



P.E.S. College of Engineering, Mandya - 571 401
(An Autonomous Institution affiliated to VTU, Belagavi)
Sixth Semester, B.E. - Information Science and Engineering
Semester End Examination; July / Aug. - 2022
Supply Chain Management

Time: 3 hrs

Max. Marks: 100

Course Outcomes

The Students will be able to:

CO1: Build a strategic framework to analyze supply chains.

CO2: Design the supply chain network.

CO3: Plan demand and supply in a supply chain.

CO4: Plan and manage inventories in a supply chain.

CO5: Manage cross-functional drivers in a supply chain.

Note: I) PART - A is compulsory. Two marks for each question.**II) PART - B: Answer any Two sub questions (from a, b, c) for Maximum of 18 marks from each unit.**

Q. No.	Questions	Marks	BLs	COs	POs
I : PART - A		10			
I a.	Write the stages in a supply chain.	2	L1	CO1	PO1
b.	List out the factors that are influenced by the structure of the distribution network.	2	L1	CO2	PO1
c.	What is systematic component and random component?	2	L1	CO3	PO1
d.	What is lot size or batch size?	2	L1	CO4	PO1
e.	List any two risks of using a third party.	2	L1	CO5	PO1
II : PART - B		90			
UNIT - I		18			
1 a.	Describe the supply chain process cycles along with sub-processes in each supply chain process cycle.	9	L2	CO1	PO1
b.	Demonstrate how a company achieves strategic fit between supply chain and competitive strategies?	9	L2	CO1	PO1
c.	Illustrate the need of expanding the scope of strategic fit across the supply chain.	9	L3	CO1	PO1
UNIT - II		18			
2 a.	With a graph, explain the below ;				
	i) Relationship between desired response time and number of facilities	9	L2	CO2	PO1
	ii) Number of facilities and transportation cost				
	iii) Variation of Logistic cost and response time with number of facilities				
b.	Tabulate the following performance characteristics with reference to cost factor and service factor;				
	i) Network with consume pickup sites	9	L2	CO2	PO1
	ii) Retail storage with consumer pickup sites				
	iii) Distributor storage with last mile delivery				
c.	Discuss any six factors influencing network design decisions.	9	L2	CO2	PO1

Contd... 2

UNIT - III**18**

- 3 a. Explain five points that are important for an organization to forecast effectively. 9 L2 CO3 PO1
- b. Write short note on:
- i) Managing supply 9 L2 CO3 PO1
- ii) Managing capacity
- iii) Managing inventory
- c. Describe the role of IT in forecasting. 9 L2 CO3 PO1

UNIT - IV**18**

- 4 a. Explain the role of cycle inventory in a supply chain. 9 L2 CO4 PO1
- b. Assume that weekly demand for phones at ABC supplier is normally distributed with a mean of 2500 and standard deviation of 500. The manufacturer takes 2 weeks to fill an order placed by an ABC manager. The store manager currently orders 10,000 phones when the inventory on hand drops to 6000. Evaluate the safety inventory and average inventory carried by ABC. Also, evaluate the average time a phone spends at ABC. 9 L3 CO4 PO1
- c. Discuss the role of IT in inventory management. 9 L2 CO4 PO1

UNIT - V**18**

- 5 a. How the surplus does is increased in a supply chain by third parties? Briefly explain. 9 L2 CO5 PO1
- b. Write a short note on basic principles of negotiation. 9 L2 CO5 PO1
- c. Describe the role of pricing and revenue management in a supply chain. 9 L2 CO5 PO1

* * * *