Printed Page:- 04 **Subject Code:- BMBA0206**

Roll. No:

NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA

(An Autonomous Institute Affiliated to AKTU, Lucknow)

MBA

SEM: II - THEORY EXAMINATION (2023 - 2024)

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. Process layout is known as (CO1) 1

(a) Plant layout

(b) Functional layout

(c) Job layout

(d) Production layout

1-b. Which of the following is not one of the 3 Rs? (CO1) 1

(a) reuse

(b) reduce

(c) reposition

(d) none of these

1-c. Services are typically produced and consumed simultaneously. This is an example of the _____characteristic of services.(CO2) 1

(a) Intangibility

(b) Inseparability

(c) Variability

(d) Perishability

1-d. Which of the following is typically the largest of all inventory costs? (CO2) 1

(a) shortage cost

(b) purchase cost

(c) holding cost

(d) none of these

1-e. Improving quality through small, incremental improvements is a characteristics of what type of quality management system? (CO3) 1

(a) Just in time

(b) Six Sigma

(c) Total Quality Management

(d) Kaizen

1-f. Procurement cycle time is time consumed for (CO3) 1

(a) Receiving of raw material

(b) Inspection of various raw material

(c) Inspection of purchased components parts

(d) all of the above

1-g. The two types of decisions that are relevant to supply chain management are: (CO4) 1

(a) Tactical and operational

(b) Short- and long-term

(c) Location and layout

(d) Domestic and international

1-h. It is especially the case for small businesses that closer interactions and increased agility make _____ relatively more attractive.(CO4) 1

(a) Domestic suppliers

(b) Centralized purchasing

(c) Global suppliers

(d) None of the above

1-i. A tool that depicts process variation graphically is a(n) (CO5) 1

(a) Affinity diagram

(b) Checklist

(c) Control chart

(d) Flowchart

1-j. The "Control" phase of DMAIC is intended to ensure that: (CO5) 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) 2

2.b. Define service reliability.(CO2) 2

2.c.	Explain about ABC classification.(CO3)	2
2.d.	Explain different flows involved in supply chain.(CO4)	2
2.e.	Define control charts. (CO5)	2

SECTION-B 30

3. Answer any five of the following:-

3-a.	Last week employees at Bluegill produced 46 chairs after working a total of 200 hours. Of the 46 chairs produced, 12 were damaged due to a problem with the new sanding machine. The damaged chairs can be discounted and sold for Rs. 25 each. The undamaged chairs are sold to a department store retail chain for Rs. 70 each. Compute the labor productivity ratio for last week. If labor productivity was Rs. 15 in sales per hour the previous week, identify the change in labor productivity. (CO1)	6
3-b.	Distinguish between product layout and process layout. (CO1)	6
3-c.	Define service quality. Describe five dimensions of service quality. (CO2)	6
3-d.	Describe the classification of services.(CO2)	6
3.e.	Define inventory. Discuss the objectives of inventory management. (CO3)	6
3.f.	Discuss the importance of supply chain drivers.(CO4)	6
3.g.	Define six sigma. Discuss objectives of six sigma.(CO5)	6

SECTION-C 50

4. Answer any one of the following:-

4-a.	Define location decisions. Discuss the importance of location of a manufacturing company.(CO1)	10
4-b.	Differentiate between production and operations management. (CO1)	10

5. Answer any one of the following:-

5-a.	Explain SERVQUAL model. Discuss the importance of SERVQUAL model in measuring service quality.(CO2)	10
5-b.	Critically analyze gap model of service quality. (CO2)	10

6. Answer any one of the following:-

6-a.	Explain EOQ model with diagram. (CO3)	10
6-b.	Distinguish between aggregate planning and master production schedule. (CO3)	10

7. Answer any one of the following:-

7-a.	Explain the concept of bull whip effect. Outline the effects of bullwhip on the supply chain performance. (CO4)	10
7-b.	Monthly sales data for a product is given : January 2024: 100 units February 2024: 120 units March 2024: 115 units April 2024: 130 units May 2024: 135 units	10

Assuming an initial smoothed value of 100 units and a smoothing factor (α) of 0.3, Calculate the forecasted value of June 2024
(CO4)

8. Answer any <u>one</u> of the following:-

8-a.	Describe in detail seven tools of quality control with suitable examples. (CO5)	10
8-b.	Briefly explain 14 Deming's principle with suitable examples. (CO5)	10