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NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA

(An Autonomous Institute Affiliated to AKTU, Lucknow)

MBA

SEM: IV - THEORY EXAMINATION (2023 - 2024)

Subject: Supply Chain Analytics

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. The primary goal of a supply chain is to.(CO1) 1
- (a) Maximizing costs
 - (b) Minimizing customer value
 - (c) Maximizing customer value
 - (d) Minimizing efficiency
- 1-b. Select which of the following is a key component of the supply chain.(CO1) 1
- (a) Consumers
 - (b) Employees
 - (c) Manufacturers
 - (d) Investors
- 1-c. Identify the driver of supply chain which involves adopting automation and robotics to streamline processes.(CO2) 1
- (a) Customer Expectations
 - (b) Globalization
 - (c) Technology Advancements
 - (d) Regulatory Compliance
- 1-d. Out of given functions select which function of the supply chain involves managing the transportation of products.(CO2) 1
- (a) Procurement

- (b) Production
 - (c) Logistics
 - (d) Inventory Management
- 1-e. The motive for holding inventory involves coping with sudden price fluctuations is known as.(CO3) 1
- (a) Transaction motive
 - (b) Precautionary motive
 - (c) Speculation motive
 - (d) Cost-saving motive
- 1-f. The risk associated with excessive inventory is.(CO3) 1
- (a) Increased profitability
 - (b) Reduced interest burden
 - (c) Low liquidity
 - (d) Improved efficiency
- 1-g. The primary goal of Lean Management is to.(CO4) 1
- (a) Increase production speed
 - (b) Eliminate waste
 - (c) Reduce employee count
 - (d) Enhance marketing strategies
- 1-h. Kaizen is a Japanese term that means.(CO4) 1
- (a) Large-scale change
 - (b) Continuous improvement
 - (c) Quick fix
 - (d) Total overhaul
- 1-i. Strong supplier relationships ensure.(CO5) 1
- (a) Inconsistent quality of materials
 - (b) Better quality control processes and standards
 - (c) Increased production costs
 - (d) Reduced communication with suppliers
- 1-j. Cost efficiency through supplier relationships is achieved by:(CO5) 1
- (a) Isolating supplier management
 - (b) Better pricing agreements and discounts
 - (c) Reducing communication with suppliers
 - (d) Increasing inventory levels

2. Attempt all parts:-

- 2.a. Define the term "supply chain."(CO1) 2
- 2.b. List few example of seasonal inventory.(CO2) 2
- 2.c. Discuss the importance of proximity to markets in case of location decision.(CO3) 2

- 2.d. State the primary goal of lean management.(CO4) 2
- 2.e. Describe the role of predictive maintenance in supply chain management.(CO5) 2

SECTION-B

30

3. Answer any five of the following:-

- 3-a. Explain the importance of supplier management in the supply chain process.(CO1) 6
- 3-b. Discuss how globalization impacts supply chain management.(CO1) 6
- 3-c. Explain the significance of maintaining an adequate level of finished goods inventory in a retail business.(CO2) 6
- 3-d. Outline the concept of Economic Order Quantity (EOQ) and explain how it helps in minimizing total inventory costs.(CO2) 6
- 3.e. Explain the concept of the coefficient of variation (CV). Discuss its usefulness in comparing the variability of datasets.(CO3) 6
- 3.f. Describe the steps involved in the PDCA cycle and their importance in continuous improvement.(CO4) 6
- 3.g. Explain the potential risks and benefits of multi-sourcing in supply chain management.(CO5) 6

SECTION-C

50

4. Answer any one of the following:-

- 4-a. ABC Electronics is facing issues with inventory management, resulting in either stockouts or excessive holding costs. As a supply chain consultant, propose a strategy to optimize their inventory levels and improve overall efficiency.(CO1) 10
- 4-b. Discuss the importance of strategic fit in aligning supply chain strategies with overall business objectives with suitable examples.(CO1) 10

5. Answer any one of the following:-

- 5-a. A car manufacturing plant faces delays in its assembly line due to inefficiencies in managing WIP inventory. Propose a solution to streamline WIP inventory management and reduce production delays.(CO2) 10
- 5-b. Discuss the concept of Just-In-Case (JIC) inventory management. Compare and contrast JIC with Just-In-Time (JIT) inventory management, highlighting the advantages and disadvantages of each approach.(CO2) 10

6. Answer any one of the following:-

- 6-a. Explain the steps involved in the simplex method for solving a Linear Programming Problem. Illustrate with a numerical example.(CO3) 10
- 6-b. Discuss the factors affecting facility location decisions. Provide examples to illustrate each factor.(CO3) 10

7. Answer any one of the following:-

- 7-a. A retail company has received complaints about long checkout times. How can lean management and the 5S methodology be used to improve the checkout process?(CO4) 10

- 7-b. Discuss the relationship between TQM and customer satisfaction with examples from any industry of your choice.(CO4) 10
8. Answer any one of the following:-
- 8-a. A company experienced significant supply chain disruption due to a natural disaster affecting their main supplier. Discuss how SRM practices could have mitigated this risk and suggest measures to prevent future disruptions.(CO5) 10
- 8-b. Discuss the role of SRM in fostering innovation and product development with real-world examples.(CO5) 10

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