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B.M.S. College of Engineering, Bengaluru-560019

Autonomous Institute Affiliated to VTU

January / February 2025 Semester End Main Examinations

Programme: B.E. **Semester: VII**

Branch: Institutional Elective **Duration: 3 hrs.**

Course Code: 22IM7OESCM **Max Marks: 100**

Course: Supply Chain Management

Instructions: 1. Answer any FIVE full questions, choosing one full question from each unit.
2. Missing data, if any, may be suitably assumed.

Important Note: Completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages. Revealing of identification, appeal to evaluator will be treated as malpractice.

			CO	PO	Marks
		UNIT - I			
1	a)	List and discuss the objectives of a supply chain.	*CO1*	*PO1*	**10**
	b)	Discuss the decision phases in a supply chain and their significance.	*CO1*	*PO1*	**10**
		OR			
2	a)	Differentiate between process view and cyclic view of supply chain philosophy.	*CO1*	*PO1*	**10**
	b)	Examine the role of transportation and information in extending the strategic scope of a supply chain.	*CO1*	*PO1*	**10**
		UNIT - II			
3	a)	Discuss the factors influencing the distribution network in supply chain.	*CO1*	*PO1*	**10**
	b)	Write a short note on e – business and its impact on supply chain.	*CO1*	*PO1*	**10**
		OR			
4	a)	With a neat diagram identify the phases of framework of network design decision.	*CO1*	*PO1*	**10**
	b)	Define decision trees and explain their importance in supply chain network design.	*CO1*	*PO1*	**10**
		UNIT - III			
5	a)	Discuss P system and Q system of an inventory management of supply chain by stating an example.	*CO1*	*PO1*	**10**
	b)	An organization has 10 items in its inventory. The demand and unit costs are as follows: Item | A | B | C | D | E Annual Demand | 1,000 | 2,000 | 3,000 | 500 | 1,500 Unit Cost (₹) | 100 | 50 | 10 | 200 | 20 Item | F | G | H | I | J Annual Demand | 4,000 | 100 | 600 | 2,500 | 200 Unit Cost (₹) | 5 | 500 | 250 | 15 | 300 Perform ABC analysis and classify the items accordingly.	*CO3*	*PO2*	**10**

			OR			
	6	a)	A particular item has a demand of 9,000 units per year. The cost of one procurement is Rs. 100/- and the holding cost per unit is Rs. 2.40 per year. The shortages are allowed and the shortage cost is Rs. 5/- per unit per year. i. Find Economic lot size, ii. Number of orders per year, iii. The time between two orders, and v. Total cost per year including material cost, taking unit price as Re.1/- per unit.	*CO2*	*PO1* *PO6*	**10**
		b)	Describe XYZ analysis and explain how it can be used to manage inventory demand variability. Provide an example of its application in a manufacturing company.	*CO1*	*PO1*	**10**
			UNIT - IV			
	7	a)	Evaluate strengths and weakness of road and water transportation in supply chain.	*CO1*	*PO1*	**12**
		b)	Explain the importance of transportation infrastructure and policies in supply chain management.	*CO1*	*PO1*	**08**
			OR			
	8	a)	Discuss the factors that influence the performance of sourcing in supply chain.	*CO1*	*PO1*	**10**
		b)	List the advantages and challenges of third – party logistics.	*CO1*	*PO1*	**10**
			UNIT - V			
	9	a)	Discuss the current trends in Supply Chain and Logistics Management with a focus on e-SRM, e-LRM, e-SCM.	*CO1*	*PO1*	**10**
		b)	Discuss the significance, benefits of block chain in Supply Chain Management.	*CO1*	*PO1*	**10**
			OR			
	10	a)	Explain the concepts of descriptive, predictive, and prescriptive analytics with examples to each.	*CO1*	*PO1*	**10**
		b)	Differentiate between lean and agile supply chains with a focus on the following: i. Objective ii. Demand Pattern iii. Inventory iv. Production v. Lead Time	*CO2*	*PO2*	**10**

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