



INDIAN INSTITUTE OF MATERIALS MANAGEMENT

Dec 2015

Post Graduate Diploma in Materials Management

Paper 17(OLD & NEW)

ADVANCED SUPPLY CHAIN MANAGEMENT

Date: 18.12.2015

Time: 2.00 p.m. to 5.00 p.m.

Max. Marks 100

Duration 3 hours

Instructions

1. The question paper is in three parts
2. Part A is compulsory. Each sub question carries one mark.
3. In Part B answer any 3 questions out of 5. Each question carries 16 marks
4. Part C is a case study with sub questions and it is compulsory.

Total marks-32

Total marks-48

Total marks-20

PART A

(1 x 32 = 32 marks)

Q. 1. Fill in the blanks.

- a) A business function is _____ and _____.
- b) Integration of value, information and funds leads to profit maximization in _____ _____
- c) Physical distribution is concerned with _____ _____ shipments.
- d) Demand uncertainty leads to _____ _____.
- e) The external supply chain connects the key _____ and _____.
- f) When a firm moves from a decentralized to centralized system _____ _____ reduces.
- g) ABC classification is based on the _____ _____ value..
- h) SOS classification system means _____ _____
- i) International supply chain networks can provide a wealth of _____ _____ if they are managed effectively..
- j) Grey Box is one level of _____ _____
- k) Dell developed build-to-order model in which configuration is determined when an _____ comes..
- l) EDI has a highly _____ _____ communication system..

Q. 2. State True or False

- a) The success of supply chain is based on their ability to deliver quality.
- b) Movement of finished products to customers is physical distribution.
- c) In a pull process there is no demand uncertainty.
- d) Cycle time is the total time from the beginning to the end of the process.
- e) In the systems approach, a channel is viewed as a set of fragmented parts.
- f) Direct shipment strategy was made famous by Wal Mart.
- g) A strategy that has a narrow competitive scope is a focus strategy.
- h) Distribution side of the firm is managed by MRP.

- i) When a buyer enters into a purchase and a sale transaction, it is called hedging.
- j) Average setup time related to cost capability area.
- k) Supplier selection is outside the purview of the procurement cycle.
- l) In cost focus, a firm seeks a cost advantage.

Q. 3. Match the following:

A	B
1. FSND, ABC, Golf	a. Commercial Tax
2. Decision analysis	b. White Box
3. Third party logistics	c. Inventory classification methods
4. Formal supplier integration	d. Differentiation strategy
5. Automatic identification method	e. Focus on core strength
6. Product dimension uniqueness	f. Information functionality
7. Informal supply integration	g. Grey Box
8. Excise duty	h. RFID

PART B

48 marks

(Answer any three. Each question carries 16 marks)

Q4. a) Explain the principles of supply chain information with suitable examples.

b) Explain the Blue whip effect.

Q5. a) Discuss any two functional strategies impacting supply chain performance.

b) Explain the impact of customer needs on implied demand strategy.

Q6. a) What are the goals of supply chain information technology?

b) What are your thoughts about the future of supply chain management?

Q7. a) Discuss the essential elements of geographical information system.

b) Explain any two performance metrics along the supply chain.

Q.8. Write Short Notes **any four**.

4 x 4 = 16 marks

- A) Third Party Logistics
- B) Retailer Supplier Logistics
- C) Mass customization
- D) Data warehousing and data mining
- E) Effective Forecasts

PART C

20 marks

Q.10 Case Study (compulsory)

INTRODUCTION

McDonald's is a limited menu restaurant is characterized by speed of operations. McDonald's is the world leading retailer with more than 33,000 restaurants in 118 countries serving more than 67 million customers each day. In India, the first outlets of the chain threw open their doors to the public in Delhi and Mumbai in 1996 within one month of each other. McDonald's is present in 40 Indian cities with 250 restaurants and serves 650,000 customers daily.

THE FOOD RETAIL INDUSTRY

Internationally, no doubt McDonald's is considered the largest food service retailer in the world. The first restaurant was established in 1955 in Des Plaines, Illinois, USA. It emerged in Indian territory in 1996 eyeing the informal dining-out industry in India which is estimated at \$74 billion a year. The fast food industry in India is estimated to be \$12-\$14.

THE INTRICATE SUPPLY-CHAIN

The strength of McDonald's India employees amounts 9,000 people including restaurant staff. But the surprise lies in its unique and intricate supply chain network which is managed by just five people across the whole country. Including the Quality Assurance people, this figure rises to just eight people who are all responsible for its efficient supply chain Indian territory.

SUI GENERIS NETWORK

The supply-chain network of McDonald's is of its own kinds:

- 100 percent outsourced
- Lean with no back-up staff and no frills.

The company is enjoying growth of 30-40 percent every year in India. The credit goes to the proper research work done before launching McDonald's in India. The experts set together and coordinated groundwork was done to ensure the successful functioning of its demand and supply system. It was from 1990 onwards, expert teams happened to be in India to check the strength of India's logistics industry, the reliability of its transport sector, and resource availability. The result was an extremely effective supply-chain at optimal level in place despite of India's weak infrastructure.

In context to Indian market special menus with religious and cultural sentiments were designed and in six years' time the company was ready with its entire supply chain. McDonald's is known for its beef burgers free of beef and pork in Indian subcontinent.

MULTI-LAYERED SUPPLY-CHAIN

The McDonald's supply chain is both critical and multi-layered. There are two categories in food ingredients supply; Tier-1 and Tier-2 suppliers.

In Tier-I there are 14 core suppliers-provide processed products e.g. Vegetable and chicken patties comes from Vista Processed foods Pvt Ltd. , French fries, potato wedges and hash browns by McCain Foods India Pvt. Ltd. And so on.

In Tier-2 suppliers there are growers and processors who provide lettuce and potato, poultry items and coating systems that are used for coating the chicken and vegetable patties. The flow of ingredients are from Tier-2 to Tier-I suppliers who process them.

Now, the fleet of refrigerated trucks transport these processed foods to the company's Distribution Centers(DCs). These trucks have been specifically maneuvered for variability of McDonalds products. These are Multi-temperature and single temperature trucks into practice where 250 McDonalds Indian restaurants are provided on time fast delivery. This is not unidirectional, it also include the significant aspect of return logistics. Hence the empty bottles and racks are available for further processing. Plastic crates are used for buns to ensure their quality.

With four Distribution Centers across the country all 250 restaurants are served effectively. And every new outlet addition is capably handled by these DCs within in ten days in the country. The Noida and Mumbai DCs are primary Distribution Centers owned by the company. The other two Distribution Centers are in Bengaluru and Kolkata are housed in leased properties. The system that is used to manage link between Restaurant and DCs is a hub-and-spoke model where the DCs act as hubs. McDonalds transportation has been completely outsourced and since 80 percent is refrigerated truck movement, the company has a dedicated fleet which transports their goods.

Questions:

1. Discuss the major initiatives associated with the supply chain of the company.
2. What are the strategies that you would suggest to the company to become proactive in ensuring supply chain efficiency?
