

## **MBSC 3003 R**

M.B.A. DEGREE EXAMINATION, MAY 2026,

Third Semester

Operations and Supply Chain Management

**SUPPLY CHAIN MANAGEMENT**

(2023 Regulations)

Time : Three hours

Maximum : 75 marks

PART A — (5 × 4 = 20 marks)

Answer any FIVE questions.

1. How would you apply the concept of strategic fit to a fast-moving consumer goods (FMCG) company during a product launch?
2. Compare and contrast the role of information and inventory as supply chain drivers in a highly dynamic market.
3. Outline how different distribution design options impact delivery lead time and customer satisfaction in urban vs. rural areas.

4. Construct the impact of network design decisions on the cost and flexibility of a global supply chain.
5. Apply the moving average method to forecast the next quarter's demand for a seasonal product with fluctuating sales.
6. Illustrate the effect of inaccurate demand forecasting on inventory costs and service levels in a retail supply chain.
7. Explain how would you choose an appropriate mode of transportation for perishable goods considering cost and time?
8. Apply the concept of vendor-managed inventory (VMI) to improve supply chain coordination for a supermarket chain.

PART B — ( $5 \times 8 = 40$  marks)

Answer any FIVE questions.

9. Evaluate the effectiveness of a company's pricing strategy in balancing supply chain efficiency and customer responsiveness.
10. Explain the impact of network design decisions on the cost and flexibility of a global supply chain.

11. Dramatize the use of IT tools enhances the accuracy and responsiveness of demand forecasting in manufacturing.
12. Create a replenishment policy for a company facing frequent stockouts due to high demand uncertainty.
13. Evaluate different supplier scoring models and suggest the most suitable for a pharmaceutical company.
14. Design a tailored transportation strategy for a fashion brand managing both fast and slow-moving product lines.
15. Evaluate the effectiveness of collaborative planning, forecasting and replenishment (CPFR) in reducing excess inventory.
16. Propose a coordination strategy for a multi-tier supply chain dealing with seasonal demand variability and limited visibility.

PART C — (1 × 15 = 15 marks)

Answer the following

17. Case Study (Compulsory) :

Global Trade Logistics Inc. (GTLI) is a logistics company specializing in ocean transportation. It operates a fleet of container ships that transport goods between Asia, Europe, and North America. With the increase in global trade and demand for efficient shipping solutions, GTLI has expanded its operations over the past decade, navigating various challenges such as port congestion, regulatory compliance, and environmental concerns. In 2023, GTLI secured a significant contract with a major electronics manufacturer based in china. The contract involved transporting large volumes of electronic components to distribution centres in the United States and Europe. However, the company faced several challenges during this process :

Port Congestion :

Increased demand for shipping services led to congestion at major ports, resulting in delayed arrivals and departures. This impacted GTLI's ability to meet delivery schedules.

Regulatory Compliance :

Changes in international shipping regulations required GTLI to adapt its practices to comply with new safety and environmental standards, necessitating additional training and investments.

Sustainability Initiatives :

In response to growing environmental concerns, GTLI aimed to implement more sustainable practices, such as reducing emissions and optimizing fuel consumption, but faced challenges in balancing costs and environmental goals.

Technological Integration :

GTLI explored implementing advanced tracking and management systems to improve visibility in the supply chain and enhance customer service, but needed to evaluate the associated costs and training requirements.

**Questions :**

- (a) Discuss the implications of regulatory compliance on ocean transportation operations. What steps can GTLI take to ensure it meets both current and future regulations effectively?
  - (b) Evaluate the challenges and benefits of implementing sustainability initiatives in ocean transportation.
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