Seat No.: _____   Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY
MBA - SEMESTER–II • EXAMINATION – SUMMER • 2014

Subject Code: 2820006   **Date: 02-06-2014**
Subject Name: Production and Operations Management (POM)
Time: 10.30 am - 1.30 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"? **07**
What are the major issues in OM that faced in India?

(b) Discuss the pros and cons for a company considering a foreign location **07**
for its operations.

Q.2 **(a)** What are the key differences between level strategy and chase strategy **07**
in Aggregate Production Planning formulation?

(b) A manufacturing company has determined from an analysis of its **07**
accounting and production data for a certain part that, demand is 9000
units/year, its cost price is Rs. 2/unit, OC is Rs. 40/order, inventory
carrying cost is 9% of inventory value. Lead time is 8 working days,
and total working days in a year are 300. Determine:
   a. EOQ
   b. Optimum number of orders per annum
   c. Total inventory cost
   d. Reorder level
   e. Number of days stock at reorder level
   f. Length of inventory cycle

OR

(b) Define inventory and inventory management. What different cost **07**
components to be considered while controlling the inventory?

Q.3 **(a)** Discuss material handling principles and classify material handling **07**
equipments.

(b) Define the various types of plant layout in brief with suitable examples **07**
of each.

OR

Q.3 **(a)** Explain the factors affecting Retail Service Layout. **07**

(b) Determine the optimal sequence of performing 5 jobs on 4 machines **07**
and total processing time. The machining of each job is required in the
order ABCD and the process timings in hours are as follows:

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)** Write a brief note on Industrial Safety   **07**

(b) "Project control should always focus on the critical path"- critically examine the statement.   **07**

OR

Q.4 **(a)** Define SQC. Explain Acceptance sampling in detail.   **07**

(b) Find the critical path of the project and its expected duration (in days) for the below given data. What is the probability that the project will be completed in 50 days.   **07**

Activity	Node	To	Tm	Tp
A	1-2	10	11	12
B	2-3	6	10	14
C	2-4	5	8	11
D	2-5	1	5	9
E	3-6	3	7	5
F	4-6	4	9	14
G	5-7	1	2	3
H	6-7	3	7	11
I	7-8	9	12	15
J	7-9	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 production, planning and control? Explain its objectives and functions in detail.   **07**

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