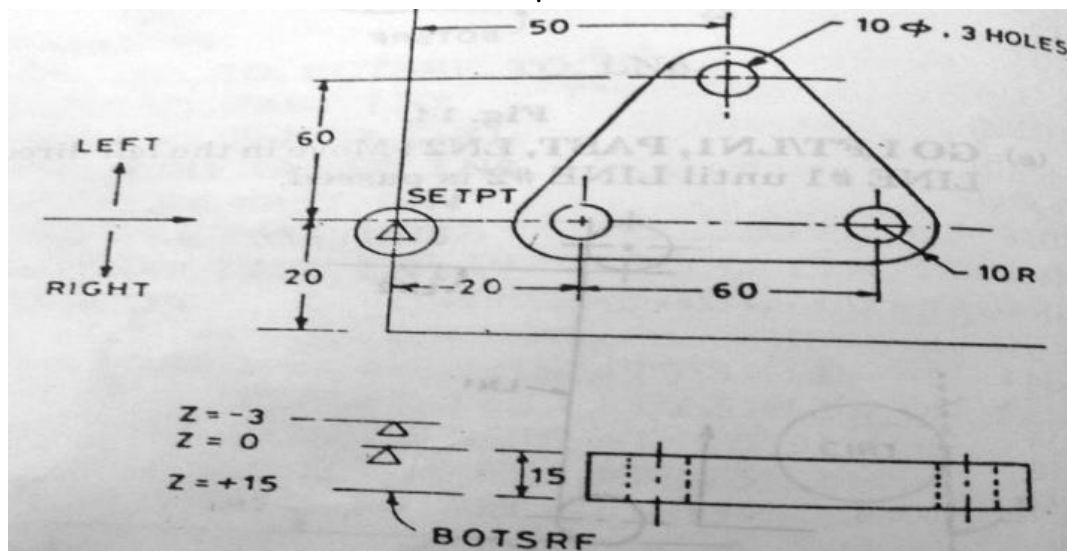


GUJARAT TECHNOLOGICAL UNIVERSITY
M. E. - SEMESTER – I • EXAMINATION – WINTER • 2014

Subject code: 2715006**Date: 12-01-2015****Subject Name: Computer Integrated Manufacturing Systems****Time: 02:30 pm - 05:00 pm****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) What are objectives of CIM? Give major functional area of manufacturing enterprise considered for achieving CIM with advantages. 07
- (b) Explain open-loop control system used in an NC machine using a block diagram. State its drawbacks. 07
- Q.2** (a) Explain EIA codes with suitable example & arrangement. 07
- (b) Explain advantages, disadvantages & application of CNC over NC machine. 07
- OR**
- (b) Explain analysis of flow lines without storage and storage buffer. 07
- Q.3** (a) Explain APT language with its different statements. 07
- (b) Explain difference Project development steps in FMS with specific use. 07
- OR**
- Q.3** (a) Discuss FMS types. Why each FMS type is Unique? Explain in details. 07
- (b) How conveyor and AGV system designed. Explain in detail. 07
- Q.4** (a) What is an AGVS? Name three categories of it. What features distinguish self guided vehicles from conventional AGVs? 07
- (b) Make the part program for the given fig. Given below using both the tools of mill and drill. Assume thickness of plate = 15 units and setpt at (0,20,0) and Z= 0 at the surface of the job 07

**OR**

- Q.4** (a) What is CMM in FMS machining system? Give different types of construction of CMM with advantages and disadvantages. 07
- (b) 07

- Q.5 (a)** Listed types of sensor use in QC. Explain any two in brief. **07**
(b) Explain integration of CAQC with CAD/CAM in brief. **07**
- OR**
- Q.5 (a)** Explain with neat sketch AS/RS system used in FMS. **07**
(b) Explain difference method of QC. And explain principle of these methods. **07**
