JAIPURIA INSTITUTE OF MANAGEMENT
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JAIPURIA INSTITUTE OF MANAGEMENT, NOIDA
PGDM / PGDM (M) / PGDM (SM)
FOURTH TRIMESTER (Batch 2019-21)
END TERM EXAMINATIONS, OCT-2020
SET-I

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

INSTRUCTIONS:
- **This is a Closed Book examination.**
- **Attempt all questions.**
- **Answers should be rich in content, pointwise and precise.**
- **Answers to Question 1 to 4 to be typed in.**
- **Answer to Question 5 to be done with pen and paper. The photo or scanned copy of the answer to Question 5 to be uploaded.**

Q. No. 1

Blue Nile is one of the world's largest online diamond jewelry retailer. The company was founded in 1999 and has its headquarters in Seattle, Washington. Customers across the globe such as those in USA, Europe, China, Singapore etc can place their orders online and receive deliveries of diamond jewelry at home. In contrast, Zales is an American jewelry retailer with headquarters in Delware, USA. Zales started in 1993 by selling diamond jewelry through its retail outlets. Over time Zales also started diamond jewelry online.

a) Based on the information provided, compare and evaluate the Competitive Strategies of Blue Nile and Zale.

b) Based on the information provided, discuss and evaluate major supply chain strategic (or design) decisions taken by the two companies as part of their supply chain strategy and in alignment with their respective competitive strategy.

(Marks: 4+4=8)

Q. No. 2

An organized retail chain "SS India" sells variety of products such as books, music, electronics, toys, home products etc. The company has Brick and Mortar retail stores in metros and other major cities of India. The top management of the company is also considering going online for select category of products i.e. opening an online supply chain channel in addition to its retail store chain.

a) For which category of products does going online offers biggest advantage as compared to the company's retail store chain. Analyse and provide suitable reasons? *(Hint: Analyse in terms of product characteristics and supply chain costs involved)*

b) For which product category does the online channel will offer smallest advantage as compared to the company's retail store chain. Analyse and provide suitable reasons? *(Hint: Analyse in terms of product characteristics and supply chain costs involved)*

(Marks: 4+4= 8)

Q. No. 3

"India TE Company" is a manufacturer and distributor of Industrial tools and equipment such as cutters, grinders, saws, jacks, drilling machines, motors, pumps etc. Presently the company employs "Retail Storage with Customer Pickup" distribution network design i.e sells its products to its industrial customers through company owned retail stores as well as through its dealership network.

The top management of the company thinking to open an additional distribution channel using the distribution network design - Distributor Storage with Last Mile Delivery (i.e. Company would itself deliver products to its final customer's location/ premises from company's distribution centers).

a) To help the management of "India TE Company", examine the two distribution network designs/channels (Distributor Storage with Last Mile Delivery and Retail Storage with Customer Pickup) in terms of various supply chain costs involved.

b) The management of "India TE Company" wants to know the impact of new distribution channel on Customer Value Factors (or Service factors). Briefly analyse and provide names of various Customer Value Factors (or Service factors) for which the performance of new distribution channel i.e. "Distributor Storage with Last Mile Delivery" will be superior or inferior than the earlier one i.e. "Retail Storage with Customer Pickup".

c) After studying the demand pattern of its products for some locations, Supply Chain Manager at "India TE Company" plans to employ "Milk Runs" for last mile delivery of products to final customer's location/ premises at these locations. Briefly analyse and provide reasons for this decision?

(Marks: 3+2+3=8)

Q. No. 4

"New India Electronics" is a large distributor (based in Delhi) of imported electronic products and accessories (Mobile phones, notebooks, notepads, speakers, headphones, mouse, battery chargers, cables, mobile / laptop covers, mousepad and other accessories etc). The products are sold to end consumer through a network of dealer retail stores spread across Northern India.

A new dealer for Jammu city has recently been appointed. The Logistics Manager at "New India Electronics" have two options vis-à-vis mode of transportation to ship products from Delhi to Jammu i.e either through Air or Road transport.

a) What type of products are best suited to be transported by Air from Delhi to Jammu? Analyse and provide suitable reasons? *(Hint: Analyse in terms of product characteristics i.e product value, demand volume, demand uncertainty etc and supply costs involved).*

b) What type of products are best suited to be transported by Road from Delhi to Jammu? Analyse and provide suitable reasons? *(Hint: Analyse in terms of product characteristics i.e product value, demand volume, demand uncertainty etc and supply costs involved).*

(Marks: 3+3=6)

Q. No. 5

A global online retail chain of leather bags plans to start its operations in India. The online retailer is debating whether to serve the India by setting up four Regional Distribution Centers (one each for North, South, Western and eastern India) or one National Distribution Center. Weekly demand in each region is normally distributed, with a mean of 1000 and standard deviation of 300.

The online retailer will be incurring a holding cost of 20 percent and the cost of product is INR 1000 per unit. Ordering costs per order in both centralized and decentralized case is INR 300/order. Demand experienced in each region is independent and supply lead time is exactly four weeks in both centralized and decentralized case.

The Online Retailer promises its customer a next day delivery. With four Regional Distribution Centers, the retailer can provide next day delivery using ground transportation at a cost of INR 10/unit. With a single National Distribution Center, the retailer will have to use a faster mode of transport that will cost INR 13/unit for next day service. Building and operating four regional DCs will cost INR 150,000 per year more than building and operating one national distribution center. The online retailer works 365 days a year. Assume desired service level of 95% in both centralized and decentralized case (consider z=1.65).

Evaluate quantitatively various supply chain costs involved. Based on Total Cost Approach, give your recommendation regarding which of the two distribution designs (centralized or decentralized) will be beneficial to the online retailer. ***(Note: Answer to Question 5 to be done with pen and paper. The photo or scanned copy of the answer to Question 5 to be uploaded).***

(Marks: 10)

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SET-II

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

INSTRUCTIONS:
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Q. No. 1

a) Wal-Mart and Seven Eleven are renowned global retail chains whose success can be attributed to best practices in supply chain management. Both supply chains have achieved good strategic fit between their competitive strategy and supply chain strategy by implementing decisions in regards to various supply chain drivers.

a) Evaluate and differentiate the competitive strategy and supply chain strategy of Wal-Mart ("Supercentres" retail format only) and Seven Eleven.

b) Analyse supply chain strategic decisions related to various supply chain drivers which these two supply chains have taken to achieve strategic fit between their competitive strategy and supply chain strategy.

(Marks: 4+4=8)

Q. No. 2

a) Distributors in Indian retail sector play an important role in the retail supply chain as compared to developed countries such as US? Analyse and provide suitable reasons about why distributors in Indian retail sector still contribute to retail supply chain surplus i.e. contribute to consumer surplus as well as supply chain profitability

b) "ABC Company" is an Indian manufacturer of Industrial tools and equipment such as cutters, grinders, saws, jacks, drilling machines, motors, pumps etc. The company sells its products to its industrial customers through company owned retail stores. In India, the company have several hundred retail stores and several distribution centres that replenish the stores.

Which category of finished products should be kept as inventory at the retail stores; at distribution centres and at the manufacturing facility. Analyse and provide suitable reasons *(Hint: Analyse in terms of product characteristics and supply chain costs involved)*

(Marks: 4+4=8)

No. 3

"Taj Leather Works" is an Agra based manufacturer of designer leather bags. The company utilizes "Drop Shipping" to fulfill orders placed by its customers through its website. Recently, the company has taken a decision to open a second distribution channel i.e. "Distributor Storage with Carrier Delivery"?

a) Analyse and compare the two distribution strategies in terms of various supply chain costs involved.

b) Analyse and compare the two distribution strategies in terms of various customer value or service factors.

(Marks: 4+4=8)

Q. No. 4

a) Examine the suitable modes of transportation for high demand, low –value shipments and low demand, high value shipments. Give reasons for the same in terms for various supply chain costs involved.

b) A manufacturer of electrical equipment employs a transportation network design namely "All Shipments via Distribution Centre with Storage". Analyse and discuss conditions when use of such transportation network design is justified?.

(Marks: 3+3=6)

Q. No. 5

"Healthy Life Ayurveda" is Kerala based company which manufacturers ayurvedic herbal medicines, supplements and other ayurvedic products. In order to expand its business, "Healthy Life Ayurveda" has decided to market and sell its products in Eastern India. The company have recently finalized and opened a depot in Eastern India. Company's Supply Chain manager is examining two choices for moving goods from plant in Kerala to its depot in Eastern India: Truck and Rail. The relevant information is as follows:

Transport Mode	Transport Lead Time (in days)	Transportation Rate (Rs / Unit)	Shipment Size (Units)
Rail	12	20	5000
Truck/Road	4	30	500

Daily demand is 100 units with standard deviation of demand 30. The average cost of product is Rs 500 per unit. Assume inventory carrying cost to be 20%. Company works with 97.7 % service level (z = 2). Since the distance is long, include pipeline inventory in analysis. For both Rail and Road transport, assume that there is no supply uncertainty.

a) Which mode of transport should the company choose if there is no demand uncertainty. Evaluate quantitatively in terms of various supply chain costs involved.

b) Which mode of transport should the company choose if there is demand uncertainty. Evaluate quantitatively in terms of various supply chain costs involved.

(Marks: 10)