Seat No.:	Enrolment No

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. 0.1 Explain any four benefits of Group Technology. Draw a Group Technology layout (a) in detail and explain. 07 Write the functions of material handling system in FMS. Draw and explain FMS **(b)** loop layout. 07 Write any seven functions performed by FMS computer control system. 0.2 07 (a) Draw the schematic diagram and explain the structure of Optiz part Classification **(b)** and coding system. **07** OR Write the typical objectives when implementing Cellular Manufacturing. 07 **(b)** Write any four benefits of CAPP. Draw and explain the general procedure 0.3 (a) Retrieval CAPP system. **07** What are the decisions which are usually in the scope of Process Planning? 07 **(b)** OR Write the three key building blocks used in CIM Architecture and explain the 0.3 (a) elements. 07 **(b)** Draw and explain the logical layout of Network Topology. 07 0.4 Write the various Manufacturing Engineering tools used in Island of Automation (a) and explain the advantages and disadvantages of it. **07** Write the objectives of Cellular Manufacturing. Explain the Rectangular Machine **(b)** Cell Layout with neat sketch. 07 OR **Q.4** Define Conveyor. Write the types of Conveyor. Explain about any one Conveyor. **07** (a) Explain work part transfer mechanism used on automated production line with **(b)** schematic diagram. **07** 0.5 Explain the three phases used in Shop Floor Control with schematic sketch. 07 (a) Write short notes on Factory Data Collection System. **07 (b)** OR **Q.5** Write the types of Automated Guided Vehicle. Explain the Vehicle Guidance (a) Technology. **07**

advantages of Automated Storage system.

(b)

Write the types of Automated Storage / Retrieval System. Write any four

07