

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**PDDC - SEMESTER-VIII • EXAMINATION – WINTER • 2014**

**Subject Code: X 81903****Date: 05-12-2014****Subject Name: Computer Integrated Manufacturing****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 is CIM ? Discuss the components of CIM. **07**  
(b) Discuss the benefits of CIM. **07**
- Q.2** (a) Differentiate the NC and CNC machines. **07**  
(b) What is DNC ? What are the advantages of using DNC on the shop floor ? **07**
- OR**
- (b) Draw neat sketches and explain various robot configurations. **07**
- Q.3** (a) Define GT. Explain OPITZ coding system. **07**  
(b) Explain different FMS components. **07**
- OR**
- Q.3** (a) What is FMS ? List different flexibilities associated with FMS and explain any two in brief. **07**  
(b) What is part family? Discuss the advantages of GT in manufacturing. **07**
- Q.4** (a) Explain the different application area for industrial robots. **07**  
(b) Explain with neat sketch AS / RS system used in FMS. **07**
- OR**
- Q.4** (a) What is earned cycle ? explain any three earned cycles with their syntax **07**  
(b) Define robot ? Discuss the different types of sensors used in robotics. **07**
- Q.5** (a) Explain with neat diagram Retrieval - type CAPP system. **07**  
(b) List inputs of MRP and explain each of them in detail. **07**
- OR**
- Q.5** (a) Explain G00, G01 and G03 codes with appropriate example. **07**  
(b) What is CIPMS ? Explain with neat flow chart. **07**

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