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(Printed Pages 7)

Roll No. \_\_\_\_\_

## MS-3085

M.B.A. (Second Semester) (Full Time)

Examination, 2015

PRODUCTION & OPERATIONS MANAGEMENT

(CP-206)

***Time Allowed : Three Hours ] [ Maximum Marks : 70***

Note : Attempt five questions in all. Question no.1 is compulsory. Select one question from each Unit.

1. (a) Write a note on strategic role of operations management. 5 × 6 = 30
- (b) Under what condition and situation, as a production manager you would prefer product focused production system or process focused production system?
- (c) Three potential locations for a plant are mentioned below along with their cost

**P.T.O.**

(2)

structures. Product is expected to sell at Rs. 130 per unit. Find the most economical location for an expected volume of 6,000 units per year. What is the expected profit at this site.

Potential Location	Fixed cost Per year (Rs)	Variable cost per unit (Rs)
Location A	1,50,000	75
Location B	2,00,000	50
Location C	4,00,000	25

- (d) What is the importance of Ergonomics in the organizations to day?
- (c) Explain "Fishbone "Diagram of Quality improvement.
- (f) A firm uses 250 gallons of a certain gel per year at a purchase price of Rs. 2.50

(7)

- 9. What are the principles of TQM? Explain the process of implementing TQM using a flow chart: 10

(4)

Year	Shipments (tonnes)
1	20
2	30
3	60
4	100
5	80
6	70
7	120
8	140
9	140
10	180
11	190

Unit - II

4. What do you understand by MRP II? How different it is from MRPI? Explain. 10
5. (a) Briefly discuss project and project management. 5  
(b) An organization has four suppliers. The company's computer has recognized a low stock situation and must issue pur-

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(5)

chase recommendation to the buyer on the basis of the criteria given. What rank will the computer give to the respective vendors? 5

Criteria	Importance Rating(1-10)	Vendors			
		A	B	C	D
1. Price	6	0.4	0.4	0.6	0.7
2. Field Service	3	0.7	0.7	0.3	0.2
3. Delivery Reliability	4	0.8	0.9	0.2	0.3
4. Delivery time	1	0.5	0.3	0.2	0.2
5. Ease of Maintenance	8	0.6	0.4	0.3	0.3
6. Adoptability to computer	2	0.5	0.6	0.0	0.9
7. Product life	3	0.5	0.4	0.3	0.3

Unit-III

6. Discuss "Work Measurement" and its process in detail. 10
7. (a) Explain cellular Manufacturing layout which types of organizations are most suitable for its adoption. 5

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(6)

- (b) Elaborate on Behavioural dimension of effective job desigs. 5

Unit-IV

8. In the following table, the length of 10 samples of 5 rods are given. Construct the relevant Control charts, given that  $A_2=0.58$ ,  $D_3=0$  and  $D_4=2.11$  for  $n=5$  10

Sample	Length in "cm"				
	1	2	3	4	5
1	6.2	6.8	7.2	6.0	5.8
2	6.8	6.0	7.4	6.8	6.6
3	4.8	5.2	5.8	6.4	6.8
4.	6.6	6.8	6.4	6.2	6.0
5.	3.6	6.2	7.2	7.4	7.2
6.	6.8	6.6	4.2	4.8	4.0
7.	8.8	7.2	7.8	3.8	5.6
8.	4.6	4.8	6.6	6.8	6.0
9.	6.8	7.2	6.6	6.4	6.0
10.	6.6	4.4	5.2	6.2	6.6

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(3)

per gallon. The cost associated with placing an order is Rs.8 the holding stock (on annual basis) is 20% of the purchase cost per unit. Assuming that the basic conditions of the EOQ model apply, calculate:

- (i) The economic order quantity  
(ii) The total annual cost for the same.

Unit-I

2. Explain the detail the historical evolution of Production and operations Management. 10
3. (a) Which type of service process technology is required for a charter Travel Service? Explain with reasons. 5  
(b) Use the Least Square method to develop a linear trend equation for the data given below. State the equation and forecast the trend for the 16<sup>th</sup> year. 5

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