

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

M.B.A. Sem-II Examination May 2011

Subject code: 820006

Subject Name: Production and Operations Management

Date: 28/05/2011

Time: 10.30 am – 01.30 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 Activities are involved in the operations Function? How does an operation interact with other functional areas? **07**
- (b) Explain the difference between make-to-stock, make-to-order and assemble-to-order products and services. Give an example of each. **07**
- Q.2** (a) A Pizza Delivery Service is considering to locate its business in your city. Enlist the factors which this service should take into consideration while locating in your city. **07**
- (b) Describe Qualitative Methods of Forecasting. **07**

OR

- (b) What is Aggregate Production Planning? Discuss the strategies in aggregate planning to manage demand & supply. **07**
- Q.3** (a) Describe the basic features of the five major process types and give an example of each in manufacturing. **07**
- (b) Explain how order Quantity is determined using the basic Economic order Quantity (EOQ) Model. **07**

OR

- Q.3** (a) Explain the term PERT & CPM with context to project management. Give the example of the projects where each would be more applicable than the other. **07**
- (b) Explain the MRP System. What are the logics used in MRP? Explain its Methodology. **07**
- Q.4** (a) Discuss the methods for Scheduling of “n” jobs on one machine and scheduling of “n” jobs on more than one machine. **07**
- (b) Explain the concept of Supply Chain Management. What are in-bound logistics & out-bound logistics with reference to Supply Chain management? **07**

OR

- Q.4 (a)** How do the single server and multiple server models compare in Queuing Theory? **07**
- (b)** A child care shop dealing with children's requirements has one cashier who handles all customers' payments. The cashier takes on an average 4 minutes per customers. Customers come to the cashier area in a random manner but on an average of 10 people per hour. The management received a large number of customer's complaints and decided to investigate the following questions: **07**
- 1) What is the average length of the waiting line to be expected under the existing conditions?
 - 2) What portion of his time is the cashier expected to be idle?
 - 3) What is the average length of time that a customer would be expected to wait to pay for his purchase?
 - 4) If it was decided that a customer would not tolerate a wait of more than 12 minutes, what is the probability that a customer would have to wait at least that length of time?
- Q.5 (a)** Identify different types of inspection and discuss their role in the Quality assurance and Control Process. What is the relationship between inspection and acceptance sampling? **07**
- (b)** Write a note on : Bench Marking **07**

OR

- Q.5 (a)** Explain JIT System and Six Sigma Process of Japanese Manufacturing. **07**
- (b)** For a lot of 4000 items, a sample of size 100 is drawn each time. The acceptance number is two for a single-sampling plan. Find Producer's Risk and Consumer's Risk at an AQL (Acceptance Quality Level) and LTPD (Lot Tolerance Percentage Defectives) of 1% & 6% defective per lot respectively. **07**
