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**NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, MCA INSTITUTE,
GREATER NOIDA**

(An Autonomous Institute Affiliated to AKTU, Lucknow)

PGDM

TRIMESTER: I - THEORY EXAMINATION (20 -20)

Subject: Supply chain Planning and Demand Forecasting

Time: 2.5 Hours

Max. Marks: 60

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

15

1. Attempt all parts:-

- | | | |
|------|--|---|
| 1-a. | What does Inventory Management involve in Supply Chain Planning? (CO1, K1) | 1 |
| | (a) Forecasting future customer demand | |
| | (b) Coordinating with suppliers | |
| | (c) Scheduling production runs | |
| | (d) Managing stock levels to balance supply and demand | |
| 1-b. | What is the primary focus of the Planning Stage in developing a supply chain strategy? (CO2, K1) | 1 |
| | (a) Execute the strategy and adjust as needed | |
| | (b) Evaluate performance and make necessary adjustments | |
| | (c) Establish goals and assess current capabilities | |
| | (d) Optimize warehousing operations | |
| 1-c. | What does supply chain agility refer to? (CO3, K1) | 1 |
| | (a) The ability to reduce costs in supply chain operations. | |
| | (b) The ability to quickly adapt to changes in demand and supply conditions. | |
| | (c) The ability to increase the speed of production. | |
| | (d) The ability to expand the supply chain network. | |
| 1-d. | How can demand forecasting be simply explained? (CO4, K1) | 1 |
| | (a) Predicting the exact number of future customers without any error. | |

- (b) Ignoring future demand and focusing only on current sales.
- (c) Reducing production costs by not using past data.
- (d) Predicting how many students will attend a school event to ensure there are enough seats and snacks.

1-e. Which of the following tools is commonly used in intercompany integration to manage end-to-end supply chain activities? (CO5, K1) 1

- (a) ERP Systems
- (b) Marketing Software
- (c) Social Media Platforms
- (d) Content Management Systems

2. Attempt all parts:-

2.a. What is the purpose of Production Planning within Supply Chain Planning? (CO1, K2) 2

2.b. Identify and Describe Key Process Drivers. Include an example for each driver that illustrates its role in supply chain management. (CO2, K3) 2

2.c. How does Amazon India leverage supply chain agility to gain a competitive advantage? (CO3, K3) 2

2.d. Explain how demand forecasting assists BigBasket in managing its fresh produce inventory. What are the benefits and potential drawbacks of this approach? (CO4, K3) 2

2.e. How does Reliance Industries use intercompany integration in their supply chain operations? (CO5, K3) 2

SECTION-B 15

3. Answer any three of the following:-

3-a. What analogy can be used to describe the process of Supply Chain Planning? (CO1, K2) 5

3-b. What key activities are involved in the Planning Stage of developing a supply chain strategy, and how does ITC Limited exemplify this stage? (CO2, K3) 5

3.c. How does market condition variability impact supply chain management? (CO3, K3) 5

3.d. How does exponential smoothing help in forecasting by giving more weight to recent data, and what effect does this have on predictions? (CO4, K3) 5

3.e. What are the advantages of real-time data sharing in supply chain management, and how does Walmart utilize electronic data interchange (EDI) to achieve this? (CO5, K3) 5

SECTION-C 30

4. Answer any one of the following:-

4-a. What does "Predictive Analytics" involve in supply chain management? (CO1, K2) 6

4-b. How does Maruti Suzuki's logistics process illustrate the concept of logistics? 6

(CO1, K2)

5. Answer any one of the following:-

- 5-a. Discuss the significance of assessing current performance and identifying areas for improvement. Outline the process of creating a plan to address identified issues and achieve objectives. Consider Amazon India's example and propose another strategy for a different company. (CO2, K5) 6
- 5-b. What are the key impacts of efficiency and cost reduction on supply chain management, and how does a company like Larsen & Toubro optimize its supply chain to reduce project costs? (CO2, K3) 6

6. Answer any one of the following:-

- 6-a. Choose any well-known company (preferably from India) and share its supply chain practices. Focus on how the company adapts to customer demand and market conditions. (CO3, K4) 6
- 6-b. Describe how Continuous Improvement is applied in the context of Lean Thinking. (CO3, K3) 6

7. Answer any one of the following:-

- 7-a. What are the key differences between quantitative and qualitative methods in demand forecasting? Describe the basis for each method and how they are applied in forecasting. (CO4, K4) 6
- 7-b. Create a table comparing quantitative and qualitative demand forecasting methods. (CO4, K5) 6

8. Answer any one of the following:-

- 8-a. In detail, explaining what intercompany integration is. Explain using a simple analogy. (CO5, K3) 6
- 8-b. Explain what internal integration means within an organization in your own words. (CO5, K3) 6