

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER-VII • EXAMINATION – WINTER • 2014

Subject Code: 173403**Date: 04-12-2014****Subject Name: Computer Integrated Manufacturing****Time: 10:30 am - 01:00 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) Explain any four benefits of Group Technology. Draw a Group Technology layout in detail and explain. **07**
- (b) Write the functions of material handling system in FMS. Draw and explain FMS loop layout. **07**
- Q.2** (a) Write any seven functions performed by FMS computer control system. **07**
- (b) Draw the schematic diagram and explain the structure of Optiz part Classification and coding system. **07**
- OR**
- (b) Write the typical objectives when implementing Cellular Manufacturing. **07**
- Q.3** (a) Write any four benefits of CAPP. Draw and explain the general procedure Retrieval CAPP system. **07**
- (b) What are the decisions which are usually in the scope of Process Planning? **07**
- OR**
- Q.3** (a) Write the three key building blocks used in CIM Architecture and explain the elements. **07**
- (b) Draw and explain the logical layout of Network Topology. **07**
- Q.4** (a) Write the various Manufacturing Engineering tools used in Island of Automation and explain the advantages and disadvantages of it. **07**
- (b) Write the objectives of Cellular Manufacturing. Explain the Rectangular Machine Cell Layout with neat sketch. **07**
- OR**
- Q.4** (a) Define Conveyor. Write the types of Conveyor. Explain about any one Conveyor. **07**
- (b) Explain work part transfer mechanism used on automated production line with schematic diagram. **07**
- Q.5** (a) Explain the three phases used in Shop Floor Control with schematic sketch. **07**
- (b) Write short notes on Factory Data Collection System. **07**
- OR**
- Q.5** (a) Write the types of Automated Guided Vehicle. Explain the Vehicle Guidance Technology. **07**
- (b) Write the types of Automated Storage / Retrieval System. Write any four advantages of Automated Storage system. **07**
