

INDIAN INSTITUTE OF MATERIALS MANAGEMENT
Post Graduate Diploma in Materials Management

PAPER 17
ADVANCED SUPPLY CHAIN MANAGEMENT

Date: 15-6-2009

Time: 2.00 PM to 5.00 PM

Max Marks : 100

Duration : 3 hours

Instructions:

1. PART A is compulsory. Answer all questions. Total Marks:32
 2. From PART B, answer any three questions out of 5 questions. Each question carries 16 marks. Total Marks:48
 3. PART C is Case Study and is compulsory. Answer the questions reflecting through understanding of the case. It carries 20 marks. Total Marks :20
 4. Please read the instructions on the answer sheet carefully.
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PART A

Q.1(A) Write the full form of the following : (Total 6 Marks)

- | | | |
|---------|---------|---------|
| (1) DSS | (2) EOQ | (3) BOM |
| (4) GPS | (5) B2B | (6) ERP |

Q.1 (B) State whether the statement is 'TRUE' or 'FALSE': (1Mark each)

1. Supply Chain Management takes into consideration all activities at Strategic, tactical and operational levels.
2. Calculation of inventory turn over ratio may not be an appropriate approach for designing distribution network plan.
3. Buy back contracts do not allow risk sharing.
4. In sales rebate contracts retailers get direct incentives for sales above a certain quantity.
5. In Cross Docking system inventory costs and lead time can not be controlled.
6. High demand uncertainty leads to preference for managing Supply Chain based on realized demand – a pull strategy.
7. Third Party Logistics (3PL) companies can provide cost effective flexibility across geographical locations .
8. The critical supply chain cost drivers like transportation and inventory costs should be considered while designing for Logistics networks as well as Product design.
9. The Supplier Integration as close to Supply Chain Management as possible helps the firms to concentrate on core competencies .
10. Supply Chain Management is an important component in fulfilling customers needs and providing customer value.
11. Electronic commerce refers to replacement of physical processes with electronic processes.
12. International Supply Chain Management networks can provide additional opportunities to the stakeholders, if managed effectively.

Q.1(C) Match the following: (1 marks each)

| | | | |
|---|----------------------------------|---|--|
| 1 | Risk Pooling | A | Algorithms that provide good solutions to problems |
| 2 | Logistics network | B | Interest on material held, taxes, insurance, obsolescence |
| 3 | Heuristics | C | Supplier decides appropriate stock levels of each product |
| 4 | Inventory Carrying Cost | D | Full refund for a portion of returned items |
| 5 | Quantity - Flexibility Contracts | E | Reduce lead time & operating expenses on distribution centre |
| 6 | Buy Back Contracts | F | Suppliers, Warehouses, Distribution centers, retail outlets |
| 7 | Direct Shipments | G | Reduction in demand variability across locations |
| 8 | Vendor Managed Inventory | H | Refund of unsold goods for some agreed-upon price |

Q.1(D) Write short note : (Any Three): (2 Marks each)

- 1) Supply Chain Management 2) Balanced Score Card 3) 3PL
4) ERP 5) e-commerce
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PART B

- Q.2** Discuss with examples how Supply Chain Management has evolved over time.
- Q.3** Explain effective inventory management techniques/strategies for a manufacturing company.
- Q.4** Discuss the main factors that contribute to increase in variability i.e. Bullwhip effect .
- Q.5** Discuss the stages of development in integrating information technology with Supply Chain.
- Q.6** What is GIS ? How is it useful in Logistics.
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PART C

In the second half of 2008, a large consumers goods manufacturing company was confronting with common inventory management problems. The consumer market for the company's products is mainly concentrated in urban cities. The market research data suggests that company has to focus on entire Supply Chain Management and expanding the consumer base to rural areas in order to remain competitive in the industry and for future growth.

The company has got good reputation in the market and the products enjoy better brand value as compared to competitor's products. The company is receptive to change, and amenable to adopting modern technology.

The information management systems of the company was not responsive to the changed market situation. All five manufacturing units with different stand alone systems, located in four states of northern India needed proper management of safety stocks / optimum inventory levels for improving customer service and operational efficiency. The management of the company has decided for implementing internet based effective decision support system covering entire value chain. The purpose of the exercise included setting up a robust system for optimum inventory holding, dealing with conflicting inter- departmental and inter- unit objectives, and sorting out capacity constraints for men money and material.

The Managing Director of the company has entrusted you the responsibility of appropriate planning, organizing and implementing the project. You are required to suggest for suitable information technology infrastructure and roadmap for smooth transition, based on current industry practices.

Discuss the various stages of company wide implementation of the system. How will you evaluate the performance of entire supply chain ?
