Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

M. E. - SEMESTER – I • EXAMINATION – WINTER 2012

Subject code: 710803N **Date: 12-01-2013**

Subject Name: Computer Aided Production Management

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 forecasting? List the factors affecting forecast and potential benefits of forecast. **07**

(b) Discuss in detail some of the variables that affect the accuracy of the forecast. Explain MAD, Bias and MAPE. **07**

Q.2 **(a)** Explain the essential features of Computerized Relative Allocation of Facilities Technique (CRAFT). **07**

(b) The processing time in days for 6 books on 2 machines are as follows: **07**

Book	1	2	3	4	5	6
Printing time (days)	30	120	50	20	90	110
Binding time (days)	80	100	90	60	30	10

Determine the sequence of the books that minimize total elapsed time to publish all the books.

OR

(b) Explain concept of composite job in Group Technology. **07**

Q.3 **(a)** What is Group Technology? State its benefits and applications stating illustrations. **07**

(b) What are the objectives of MRP? Discuss in brief. **07**

OR

Q.3 **(a)** Explain overall structure of OPITZ coding system and its application. **07**

(b) What is ERP? Discuss its benefits in large scale industry. **07**

Q.4 **(a)** Draw the structure of a computer aided process planning system. What is the need of such system in the manufacturing industry? **07**

(b) Discuss the need and importance of shop floor data collection systems. Which are the devices used for shop floor data collection. **07**

OR

Q.4 **(a)** What are the benefits of computer aided process planning? Explain generative type of process planning. **07**

(b) Discuss the different parameters affect on the control of shop floor. **07**

Q.5 **(a)** Explain the Non-contact type Computer Aided Inspection stating advantages and applications. **07**

(b) Explain the purpose of simulation. Explain major activities involved in simulation. **07**

OR

Q.5 **(a)** Discuss the important benefits of computer aided quality control. **07**

(b) Discuss the different types of manufacturing simulations. **07**

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