

Roll No



**PRESIDENCY UNIVERSITY  
BENGALURU**

**SET-B**

**SCHOOL OF MANAGEMENT  
END TERM EXAMINATION – MAY/JUNE 2024**

**Semester :** Semester VI -2021

**Course Code :** BBE3002

**Course Name :** - Supply Chain Modelling and Design

**Program :** BBA

**Date:** May 29, 2024

**Time:** 9:30 AM - 12:30 PM

**Max Marks :** 100

**Weightage :** 50%

**Instructions:**

- (i) Read all questions carefully and answer accordingly.
- (ii) Question paper consists of 3 parts.
- (iii) Scientific and non-programmable calculator are permitted.
- (iv) Do not write any information on the question paper other than Roll Number.

**PART - A**

**ANSWER ANY 5 QUESTIONS**

**5 X 2 = 10M**

1. What is the purpose of supply chain analytics?  
(CO1) [Knowledge]
2. Write notes on Global Supply Chain?  
(CO2) [Knowledge]
3. What is Lead Time?  
(CO3) [Knowledge]
4. Bring out the differences between MRP I and MRP II?  
(CO4) [Knowledge]
5. What is the main aim of supply chain analytics?  
(CO1) [Knowledge]
6. What are the implications of supply chain software on traditional business models, particularly in terms of reshaping relationships between suppliers, manufacturers, distributors, and customers?  
(CO2) [Knowledge]
7. What is Inventory Replenishment?  
(CO3) [Knowledge]

**PART - B**

**ANSWER ANY 5 QUESTIONS**

**5 X 10 = 50M**

8. SCOR Model –supply chain operations reference model is a leading supply chain framework. Explain its components and the role of the components help SCM modelling.  
(CO1) [Comprehension]

9. Supply chain modeling is a tool to help managers make better decisions about how to run their supply chains. Explain the process of supply chain modelling with an example. (CO2) [Comprehension]
10. Traditional inventory models focus on centralized warehousing. However, the explosion of e-commerce and the rise of omnichannel retailing, where customers expect seamless buying experiences across online and physical stores, require a rethinking of inventory strategies. How can companies adapt their inventory management systems to cater to this evolving retail landscape? (CO3) [Comprehension]
11. With advancements in technologies like blockchain and microgrids, how can DRP leverage these to create a more decentralized and resilient distribution network, potentially reducing reliance on traditional centralized generation? (CO4) [Comprehension]
12. ABC company wants to automate its supply chain process. Right at sourcing from perfect supplier and reaching out to the prospective customer. So, explain briefly about the benefits of supply chain modelling in automating the complete system? Also, Explain the process of adaptation of Supply Chain Modelling Systems in an organization. (CO1) [Comprehension]
13. How can supply chain modeling help companies balance conflicting objectives such as cost minimization, service level optimization, and inventory reduction, while still meeting customer demands and maintaining competitive advantage? (CO2) [Comprehension]
14. BoMs define product structures, and multi-location warehouses introduce logistical complexity. How can companies effectively integrate BoM data with multi-location inventory management systems to ensure efficient production and order fulfillment? (CO3) [Comprehension]

## PART - C

**ANSWER ANY 2 QUESTIONS**

**2 X 20 = 40M**

15. Pharmaceutical companies operate in a highly regulated environment with stringent quality and compliance requirements. Efficient supply chain management is critical for delivering safe and effective products to patients while meeting regulatory standards. Manual processes, legacy systems, and siloed data can hinder operational efficiency and increase the risk of errors and non-compliance. To address these challenges, PharmaCo embarked on a journey to automate its supply chain processes.
- Challenges Faced by PharmaCo:
1. Manual Processes: PharmaCo relied heavily on manual processes for inventory management, order processing, and distribution, leading to inefficiencies, errors, and delays.
  2. Compliance Risks: The pharmaceutical industry is subject to strict regulatory requirements, including Good Manufacturing Practices (GMP), serialization, and traceability standards. Manual processes increased the risk of non-compliance and regulatory penalties.
  3. Lack of Visibility: Limited visibility into inventory levels, demand forecasts, and supply chain performance made it difficult for PharmaCo to make informed decisions and respond effectively to market demands.
  4. Increasing Demand: As PharmaCo's product portfolio expanded and demand grew, traditional supply chain processes struggled to keep pace, resulting in supply shortages and customer dissatisfaction.
    - i) Explain, how by adopting supply chain software will enhance the efficiency of the existing challenges of the pharma companies and
    - ii) What do you mean by Supply Chain Modelling Systems?

(CO1) [Application]

16. ERP is the linkage between the Supplier, Manufacturer, and Customer and involves the process of planning, implementing and controlling supply chain operations. Explain using an example of SAP software how ERP helps a computer manufacturer in his SCM.

(CO2) [Application]

17. Renold Corporation Inc, a leading player in the electronics industry, faced significant disruptions in its global supply chain due to a series of unforeseen events, including geopolitical tensions, cyber-attacks on key suppliers, and port closures resulting from natural disasters. These disruptions threatened to impact production schedules, customer satisfaction, and ultimately, profitability.

Mitigating Risks through Insourcing and Back-shoring: Recognizing the vulnerabilities of its extended supply chain, Renold Corporation Inc embarked on a strategic shift towards insourcing and back-shoring critical components and manufacturing processes. By bringing certain operations closer to home, XYZ aimed to reduce dependence on distant suppliers and mitigate risks associated with geopolitical instability and transportation failures.

1) Explain how the company can mitigate the supply chain risks.

2) Suggest some measures to improve the supply chain efficiency of the company.

(CO4) [Application]