Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

M.E Semester-I Examination January 2010

Subject code: 710803

Subject Name: Computer Aided Production Management

Date: 25 / 01 / 2010 **Time: 12.00 – 2.30 pm**

Total Marks: 60

Instructions:

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

Q.1	**(a)**	Explain advantages and applications of Computer Aided Forecasting stating illustrations. Explain the significance of reliability of forecast and how is it measured?	**06**
	(b)	What is Group Technology? State its benefits and applications stating illustrations. What are the two hurdles in adopting GT?	**06**
Q.2	**(a)**	State the objectives of Plant Layout Design. Explain the algorithm and procedure of CRAFT stating requirements and an illustration.	**06**
	(b)	Explain the Exponential Smoothening Method of Forecasting stating algorithm and an illustration. Explain the significance of Exponential Smoothening Constant α.	**06**
		OR	
	(b)	What is Product Flow Analysis? State and explain Rank Order Cluster Algorithm stating an illustration, limitation and application.	**06**
Q.3	**(a)**	Explain the basic structure of Opitz System. Sketch and classify a component stating meaning of each digit.	**06**
	(b)	Explain Retrieval type Computer Aided Process Planning with the help of a block diagram stating algorithm and an illustration.	**06**
		OR	
Q.3	**(a)**	Explain the Regression Analysis for forecasting stating algorithm, an illustration and applications.	**06**
	(b)	What is a process plan? Prepare a process plan for a gear. State benefits and names of Computer Aided Process Planning systems.	**06**
Q.4	**(a)**	State and explain the basics of MRP. Explain inputs to MRP System and show the sample of MRP output.	**06**
	(b)	Explain the Johnson method of sequencing the N jobs through Two machines. State its algorithm and an illustration. How is the elapsed time computed?	**06**
		OR	
Q.4	**(a)**	Explain following terms of MRP stating illustrations: Allocated quantity, Lead Time, Pegging, Cycle Counting. Updating, Time fence, Lot for lot and part period.	**06**
	(b)	Explain the generic model of ERP system and its selection.	**06**
Q.5	**(a)**	Explain the Non-contact type Computer Aided Inspection stating advantages and applications.	**06**
	(b)	Explain Simulation process stating major activities and purpose.	**06**
		OR	
Q.5	**(a)**	What are the objectives of Shop Floor Control? Describe a Shop Floor Control System stating an illustration.	**06**
	(b)	Explain the application of Simulation in machine shop stating objectives and benefits.	**06**

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