

MMS - III (Open) 23.11.2016
University Exam
Advanced Supply Chain Management

Q.P. Code : 795902

(3 Hours)

(Total Marks : 60

- N.B. : (1) Question No.1 is compulsory.
(2) Attempt any Four questions out of the remaining questions from No.2 to No.7.
(3) The candidates portraying better analytical and logical ability would be given higher weightage.

1. (a) In 1999 C-Mart was one of the leading companies in the retail industry, with 1981 stores and average revenues per store of INR 7.25 million. At that time, E-Mart was a small niche retailer in the south with only 229 stores and average revenues about half of those of C-Mart stores. In 10 years E-Mart had transformed itself to being a retailer with the highest inventory turnover and operating profit for any discount retailer. Today E-Mart is the largest and highest profit retailer in India. In fact as of 2009, E-Mart accounted for nearly 5% of Indian retail spending. The starting point was a relentless focus on satisfying customer needs; E-Mart's goal was simply to provide customers with access to goods when and where they want them and to develop cost structures that enabled competitive pricing. The key to achieving this goal was to make the way the company replenishes its inventory the centre piece of its strategy. This was done by using a robust logistics technique known as cross docking. This strategy reduced E-Mart's cost of sales significantly and made it possible to offer everyday low prices to its customers. 10

Questions :

- (a) How did E-Mart manage this transformation? What strategic initiatives were deployed?
(b) If the strategy works so well for E-Mart, should all companies use the same strategy?
(c) What impact would E-Commerce make on E-Mart's supply chain?
- (b) Machine tool builder Inkuma Corporation has implemented a distributor integration system. Inkuma carries many expensive machine tools and repair parts, but the high cost of carrying the full line makes it impossible for Inkuma's 46 distributors in North and South India to do so. Instead Inkuma requires each of its dealers to carry a minimum number of machine tools

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and parts. The company manages the entire system so that each tool and part is in stock somewhere, either in one of the company's warehouses or at one of the distributors. A system called Inkuma-link allows each of the distributors to check the warehouse inventories and to communicate with other distributors in finding a required part. Once a part is found, the company ensures that it is delivered quickly to the requesting dealer. There are plans to upgrade the system so that each distributor has full knowledge of the inventory held by other distributors. Since the systems implementation inventory costs throughout the supply chain have been reduced, the chance that a distributor will lose a sale because of shortages has decreased and customer satisfaction has increased.

Questions :

- (a) How has Inkuma Corporation managed to get distribution perspective into the supply chain framework?
- (b) What kind of framework does Inkuma-link utilise? What are the advantages of this framework and how has it helped the corporation?
2. (a) How do third parties increase the supply chain surplus? 10
- OR**
- (b) How can the full set of logistical and cross-functional drivers be used to create strategic fit for a PC (Personal Computer) manufacturer targeting both time sensitive and price conscious customers?
3. (a) (i) Considering the quick response partnership, the retailer places an order at the beginning of each month but transfers POS data to the manufacturer every week. What is the impact of manufacturer's weekly production capacity on the benefit from information sharing? How should the manufacturer use the weekly demand data received from the retailer? 5
- (ii) What is the difference between third party and fourth party logistics providers? Give relevant examples. 5

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(b) (i) Consider the supply chain for canned fruits sold by a major food processing company. What are the sources of uncertainty in this supply chain? 5

(ii) Seaport and inland terminals are taking up a more active role in supply chains. Following containerization the transport terminal is no longer a passive element within supply chain. Discuss the changing role of terminals in supply chain. 5

4. (a) Why is the issue of conflict minerals and similar ethical considerations gaining momentum? What steps companies can take in order to ensure supply chain due diligence and stronger focus on supply chain transparency? 10

OR

(b) A retail chain has eight stores in a region supplied from four sources. Trucks have a capacity of 40,000 units and cost INR 1000 per load plus INR 100 per delivery. Thus, a truck making two deliveries charges INR 1200. The cost of holding one unit in inventory at retail for a year is INR 0.20. The Vice President of supply chain is considering whether to use direct shipping from supplier to retail stores or setting up milk runs from suppliers to retail stores. What network do you recommend if annual sales for each product at each retail store is 9,60,000 units? What network do you recommend if sales for each product at each retail store is 1,20,000 units?

5. (a) (i) You are the CEO of a medium sized apparel manufacturing firm and are considering a mass customization strategy for some of the products. How will you decide, which or any of your products are appropriate for mass customization? 5

(ii) Mass customization business model requires the supply chain to be flexible and responsive to consumer demand. Explain with relevant examples. 5

OR

- (b) (i) "An improper supply chain management, lack of cold chain infrastructure and food processing units are leading to inefficiencies, losses and wastage of fruits and vegetables in India." Explain. 5
- (ii) A Global director of an automotive company headquartered in the USA said, "supply base optimization must occur, before long-term agreements can be put into place." What are the implications of this statement? 5
6. (a) Vitamin Supplements Online (VSO) is an online retailer of health supplements. 10
Vitamins represent a significant portion of its sales. Demand for vitamins is 10,000 bottles per month. VSO incurs a fixed order placement, transportation and receiving cost of INR 100 each time an order for vitamins is placed with the manufacturer. VSO incurs holding cost of 20%. The manufacturer uses the following all units discount pricing schedule.

Order Quantity (NOS)	Unit Price (INR)
0 - 4,999	3.00
5,000 - 9,999	2.96
10,000 or more	2.92

Evaluate the number of bottles that the VSO manager should order in each lot.

OR

- (b) (i) "It is said that EOQ models, however complex are restricted by so many assumptions that they have very limited practical value." Take a position on this statement and provide relevant examples to support your arguments if any. 5
- (ii) What is the role of safety inventory in the context of supply chain? 5
7. Write short notes on (Any Two) : 10
- Collaborative Planning Forecasting and Replenishment (CPFR)
 - Efficient Consumer Response (ECR).
 - Vendor Managed Inventory (VMI)
 - SCOR Model: