

SRM VALLIAMMAI ENGINEERING COLLEGE

(An Autonomous Institution)

SRM Nagar, Kattankulathur – 603 203

DEPARTMENT OF MANAGEMENT STUDIES

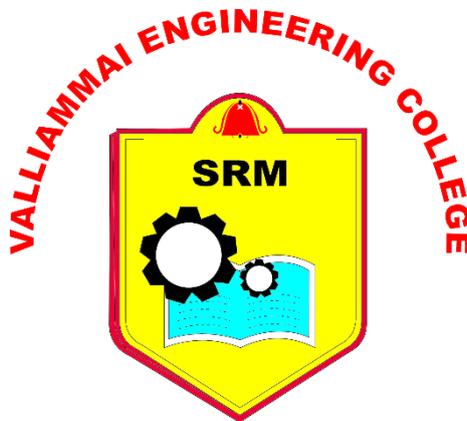
QUESTION BANK

III SEMESTER

PBA506 – SUPPLY CHAIN MANAGEMENT

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Prepared by

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UNIT – I – INTRODUCTION

SYLLABUS: Supply Chain – Fundamentals – Evolution, Role in Economy – Importance – Decision Phases – Supplier – Manufacturer – Customer Chain – Enablers / Drivers of Supply Chain Performance. Supply Chain Strategy – Supply Chain Performance Measures.

PART- A				
S.NO	QUESTIONS	COMPETENCE	BT LEVEL	CO LEVEL
1.	Define a supply chain.	Remembering	BTL 1	CO1
2.	List the decision phases in a supply chain.	Remembering	BTL 1	CO1
3.	What are the key objectives of a supply chain?	Understanding	BTL 2	CO1
4.	What is the role of supply chain in the economy.	Understanding	BTL 2	CO1
5.	Define supply chain surplus.	Remembering	BTL 1	CO1
6.	What are the key enablers of supply chain performance?	Understanding	BTL 2	CO1
7.	List the components of a supply chain.	Remembering	BTL 1	CO1
8.	What is the importance of supply chain in business.	Understanding	BTL 2	CO1
9.	Define cycle view and push/pull view of supply chain.	Remembering	BTL 1	CO1
10.	What is the effect of supply chain on customer satisfaction?	Understanding	BTL 2	CO1
11.	What is meant by responsiveness in supply chain?	Understanding	BTL 2	CO1
12.	Define supply chain performance measures.	Remembering	BTL 1	CO1
13.	What is strategic fit in supply chain strategy?	Understanding	BTL 2	CO1
14.	List the drivers of supply chain performance.	Remembering	BTL 1	CO1
15.	What is the role of supplier in a supply chain.	Understanding	BTL 2	CO1
16.	What is meant by supply chain coordination?	Remembering	BTL 1	CO1
17.	What is the function of a manufacturer in the supply chain?	Remembering	BTL 1	CO1
18.	List any two supply chain strategies.	Remembering	BTL 1	CO1
19.	Define the term 'customer chain'.	Understanding	BTL 2	CO1
20.	What do you mean by a global supply chain?	Understanding	BTL 2	CO1
21.	Differentiate between efficiency and responsiveness.	Understanding	BTL 2	CO1
22.	Define logistics and explain its role in SCM.	Remembering	BTL 1	CO1

23.	What is the significance of IT in a supply chain?	Understanding	BTL 2	CO1
24.	Define the term “value creation” in SCM.	Understanding	BTL 2	CO1

PART- B				
S.NO	QUESTIONS	COMPETENCE	BT LEVEL	CO LEVEL
1	Explain supply chain drivers in a retail business.	Applying	BTL 3	CO1
2	Analyze how supply chain decisions affect performance.	Analyzing	BTL 4	CO1
3	Apply SCOR model to evaluate a supply chain.	Applying	BTL 3	CO1
4	Discuss strategic vs operational decisions in SCM.	Analyzing	BTL 4	CO1
5	Explain technology enablers in supply chain efficiency.	Analyzing	BTL 4	CO1
6	Analyze how supplier coordination affects lead time.	Analyzing	BTL 4	CO1
7	Apply strategic fit to seasonal product companies.	Applying	BTL 3	CO1
8	Describe performance metrics in supply chain.	Analyzing	BTL 4	CO1
9	Apply supply chain ideas to the food industry.	Applying	BTL 3	CO1
10	Analyze trade-offs between responsiveness and efficiency.	Analyzing	BTL 4	CO1
11	Explain push and pull views in manufacturing.	Analyzing	BTL 4	CO1
12	Apply customer value concept in supply chain.	Applying	BTL 3	CO1
13	Discuss impact of poor demand forecasting.	Analyzing	BTL 4	CO1
14	Analyze role of logistics in supply chain responsiveness.	Analyzing	BTL 4	CO1
15	Apply supply chain structure to e-commerce.	Applying	BTL 3	CO1
16	Describe supply chain strategy in automotive sector.	Analyzing	BTL 4	CO1
17	XYZ Electronics operates globally, sourcing over 25 components from Asia, Europe, and South America. Their recent supply issues included customs delays, raw material shortages, lack of inventory visibility, and customer dissatisfaction. Internal coordination is weak between procurement, production, and distribution teams.	Analyzing	BTL 4	CO1

	Q: Evaluate the key supply chain drivers (facilities, inventory, transportation, information, sourcing, and pricing) affecting XYZ Electronics. Identify which drivers are underperforming and propose an integrated strategy that improves coordination, responsiveness, and cost-efficiency. How would performance metrics help monitor the new strategy's success?			
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UNIT – II – STRATEGIC SOURCING

SYLLABUS: Outsourcing – Make vs Buy – Identifying Core Processes – Market vs Hierarchy – Make vs Buy Continuum – Sourcing Strategy – Supplier Selection and Contract Negotiation – Creating A World Class Supply Base – Supplier Development – World - Wide Sourcing.

PART- A

S.NO	QUESTIONS	COMPETENCE	BT LEVEL	CO LEVEL
1.	Define outsourcing.	Remembering	BTL 1	CO2
2.	What is meant by make-or-buy decision?	Understanding	BTL 2	CO2
3.	Define core processes in a firm.	Remembering	BTL 1	CO2
4.	What is the make vs buy continuum?	Understanding	BTL 2	CO2
5.	Define sourcing strategy.	Remembering	BTL 1	CO2
6.	What are the objectives of sourcing strategy?	Understanding	BTL 2	CO2
7.	What is market vs hierarchy concept?	Understanding	BTL 2	CO2
8.	Define supplier selection.	Remembering	BTL 1	CO2
9.	What is contract negotiation in sourcing?	Understanding	BTL 2	CO2
10.	List the criteria for supplier evaluation.	Remembering	BTL 1	CO2
11.	Define supplier development.	Remembering	BTL 1	CO2
12.	What are the characteristics of a world-class supply base?	Understanding	BTL 2	CO2
13.	What is vertical integration in sourcing?	Understanding	BTL 2	CO2
14.	Define single sourcing and multiple sourcing.	Remembering	BTL 1	CO2
15.	What is total cost of ownership in sourcing?	Understanding	BTL 2	CO2
16.	Define global sourcing.	Remembering	BTL 1	CO2

17.	What are the risks involved in outsourcing?	Understanding	BTL 2	CO2
18.	Define insourcing.	Remembering	BTL 1	CO2
19.	What is backward integration?	Understanding	BTL 2	CO2
20.	Define the role of third-party logistics in sourcing.	Understanding	BTL 2	CO2
21.	What is the role of SRM (Supplier Relationship Management)?	Understanding	BTL 2	CO2
22.	Define procurement.	Remembering	BTL 1	CO2
23.	What are supplier scorecards?	Understanding	BTL 2	CO2
24.	List two advantages of e-sourcing.	Remembering	BTL 1	CO2

PART- B				
S.NO	QUESTIONS	COMPETENCE	BT LEVEL	CO LEVEL
1.	Explain the make-or-buy decision process in a pharmaceutical firm.	Applying	BTL 3	CO2
2.	Analyze the advantages and risks of outsourcing IT services.	Analyzing	BTL 4	CO2
3.	Describe how the core vs non-core process framework applies to a service firm.	Applying	BTL 3	CO2
4.	Discuss the differences between single sourcing and multiple sourcing strategies.	Analyzing	BTL 4	CO2
5.	Apply sourcing strategy models to a startup entering global markets.	Applying	BTL 3	CO2
6.	Analyze supplier selection models used in the automotive industry.	Analyzing	BTL 4	CO2
7.	Discuss how contract negotiation influences long-term supplier relationships.	Analyzing	BTL 4	CO2
8.	Apply the total cost of ownership concept in sourcing a capital item.	Applying	BTL 3	CO2
9.	Explain how e-sourcing platforms improve procurement efficiency.	Analyzing	BTL 4	CO2
10.	Analyze the trade-offs between global and local sourcing using cost-benefit analysis.	Analyzing	BTL 4	CO2
11.	Apply the supplier scorecard methodology to enhance supplier performance.	Applying	BTL 3	CO2

12.	Describe how supplier development contributes to supply chain resilience.	Analyzing	BTL 4	CO2
13.	Apply risk assessment techniques in outsourcing decisions.	Applying	BTL 3	CO2
14.	Analyze backward integration as a sourcing strategy in the FMCG sector.	Analyzing	BTL 4	CO2
15.	Describe how procurement strategy enhances competitiveness in the retail industry.	Applying	BTL 3	CO2
16.	Discuss the market vs hierarchy approach in logistics sourcing.	Analyzing	BTL 4	CO2
17.	<p>FabCo Garments, a mid-sized textile brand, is analyzing whether to outsource its dyeing and finishing processes to Vietnam or invest in expanding its in-house facility in Tiruppur. Key issues: cost saving, quality control, delivery lead time, and alignment with sustainability goals.</p> <p>Q: Using the make-vs-buy decision matrix and sourcing continuum, critically assess FabCo's options. What strategic sourcing criteria (cost, risk, quality, flexibility, sustainability) should influence their decision? How should the firm evaluate supplier performance and ensure long-term alignment with its business strategy?</p>	Analyzing	BTL 4	CO2

UNIT – III – SUPPLY CHAIN NETWORK

SYLLABUS: Distribution Network Design – Role – Factors Influencing Options, Value Addition – Distribution Strategies – Models for Facility Location and Capacity Allocation – Distribution Center Location Models. Supply Chain Network Optimization Models – Impact of Uncertainty on Network Design - Network Design Decisions Using Decision Tree - Supply Chain As A Service (SCAAS)

PART- A

S.NO	QUESTIONS	COMPETENCE	BT LEVEL	CO LEVEL
1.	Define supply chain network design.	Remembering	BTL 1	CO3
2.	What are the goals of distribution network design?	Understanding	BTL 2	CO3
3.	List any four distribution strategies.	Remembering	BTL 1	CO3
4.	What is facility location planning?	Understanding	BTL 2	CO3
5.	Define capacity allocation.	Remembering	BTL 1	CO3

6.	What are the factors influencing facility location decisions?	Understanding	BTL 2	CO3
7.	Define centralized and decentralized distribution.	Remembering	BTL 1	CO3
8.	What is meant by value addition in distribution?	Understanding	BTL 2	CO3
9.	List two types of distribution network models.	Remembering	BTL 1	CO3
10.	What are the objectives of supply chain network optimization?	Understanding	BTL 2	CO3
11.	Define responsive supply chain.	Remembering	BTL 1	CO3
12.	What is the role of technology in distribution network planning?	Understanding	BTL 2	CO3
13.	What is demand variability?	Remembering	BTL 1	CO3
14.	Define stochastic demand.	Remembering	BTL 1	CO3
15.	What is the role of simulation in network design?	Understanding	BTL 2	CO3
16.	List the challenges in global distribution networks.	Remembering	BTL 1	CO3
17.	Define Supply Chain as a Service (SCaaS).	Remembering	BTL 1	CO3
18.	What are the components of a SCaaS model?	Understanding	BTL 2	CO3
19.	What is decision tree analysis in supply chain design?	Understanding	BTL 2	CO3
20.	Define hub-and-spoke network design.	Remembering	BTL 1	CO3
21.	What is a hybrid distribution strategy?	Understanding	BTL 2	CO3
22.	Define inventory aggregation.	Remembering	BTL 1	CO3
23.	List key cost drivers in distribution network decisions.	Remembering	BTL 1	CO3
24.	What is network latency in supply chain context?	Understanding	BTL 2	CO3

PART- B				
S.NO	QUESTIONS	COMPETENCE	BT LEVEL	CO LEVEL
1	Explain facility location models for e-commerce expansion.	Applying	BTL 3	CO3
2	Analyze the impact of demand uncertainty on supply chain network design.	Analyzing	BTL 4	CO3
3	Explain decision tree analysis for warehouse location selection.	Applying	BTL 3	CO3

4	Analyze trade-offs between centralized and decentralized distribution.	Analyzing	BTL 4	CO3
5	Discuss how network optimization can reduce delivery time and cost.	Applying	BTL 3	CO3
6	Analyze factors that affect capacity allocation in a multi-product supply chain.	Analyzing	BTL 4	CO3
7	Explain the process of designing a lean supply network for startups.	Applying	BTL 3	CO3
8	Analyze how distribution centers add value in FMCG supply chains.	Analyzing	BTL 4	CO3
9	Discuss a hybrid distribution strategy for a fashion retail brand.	Applying	BTL 3	CO3
10	Explain the use of hub-and-spoke model in a national logistics network.	Applying	BTL 3	CO3
11	Analyze the cost impact of different facility location choices.	Analyzing	BTL 4	CO3
12	Explain simulation models used to optimize networks under demand uncertainty.	Applying	BTL 3	CO3
13	Discuss the SCaaS (Supply Chain as a Service) model for SMEs in electronics.	Applying	BTL 3	CO3
14	Explain decision support systems used in distribution center planning.	Applying	BTL 3	CO3
15	Analyze network performance before and after using location models.	Analyzing	BTL 4	CO3
16	Explain mathematical models for determining the number of warehouses.	Applying	BTL 3	CO3
17	<p>FoodChain Pvt Ltd plans to expand its reach across Karnataka and Tamil Nadu by setting up new distribution centers. Current challenges include uneven service levels, high transportation cost, and uncertainty in local demand. They are considering hub-and-spoke and cross-docking models for network redesign.</p> <p>Q: Formulate a network design plan for Food Chain using facility location and capacity allocation models. What quantitative and qualitative factors should influence distribution center placement? How can uncertainty and demand variability be accounted for using a decision tree</p>	Analyzing	BTL 4	CO3

or optimization model? Justify the proposed model with supply chain responsiveness and efficiency trade-offs.			
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UNIT – IV – PLANNING DEMAND, INVENTORY AND SUPPLY

SYLLABUS: Managing Supply Chain Cycle Inventory – Uncertainty in The Supply Chain – Analyzing Impact of Supply Chain Redesign on The Inventory – Risk Pooling – Managing Inventory for Short Life Cycle Products, Multiple Item, Multiple Location Inventory Management – Pricing and Revenue Management.

PART- A

S.NO	QUESTIONS	COMPETENCE	BT LEVEL	CO LEVEL
1.	Define cycle inventory.	Remembering	BTL 1	CO4
2.	What is meant by demand uncertainty?	Understanding	BTL 2	CO4
3.	List the types of inventory in supply chain.	Remembering	BTL 1	CO4
4.	What is risk pooling?	Understanding	BTL 2	CO4
5.	Define short life cycle products.	Remembering	BTL 1	CO4
6.	What is supply chain redesign?	Understanding	BTL 2	CO4
7.	Define inventory turnover.	Remembering	BTL 1	CO4
8.	What are the common forecasting errors in demand planning?	Understanding	BTL 2	CO4
9.	What is the difference between cycle and safety inventory?	Understanding	BTL 2	CO4
10.	Define inventory positioning.	Remembering	BTL 1	CO4
11.	List any two challenges in managing short life cycle products.	Remembering	BTL 1	CO4
12.	Define multiple-location inventory.	Remembering	BTL 1	CO4
13.	What are the key principles of revenue management?	Understanding	BTL 2	CO4
14.	Define stockout cost.	Remembering	BTL 1	CO4
15.	What is aggregate planning?	Understanding	BTL 2	CO4
16.	Define lead time demand.	Remembering	BTL 1	CO4
17.	What is dynamic pricing?	Understanding	BTL 2	CO4
18.	Define inventory pooling.	Remembering	BTL 1	CO4

19.	What is the role of service level in inventory management?	Understanding	BTL 2	CO4
20.	What is demand planning?	Remembering	BTL 1	CO4
21.	List the benefits of coordinated inventory management.	Remembering	BTL 1	CO4
22.	What is EOQ (Economic Order Quantity)?	Remembering	BTL 1	CO4
23.	Differentiate between deterministic and stochastic inventory models.	Understanding	BTL 2	CO4
24.	Define markdown management.	Remembering	BTL 1	CO4

PART- B				
S.NO	QUESTIONS	COMPETENCE	BT LEVEL	CO LEVEL
1	Explain the EOQ model used for inventory optimization in retail chains.	Applying	BTL 3	CO4
2	Analyze the effect of lead time reduction on inventory levels.	Analyzing	BTL 4	CO4
3	Apply risk pooling concepts to optimize inventory in multiple warehouses.	Applying	BTL 3	CO4
4	Examine the impact of supply chain redesign on inventory performance.	Analyzing	BTL 4	CO4
5	Explain how dynamic pricing can increase revenue for perishable goods.	Applying	BTL 3	CO4
6	Analyze inventory challenges of short life cycle products.	Analyzing	BTL 4	CO4
7	Apply inventory aggregation techniques to minimize safety stock.	Applying	BTL 3	CO4
8	Examine the effect of demand uncertainty on inventory planning.	Analyzing	BTL 4	CO4
9	Apply multi-echelon inventory planning for pharmaceutical supply chains.	Applying	BTL 3	CO4
10	Analyze the cost-benefit of postponement strategies in supply chain planning.	Analyzing	BTL 4	CO4
11	Apply markdown optimization strategies for seasonal apparel.	Applying	BTL 3	CO4
12	Analyze how risk pooling reduces inventory costs in global supply chains.	Analyzing	BTL 4	CO4

13	Explain inventory planning using simulations under variable demand.	Applying	BTL 3	CO4
14	Examine how coordinated planning improves supply chain efficiency.	Analyzing	BTL 4	CO4
15	Apply pricing and revenue management for peak season profitability.	Applying	BTL 3	CO4
16	Analyze trade-offs between inventory holding cost and service level.	Analyzing	BTL 4	CO4
17	<p>Medicore Labs distributes vaccines and diagnostics across India. Products are sensitive to temperature, have short life cycles, and fluctuate in demand. The firm operates from 6 regional warehouses but often suffers stock imbalances. Recently, they adopted dynamic pricing for bulk buyers.</p> <p>Q: Recommend a comprehensive inventory management strategy considering multiple locations, uncertain demand, and product perishability. How can risk pooling, demand forecasting, product classification (ABC/XYZ), and revenue management (pricing) be used to improve service levels and reduce waste?</p>	Analyzing	BTL 4	CO4

UNIT – V – CURRENT TRENDS

SYLLABUS: Supply Chain Integration – Building Partnership and Trust in SC Value of Information – Bullwhip Effect – Effective Forecasting – Coordinating The Supply Chain – SC Restructuring – SC Mapping – SC Process Restructuring – Postpone The Point of Differentiation – IT in Supply Chain – Agile Supply Chain – Reverse Supply Chain – Agriculture Supply Chain-Lot, Blockchain and Intelligent Order Management.

PART- A

S.NO	QUESTIONS	COMPETENCE	BT LEVEL	CO LEVEL
1.	Define supply chain integration.	Remembering	BTL 1	CO5
2.	What is the bullwhip effect?	Understanding	BTL 2	CO5
3.	List any two SC coordination techniques.	Remembering	BTL 1	CO5
4.	Define agile supply chain.	Remembering	BTL 1	CO5
5.	What is reverse logistics?	Understanding	BTL 2	CO5
6.	State the significance of IT in SCM.	Understanding	BTL 2	CO5

7.	Define blockchain in the context of SCM.	Remembering	BTL 1	CO5
8.	List any two benefits of SC integration.	Remembering	BTL 1	CO5
9.	What do you understand by trust in supply chains?	Understanding	BTL 2	CO5
10.	Define supply chain mapping.	Remembering	BTL 1	CO5
11.	What is meant by intelligent order management?	Understanding	BTL 2	CO5
12.	State two challenges in implementing agile SC.	Remembering	BTL 1	CO5
13.	Define information visibility in SC.	Remembering	BTL 1	CO5
14.	What is postponement strategy?	Understanding	BTL 2	CO5
15.	List types of restructuring in supply chain.	Remembering	BTL 1	CO5
16.	Define value of information in supply chain.	Remembering	BTL 1	CO5
17.	What are the key drivers of SC coordination?	Understanding	BTL 2	CO5
18.	List any two causes of bullwhip effect.	Remembering	BTL 1	CO5
19.	What is the role of forecasting in supply chain?	Understanding	BTL 2	CO5
20.	Define agricultural supply chain.	Remembering	BTL 1	CO5
21.	What is supply chain digitization?	Understanding	BTL 2	CO5
22.	Define real-time tracking in logistics.	Remembering	BTL 1	CO5
23.	What is omni-channel supply chain?	Understanding	BTL 2	CO5
24.	What do you mean by SC process restructuring?	Understanding	BTL 2	CO5

PART- B				
S.NO	QUESTIONS	COMPETENCE	BT LEVEL	CO LEVEL
1	Describe inefficiencies in a retail supply chain using supply chain mapping.	Applying	BTL 3	CO5
2	Analyze the impact of the bullwhip effect on overall supply chain cost.	Analyzing	BTL 4	CO5
3	Explain how blockchain technology improves traceability in food supply chains.	Applying	BTL 3	CO5
4	Discuss how agile supply chains create competitive advantage in uncertain markets.	Analyzing	BTL 4	CO5
5	Explain intelligent order management systems in an e-commerce environment.	Applying	BTL 3	CO5

6	Analyze the role of trust and partnerships in enhancing supply chain performance.	Analyzing	BTL 4	CO5
7	Explain the postponement strategy for reducing inventory and improving customization.	Applying	BTL 3	CO5
8	Discuss the benefits of IT integration in global supply chains.	Analyzing	BTL 4	CO5
9	Describe coordination strategies used to improve demand–supply balance.	Applying	BTL 3	CO5
10	Examine the relevance of reverse logistics in the circular economy.	Analyzing	BTL 4	CO5
11	Explain forecasting techniques used for managing seasonal demand.	Applying	BTL 3	CO5
12	Analyze how supply chain restructuring supports business agility.	Analyzing	BTL 4	CO5
13	Describe how supply chain analytics improve performance and reduce delays.	Applying	BTL 3	CO5
14	List the challenges in implementing blockchain in logistics.	Analyzing	BTL 4	CO5
15	Explain integration strategies for agricultural supply chains to reduce waste.	Applying	BTL 3	CO5
16	Identify digital tools used to restructure processes in manufacturing supply chains.	Analyzing	BTL 4	CO5
17	<p>AgriFresh, a supply chain linking farmers with supermarkets, wants to implement Blockchain and IoT for traceability and Intelligent Order Management (IOM) to manage fluctuating customer demand. Farmers lack tech skills and connectivity is poor in some rural areas.</p> <p>Q: Critically assess the benefits and barriers in implementing digital technologies like Blockchain, IoT, and IOM in AgriFresh’s agricultural supply chain. How can these tools enhance SC integration, reduce bullwhip effect, and support sustainability goals? Propose a phased adoption strategy with focus on value creation and stakeholder engagement.</p>	Analyzing	BTL 4	CO5