Seat No.: ________ Enrolment No.______________

GUJARAT TECHNOLOGICAL UNIVERSITY

M.B.A -IInd SEMESTER–EXAMINATION – MAY/JUNE- 2012

Subject code: 2820006 **Date: 02/06/2012**

Subject Name: Production & Operations Management

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)** Explain Product layout and Process layout in detail **07**

(b) Define Kaizen & ISO. Explain tools of Total Quality Management in detail **07**

Q.2 **(a)** If you want to set up a Power Plant, what are the factors will you consider before selecting the location? **07**

(b) List down objectives of scheduling. Explain Rules of sequencing (Any three) **07**

OR

(b) A company is having processing quota of 60 items per 6 hours a day. Using the following details calculate the following **07**

1. Desired cycle time
2. Number of work stations
3. Balance the line

Element	Precedence	Performance time (In minutes)
A	-	4
B	A	6
C	B	3
D	A	2
E	C,D	3
F	E	6

Q.3 **(a)** Draw the network and calculate EST,EFT,LST,LFT and Slack timing available **07**

Activity	Time (Days)
1-2	6
1-6	5
2-3	13
2-4	4
3-5	11
4-5	6
6-7	11
5-8	3
7-8	15

(b) Explain batch production and mass production along with its advantages and disadvantages. **07**

Suggest suitable method of production for below categories and why

1. Automobile
2. Computers

OR

Q.3 **(a)** Crash the network to the minimum time possible **07**

	Activity time(in weeks)		Activity cost (in Rs.)	
Activity	Normal	Crash	Normal	Crash
1-2	30	18	2000	2480
1-3	24	17	1700	2190
1-4	44	40	2200	2400
2-4	20	16	1500	1820
3-4	21	15	1550	1730

(b) Define SQC. Explain Acceptance sampling. Briefly explain R-chart **07**

Q.4 **(a)** Nirman company is into the manufacturing of papers bags. The annual demand for paper is 8000 kgs. The ordering cost is 50Rs. The per k.g. carrying cost of paper is 0.20 Rs. The store remains open for 365 days a year. The price of paper is 30Rs. Per k.g. **07**

1. Find EOQ
2. Calculate Total cost
3. Find total number of orders to be placed during the year
4. Whether the following discount offer should be accepted?

Quantity	Price
2500+	28

5. If it takes 5 days to receive the order ,Find Re-order point

(b) Briefly explain the following **07**

1. Critical path with diagram
2. Best operating level

OR

Q.4 **(a)** Define production & operations management and explain functions/Activities of operations management **07**

(b) Write a brief note on Economic Order Quantity. Explain dependent demand and independent demand with example **07**

Q.5 **(a)** Write a brief note on Industrial Safety **07**

(b) Explain Principles of material handling and list down material handling equipments **07**

OR

Q.5 **(a)** Explain the following **07**

1. Chase strategy
2. Level Production strategy

(b) Take any service sector of your choice. When you visit for this service what are the dimensions based on which you will judge overall service quality? If you are appointed as an operations manager, how will you creatively design or innovate the service to improve the quality? **07**

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