INDIAN INSTITUTE OF MATERIALS MANAGEMENT

Post Graduate Diploma in Materials Management

Paper 17

ADVANCED SUPPY CHAIN MANAGEMENT

Date: 16.12.2011   Max. Marks 100
Time: 2.00 p.m. to 5.00 p.m.   Duration 3 hours

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Instructions
1. The question paper is in three parts
2. Part A is compulsory. Each question carries one mark.   **Total marks-32**
3. In Part B answer any 3 questions out of 5. Each question carries 16 marks **Total marks-48**
4. Part C is a case study with sub questions and it is compulsory.   **Total marks-20**

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PART A

Que 1   Expand the following

1 CRM

2 DSS

3 JIT

4 TQM

5 EOQ

6 POS

7 RSP

8 ERP

Que2   Fill in the blanks

1. Three key flows of supply chain management are Product/Materials, ------------ and Funds.

2 The 'Pull View' is a direct outcome of the --------------Effect

3 -------is the total elapsed time to move a unit of work from the beginning to the end of a physical process.

4 Inventory Turnover Ratio = Annual Sales ÷ ------------

5 ----------- is an automatic identification method, relying on storing and remotely retrieving data using devices called RFID tag or transponders

6 SKU stand for ---------------

7 A major issue in deploying GIS is the availability and quality of the ---------- data.

8 -------- are the initial cost associated with the purchase of materials, products and services.

Que3   Match the following

	Column A		Column B
a)	3PL	**1**	√ (2OD) ÷ UI
b)	Mass Production	**2**	Third Party Logistics
c)	Craft Production	**3**	Production of a large quantity of small variety of goods
d)	EDI	**4**	Forth Party Logistics
e)	Total Cost of Ownership (TCO)	**5**	Inventory Classification Model
f)	4PL	**6**	Highly structured message communication system
g)	Pareto Principle	**7**	Actual price of any purchase which includes hidden extra
h)	Economic Order Quantity	**8**	Creating unique & interesting products or services

Que4   Find True or False of the following

1) Cross docking is a system where the incoming shipment is transferred into outgoing shipment without entering the warehouse

2) Available To Promise (ATP) looks not only on the capability but also on the profitability of completing an order.

3) Pull process in supply chain are initiated by a customer order whereas push process are initiated and performed in anticipation of customer order

4) The percentage distribution of stocks as per Pareto Distribution is 50/50

5) E-commerce includes purchasing over the Internet, exchanges, order tracking and e-mail.

6) In ABC Analysis, 'C' items are counted the least frequently

7) One of the way to control Bullwhip Effect is controlling Lead Time

8) Safety stock reduces as firm moves from a decentralized system to a centralized system

PART B

Que5   a) What are the key issues in Supply Chain? Discuss in detail.

b) What are the various types of inventory classification models? Explain any one in detail.

Que6   **Write short notes on (any two) (8+8)**

1. a) Supply Chain Flow

b) RFID

2   a) Economic Lot Size Model

b) ABC Analysis

3   a) Bullwhip Effect

b) Cross-Docking in supply chain

4   a) Third Party Logistics

b) Parameters for Supply Chain Design

Que7   a) What are the factors that are significant while quantifying the Bullwhip effect?

b) What are the various issues in International SCM? Explain the regional differences in logistics

Que8   a) What are the various functional strategies that impact supply chain performance?

b) Write short note on 'Information Technologies for Supply Chain'.

Que9   **Distinguish between**

a) Centralized versus Decentralized Control of supply chain network

b) PUSH versus PULL System in supply chain

Que10

(Case Study)

Following are the observations based on the analysis done in Kelley's Chocolate Shop :

⇨ The annual demand for chocolate-covered cherries is 2,500 units.

⇨ The setup cost is $15 per order.

⇨ The holding cost per unit per year is $0.25.

Based on the above observations, kindly answer the following questions :

i) What is the optimum number of units per order?

ii) What is the expected number of orders per year?

iii) Assuming a 250 day working year, what is the expected time between orders? Also what are the total annual inventory costs?

iv) If delivery of the chocolates takes 2 days, at what level of stock should a new order be placed?

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