

JAIPURIA INSTITUTE OF MANAGEMENT, NOIDA
PGDM / PGDM (M) / PGDM (SM)
FOURTH TRIMESTER (Batch 2020-22)
END TERM EXAMINATIONS, OCTOBER, 2021, SET-II

Course Name	Supply Chain Management	Course Code	OM404
Max. Time	2 hours	Max. Marks	40 MM

INSTRUCTIONS:

- Attempt all four questions.
- Distribution of marks for each question mentioned in the bracket.
- It is closed book / notes exam, no mobile/ electronic / digital medium is allowed. Only calculators are allowed.
- Answers should be rich in content, precise and to the point.

Q1)

Read the paragraph below:

"IKEA, the Swedish furniture retailer provides stylish, affordable and well-designed products & solutions to its customers. IKEA is known for its signature warehouse style retail stores. The upstream supply chain consists of a network of distribution centres, dedicated manufacturing facilities, raw material suppliers and various other service providers. Stores place replenishment orders on manufacturing facilities which are typically located in low cost countries. Economic modes of transportation are used to make deliveries to the large warehouse style retail stores. Further, IKEA uses modular design for its ready-to-assemble particle wood furniture. With its various supply chain strategic decisions, IKEA is able to provide good product variety, product availability at a reasonable cost".

Based on the above, reflect and answer the following:

- Evaluate and delineate the role played by different stages in IKEA's supply chain in achieving good Strategic Fit between its Competitive Strategy and Supply Chain strategy. In your answer, highlight the impact of various supply chain strategic decisions in achieving strategic fit.
- In India, IKEA operates two large stores in Hyderabad and Navi Mumbai. In addition, IKEA is also delivering its products online in Hyderabad, Mumbai, Pune, Ahmedabad, Surat & Vadodara.

Comparatively evaluate the value created for customers as well as various supply chain costs which IKEA incurs in these two distribution channels.

(5+5=10 Marks)

Q2) Attempt any one from the following:

Quality Computers India (QCI), a PC manufacturer in Pune, serves three retail stores in Mumbai Region. Currently QCI uses TL transportation to deliver separately to each of its customers i.e. retail stores in Mumbai Region. Each truck costs INR 8000 plus INR 2500 per stop. QCI is considering aggregating deliveries to Mumbai on a single truck. Demand at large customer is 6000 units a year, demand at medium customer is 2400 units a year and demand at the small customer is 800 units a year. Average PC cost for QCI is INR 2,000 per unit and holding cost is 25 percent.

- What is the optimal delivery policy (order size and order frequency) to each customer if QCI ships separately to each of them? What is the overall cost of this plan for all three customers?

- (b) What is the optimal delivery policy (order size and order frequency) to each customer if QCI aggregates shipments to each of the three customers on every truck that goes to Mumbai Region? What is the overall cost of this plan for all three customers?
- c) What is the shortcoming of the policy mentioned in serial no.(b).

(4+4+2=10 Marks)

OR

You are a purchasing manager in charge of stocking a certain type of transformers for a large electric utility. Weekly demand among your field crews for these transformers is normally distributed with a mean of 100 and a standard deviation of 50. Holding costs are 25 percent and you must hold a level of inventory corresponding to service level of 95 percent (Safety factor= 1.64).

You are faced with two suppliers, Reliable components and Value Electric who offer the following terms: Reliable sells the transformer for \$ 5000 with a minimum order of 100 and a lead time of 1 week with standard deviation of 0.1 week. Value sells the transformer for \$ 4800 with a minimum order of 1000 and lead time of 5 weeks with standard deviation of 4 weeks.

- a) Evaluate and compare safety inventory which you will need to carry in each case.
b) Compare between cycle and safety inventory carried by any stage of a supply chain.

(7+3=10 Marks)

Q3)

A distributor has heard that one of its major manufacturer from which it buys is considering going **Direct to the Customers**.

- a) Evaluate the type of distribution network manufacturer is considering and what are its advantages?
b) Examine what advantages the distributor can offer to the manufacturer that manufacturer is unlikely be able to achieve through Direct Shipment.

(4+4=8 Marks)

Q4)

- a) In the 1980s, Asian paint was sold by color and size in paint stores. Today, paint is mixed at the paint retail store according to the color required by using a color mixing machine. Examine the impact of this restructuring on various supply chain costs and customer value factors.
b) Discuss the problems which a Supply Chain Manager will face if each stage of a supply chain views its demand as the orders placed by the downstream stage? Examine three actions or ways by which supply chain manager can achieve coordination in supply chain for better performance.

(6+6=12 Marks)