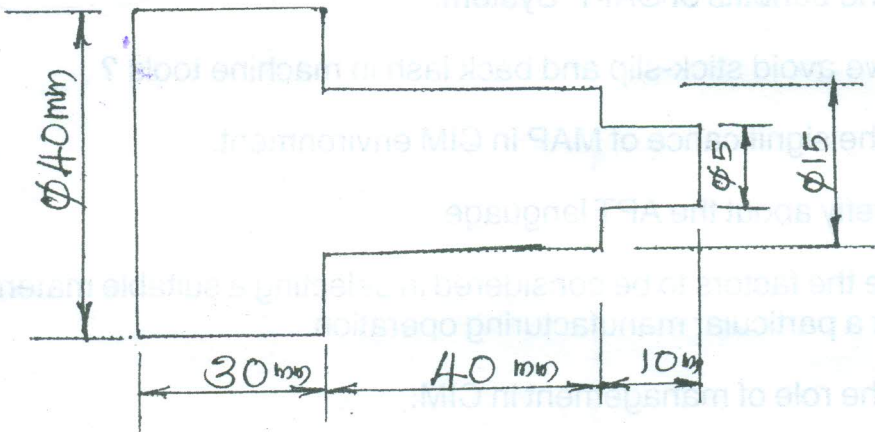
Module – III

15. a) Explain in detail the communication networks in manufacturing.   **10**

     b) How are robots programmed to follow a certain path ?   **10**

OR

16. a) What factors have led to the development to automated guided vehicles ? Do they have any disadvantages ? Explain in detail.   **10**

     b) Explain the operation of a machine vision system.   **10**