# **GUJARAT TECHNOLOGICAL UNIVERSITY**

## M.B.A -II<sup>nd</sup> SEMESTER-EXAMINATION – MAY/JUNE- 2012

Subject code: 2820006

Date: 02/06/2012

Subject Name: Production & Operations Management	
Time: 10:30 am – 01:30 pm	To

#### **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 07 before selecting the location?
  - (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 07 the following details calculate the following
  - 1. Desired cycle time
  - 2. Number of work stations
  - 3. Balance the line

Element	Precedence	Performance
		time (In minutes)
А	-	4
В	А	6
С	В	3
D	А	2
Е	C,D	3
F	Е	6

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

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 07 disadvantages.

Suggest suitable method of production for below categories and why

- 1. Automobile
- 2. Computers

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

	Activity	time(in	Activity cost (in Rs.)	
	weeks)			
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

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. 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? $\frac{Quantity Price}{2500+28}$	07
		5 If it takes 5 days to receive the order Find Re-order point	
	(h)	Briefly explain the following	07
	(0)	1 Critical path with diagram	07
		2 Best operating level	
		2. Dest operating level	
0.4	$(\cdot)$	Define an desting 8 constitute and contain fractions (A sticking	07
Q.4	(a)	Define production & operations management and explain functions/Activities	07
	<b>(L</b> )	or operations management	07
	(D)	and independent demand with example	07
0.5	<b>(a)</b>	Write a brief note on Industrial Safety	07
Q.C	(b)	Explain Principles of material handling and list down material handling equipments	07 07
		OR	
Q.5	(a)	Explain the following	07
-		1. Chase strategy	
		2. Level Production strategy	
	( <b>b</b> )	Take any service sector of your choice. When you visit for this service what	07
	()	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?	
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