Seat No.: _____   Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER–VII • EXAMINATION – WINTER 2013

Subject Code: 171903   **Date: 07-12-2013**

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)**	Classify CNC machine tools on the basis of (1) Programming methods (2) Types of controllers	**07**
	(b)	What are the different ways of defining circle, using geometry statements of APT language.	**07**
Q.2	**(a)**	What are the auxiliary statements in APT language? Explain with suitable examples any four auxiliary commands.	**07**
	(b)	Explain in detail composite part.	**07**
		OR	
	(b)	Explain in brief programmable logic controllers.	**07**
Q.3	**(a)**	State various models of CIM. Explain any one in detail.	**07**
	(b)	Describe with neat sketch AS/RS system used in FMS.	**07**
		OR	
Q.3	**(a)**	What is group technology? Differentiate between product layout and group technology layout.	**07**
	(b)	Explain OPTIZ system of coding.	**07**
Q.4	**(a)**	Differentiate between MRP_I and MRP_II	**07**
	(b)	Explain RGV manufacturing cells.	**07**
		OR	
Q.4	**(a)**	Describe computer integrated production management.	**07**
	(b)	Explain tool supply system in FMS.	**07**
Q.5	**(a)**	Classify various robots. Explain in brief economic evaluation of investment in robotic installation.	**07**
	(b)	Explain various sensors and actuators used in robots.	**07**
		OR	
Q.5	**(a)**	Explain JIT technique used in auto industries.	**07**
	(b)	Explain in brief canned cycle.	**07**

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