

QP Code : 26179

(3 Hours)

[Total Marks : 60

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

1. (a) WWG & MMC sell maintenance, repair and operations products. Both 10

companies have catalogues as well as web pages through which orders can be placed. WWG also has several hundred stores throughout the US. Customers can walk into a store, call in an order or place it via the internet. WWG has nine DCs that both replenish stores and fill customer orders. MMC on the other hand ships almost all its orders. (Though a few customers near its DCs do pick up their own orders). MMC has DCs from which all orders are fulfilled. Neither MMC nor WWG manufactures any product. They primarily serve the role of a distributor or a retailer.

Their success is largely linked to their supply chain ability. Both firms offer several hundred thousand products to their customers. Each firm stocks more than 1,00,000 products with the rest being ordered from the supplier as and when needed. Both firms need to address the following strategic and operational issues.

- (1) How should product stocking be managed at the DCs? Should all DCs carry all products?
- (2) What products should be carried in inventory and what products should be left with supplier?
- (3) How should markets be allocated to DCs in terms of order fulfillment? What should be done if an order cannot be completely filled from a DC? Should there be specific back-up locations and how should these locations be selected?
- (4) How should replenishment of inventory be managed at various stocking locations?

(b) TMC is Japan's top auto manufacturer and has experienced significant 10
growth in global sales over the last two decades. A key issue facing TMC is the design of its global production and distribution network. Part of TMC's global strategy is to open plants in every market it serves. TMC must decide what production capability each of the plants will have, as this has significant impact on the distribution system. At one

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a reputed e-commerce firm (AMZO). Identify the push/pull boundary and two processes each in the push and pull phases.

AMZO sells books, music and other items over the web and is one of the pioneers of consumer e-business. AMZO is headquartered in USA and has the vision to be planet's most customer-centric company. In India, AMZO endeavours to build that same destination by giving customers a vast selection, low prices, fast and reliable delivery and a convenient on-line shopping experience, on a world-class e-commerce platform.

OR

Explain any four distinct distribution network designs that may be used to move products from factory to customer. Provide relevant examples.

4. What does a company need to do in order to achieve strategic fit between supply chain and competitive strategies? 10

Reliz Retail (RR) is a subsidiary company of Relizee Group (RG). Recently at the Relizee AGM the Chairman said,

“Reliz Retail has accelerated its pace of growth by adding over 900 stores”.

The company annual report 2014-2015 mentions that RR grew by over 20% to reach revenue of INR 17000 crores. RR hopes to steer the retail network by opening multiple formats and supporting through supply chain infrastructure. Reliz is focused on developing an indigenous sourcing base and concentrating on economies arising out of disintermediation of supply and distribution channels. RR has established direct linkages with farmers through contract farming, moving the produce through cold supply chain and further distributing to Reliz outlets. According to a company advisor, “RR’s expansion stems from its confidence in its supply chain. Reliz knows that the real money is at the backend. Most of the other retailers have merely trading operations in the neighbourhood space. They have been struggling too much with front end without focusing on the backend.” How Reliz Retail can attempt to maintain and achieve a strategic fit?

OR

“In the era of outsourcing, 3PL can add value to existing supply chains.” Explain this statement with relevant examples.

5. Discuss how an expensive supplier with short lead times who is used as a backup for a low cost supplier with long lead times can result in higher profits than using only the low cost supplier. 10

OR

What is cross-docking? What are the benefits of cross-docking? Cite relevant examples.

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extreme each plant can be equipped only for local production. At the other extreme, each plant is capable of supplying every market. Prior to 1996, TMC used specialised local plants for each market. After the Asian financial crises in 1996-97, TMC redesigned its plants to export to markets that remained strong when local markets weakened TMC calls this strategy "Global Complementation". Whether to be global or local is also an issue for TMC's spareparts plants. Should they be designed for local consumption or should there be few parts plants globally that supply multiple assembly plants? For any global manufacturer like TMC they must address the following questions on configuration and capability of supply chain.

- (1) Should plants be able to produce for all markets or only specific contingency markets?
- (2) How should markets be allocated to plants and how frequently should this allocation be revised?
- (3) What kind of flexibility be built in the distribution system?
- (4) What actions may be taken during product design to facilitate this flexibility?

2. What is the goal of a supply chain? Explain the impact of supply chain decisions on the success of a firm. 10

OR

A leading manufacturer of automotive air conditioners in India, has manufacturing facilities at three different locations A, B and C. The management decided to build a separate dedicated facility at location D for compressors, a major product component. The following table gives the necessary information about location of plants A, B and C and their annual requirement for compressors.

Location	x-coordinate	y-coordinate	Annual requirement (units)
A	150	75	6000
B	100	300	8200
C	275	380	7000

Using the centroid method determine a location for plant D. Assume a linear relationship between volume shipped and shipping costs.

3. What is push/pull view of supply chain processes? 10
Consider the supply chain involved when a customer orders a book from

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6. What are the advantages and disadvantages of RSP? Quote one success or failure of this framework. 10

OR

Demand for a product Z at BG Bazar is 1000 units per month. BG Bazar incurs a fixed order placement, transportation and receiving cost of INR 4000 each time an order is placed. Each product Z costs BG Bazar in INR 500 and the retailer has a holding cost of 20%. Evaluate the number of product Z that the store manager should order in each replenishment lot. What is the cycle inventory and number of orders per year?

7. Write short notes on (any two) :- 10
- (a) Bullwhip Effect
 - (b) Vendor-Managed Inventory (VMI)
 - (c) E-Procurement
 - (d) Balanced Scorecard for SCM