

GUJARAT TECHNOLOGICAL UNIVERSITY**MBA - SEMESTER-II • EXAMINATION – WINTER 2013****Subject Code: 820006****Date: 31-12-2013****Subject Name: Production and Operations Management (POM)****Time: 2.30 pm – 5.30 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 do you understand by the term “operations Management”? What are the major issues in OM that faced in India? **07**
- (b) Discuss the pros and cons for a company considering a foreign location for its operations. **07**

- Q.2** (a) What are the key differences between level strategy and chase strategy in Aggregate Production Planning formulation? **07**
- (b) XYZ hospital at Pune sources 20,000 disposable syringes every year from a supplier. The OC/order is Rs.100 and CC is Re. 1/unit/yr. the price of a syringe is Rs. 5. The supplier offers a 5% discount if purchases are made in lots of 10,000 syringes or more. Determine whether the discounted model is better than EOQ model in this situation. **07**

OR

- (b) How is the continuous flow system different from intermittent flow system? **07**
- Q.3** (a) What do you understand by Operations Scheduling? What are the problems faced in the absence of proper scheduling? **07**
- (b) What are the reasons for the growing applications of Group Technology concept for layout design? **07**

OR

- Q.3** (a) How does a layout matter in office operations? **07**
- (b) Determine the optimal sequence of performing 5 jobs on 4 machines and total processing time. The machining of each job is required in the order ABCD and the process timings in hours are as follows: **07**

Job	Machine			
	A	B	C	D
1	8	3	4	7
2	9	2	5	5
3	6	4	5	8
4	12	5	1	9
5	7	1	2	3

- Q.4 (a)** Arrivals at a telephone booth are considered to be Poisson, with an average time of 10 minutes between one arrival and the next. The length of a phone call is assumed to be distributed exponentially, with mean 3 minutes. Find: **07**
1. The probability the an arrival finds that four persons are waiting for their turn
 2. The average number of persons waiting and making telephone calls; and
 3. The average length of the queue that is formed from time to time
- (b)** “Project control should always focus on the critical path”- critically examine the statement. **07**

OR

- Q.4 (a)** What is ‘line structure’ in waiting lines? List the applications of waiting line management techniques. **07**
- (b)** Find the critical path of the project and its expected duration (in days) for the below given data. **07**

Activit y	To	Tm	Tp
A	10	11	12
B	6	10	14
C	5	8	11
D	1	5	9
E	3	7	5
F	4	9	14
G	1	2	3
H	3	7	11
I	9	12	15
J	3	5	7

- Q.5 (a)** What are the benefits of ISO certification? What do you understand when a company claims that it has ISO 14000 certification? **07**
- (b)** How do the marketing and sales areas affect the product quality in a TQM system? **07**

OR

- Q.5 (a)** What do you mean by six-sigma? Explain the various analytical tools associated with six-sigma. **07**
- (b)** What is the relation between lean management and JIT manufacturing? **07**
