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Subject Code:- BMBA0206

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NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA
(An Autonomous Institute Affiliated to AKTU, Lucknow)

MBA

SEM: II - THEORY EXAMINATION (20.....- 20.....)

Subject: Operations and Supply Chain Management

Time: 3 Hours

Max. Marks: 100

General Instructions:

IMP: Verify that you have received the question paper with the correct course, code, branch etc.

1. This Question paper comprises of **three Sections -A, B, & C**. It consists of Multiple Choice Questions (MCQ's) & Subjective type questions.
2. Maximum marks for each question are indicated on right -hand side of each question.
3. Illustrate your answers with neat sketches wherever necessary.
4. Assume suitable data if necessary.
5. Preferably, write the answers in sequential order.
6. No sheet should be left blank. Any written material after a blank sheet will not be evaluated/checked.

SECTION-A

20

1. Attempt all parts:-

- 1-a. Facility location decisions (CO1,K2) 1
- (a) Do not affect other capacity decisions
 - (b) Are intermediate range capacity decisions
 - (c) Are not affected by other existing capacities
 - (d) None of the above
- 1-b. When workstations are arranged according to the progressive steps by which the product produced it is called a (CO1,K3) 1
- (a) Functional layout
 - (b) Product layout
 - (c) Fixed position layout
 - (d) Job shop layout
- 1-c. Distinct characteristic of services is _____. (CO2,K2) 1
- (a) Intangibility
 - (b) Inseparability
 - (c) Variability
 - (d) Perishability
- 1-d. One way to increase reliability is to (CO2,K3) 1
- (a) improve component design
 - (b) increase the number of service stations

- (c) increase mean repair time
(d) none of these
- 1-e. Which one of the following is not a basic option for altering demand? (CO3,K3) 1
(a) subcontracting
(b) pricing
(c) promotion
(d) none of these
- 1-f. ABC analysis depends on the (CO3,K3) 1
(a) Quality of materials
(b) Cost of materials
(c) Annual consumption value of materials
(d) none of these
- 1-g. Small changes in consumer demand can result in large variations in orders placed because of the: (CO4,K3) 1
(a) Supply chain
(b) Safety stock requirement
(c) Lead time effect
(d) Bullwhip effect
- 1-h. A control chart used to monitor the process mean is the: (CO5,K4) 1
(a) x-bar chart
(b) p-chart
(c) R-chart
(d) none of these
- 1-i. What is the purpose of using a “weighted moving average”? (CO4,K2) 1
(a) To smooth out seasonal variations
(b) To use only the most recent observation
(c) To give more importance to recent data points
(d) Break-even analysis
- 1-j. The "Control" phase of DMAIC is intended to ensure that: (CO5,K4) 1
(a) Data analysis is overseen
(b) Inputs are closely monitored
(c) Improvements are sustained
(d) None of the above

2. Attempt all parts:-

- 2.a. Define work study. (CO1,K2) 2
- 2.b. Explain empathy.(CO2,K3) 2
- 2.c. Distinguish between routing and loading.(CO3,K3) 2
- 2.d. Explain bullwhip effect. (CO4,K3) 2

2.e. Define Pareto chart. (CO5,K3) 2

SECTION-B 30

3. Answer any five of the following:-

3-a. Distinguish between product layout and process layout. (CO1,K3) 6

3-b. Define productivity. Discuss the important factors affecting productivity. (CO1,K3) 6

3-c. Define service. Distinguish between product and service. (CO2,K3) 6

3-d. Briefly explain role of services in the Indian economy.(CO2,K4) 6

3.e. Differentiate between holding cost and inventory cost. (CO3,K4) 6

3.f. Describe the five supply chain drivers.(CO4,K4) 6

3.g. Describe the importance of six sigma. (CO5,K4) 6

SECTION-C 50

4. Answer any one of the following:-

4-a. Explain how the method study and work measurement techniques be effectively implemented to optimize processes and improve efficiency. (CO1,K4) 10

4-b. Explain the factors to be considered while selecting location choice for a facility.(CO1,K4) 10

5. Answer any one of the following:-

5-a. Describe important gaps identified in gap theory of service quality. (CO2,K4) 10

5-b. Explain SERVQUAL model. Discuss the importance of SERVQUAL model in measuring service quality.(CO2,K4) 10

6. Answer any one of the following:-

6-a. The John equipment company estimates its carrying cost at 15% and its ordering cost at Rs. 90 per order. The estimated annual requirement is 78,000 units at a price of Rs. 4 per unit. 10

(i). What is the most economical no. of units to order?

(ii). No. of orders to be placed in a year.

iii). About how often will an order need to be placed?

(CO3,K4)

6-b. Distinguish between aggregate planning and master production schedule. (CO3,K3) 10

7. Answer any one of the following:-

7-a. Given the weekly demand data, what are the exponential smoothing forecasts for Periods 2-6 using A) $\alpha = 0.40$ Assume $F_1 = D_1$ 10

WEEK	DEMAND
1	590
2	625
3	600
4	720

5	700
6	??

(CO4,K4)

- 7-b. Briefly describe inbound logistics activities and out bound logistics activities with suitable examples. (CO4,K3) 10
8. Answer any one of the following:-
- 8-a. Discuss different types of control charts. Explain why statistical process control uses control charts. (CO5,K4) 10
- 8-b. Discuss any five new tools of quality control with examples.(CO5,K4) 10

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