

GUJARAT TECHNOLOGICAL UNIVERSITY
MBA (PM) – SEMESTER – 10 - EXAMINATION – SUMMER - 2017

Subject Code: 4210102**Date: 10/05/2017****Subject Name: Production Management****Time: 10.30 am to 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)** Define Operations Management. Where OM stands in the organization. **07**
(b) “Responsibility for process performance and quality is shared by all the employees of an organization.” Discuss. **07**

- Q.2 (a)** Define the various types of plant layout in brief with suitable examples of each. **07**
(b) What is Transformation Process: Explain the Transformation Process in a Bank. **07**

OR

- (b)** Explain the factors affecting Retail Service Layout. **07**

- Q.3 (a)** Write a short note on contribution by Edwards Deming in field of quality management. **07**
(b) What do you mean by “Kaizen”? What are the key features of Kaizen? **07**

OR

- Q.3 (a)** What is Outsourcing? Why company outsource? **07**
(b) Write a short note on Six Sigma. **07**

- Q.4 (a)** Find the sequence that minimizes the total time required in performing the following jobs on three machines in the order I – II - III. Also calculate idle time of machine II and machine III. Processing times (in hours) are given as under: **07**

Jobs	A	B	C	D	E	F	G
Machine I	3	8	7	4	9	8	7
Machine II	4	3	2	5	1	4	3
Machine III	6	7	5	11	5	6	12

- (b)** For the following project, draw the network diagram, show the critical path and crash the project by three weeks. **07**

Activity	Predecessor	Required Time (weeks)		Cost	
		Normal	Crash	Normal	Crash
A	-	4	2	10000	11000
B	A	3	2	6000	9000
C	A	2	1	4000	6000
D	B	5	3	14000	18000
E	B,C	1	1	9000	9000
F	C	3	2	7000	8000
G	E,F	4	2	13000	25000
H	D,E	4	1	11000	18000
I	H,G	6	5	20000	29000

OR

- Q.4 (a)** The TLB Yogurt Company must be able to make 600 party cakes in a 40 hour week. Use the following information to draw and label a precedence diagram, compute cycle time, compute theoretical minimum number of workstations, balance the assemble line and calculate its efficiency. **07**

Work Element	Precedence	Performance Time (Min)
A	-	1
B	A	2
C	B	2
D	A,E	4
E	-	3
F	C,D	4

- (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	T ₀	T _m	T _p
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	5	7
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 do you understand by Quality? Discuss various quality dimensions for a Company that manufacture mobile handset. **07**
- (b) As a project manager of a large petro-chemicals refinery, how will you select the appropriate location of the plant? Discuss the various factors affecting your decision. **07**

OR

- Q.5** (a) On which quality management principles, ISO 9000 certification is given to a company? **07**
- (b) Discuss the pros and cons for a company considering a foreign location for its operations. **07**
