

INDIAN INSTITUTE OF MATERIALS MANAGEMENT
Post Graduate Diploma in Logistics Management

Paper No. 4
Distribution Management

Date: 11-06.2009
Time: 10.00 am to 01.00 pm

Max. Marks: 100
Duration: 3 hrs

Instructions:-

1. From Part **A**, answer all questions (Compulsory). Each sub-question carries 1 mark.
Total Marks = **32**
 2. From Part **B**, answer 3 questions out of 5 questions. Each question carries 16 marks.
Total Marks = **48**
 3. Part C is a case study with 5 sub-questions (Compulsory).
Total Marks = **20**
-

PART – A

Q.1. - Choose the right answer:

- 1) Efficient Consumer Response (ECR) combines several logistics strategies to improve:
 - a) Turnover
 - b) Competitiveness
 - c) Distribution
 - d) Customer relationship management
- 2) The design of a *Logistics Information System* begins with:
 - a) Customer needs
 - b) Distribution demands
 - c) Manufacturing requirements
 - d) Transportation requirements
- 3) MRP-I is a computer-based production and inventory control system that attempts to minimise:
 - a) Manufacturing time
 - b) Manufacturing planning time
 - c) Inventories
 - d) None of the above
- 4) Which of the following is **NOT** a logistics activity:
 - a) Communication
 - b) Demand forecasting
 - c) Benchmarking
 - d) Order processing

- 5) The time that elapses between the customer's order placement and the receipt of the product is:
 - a) Supply chain
 - b) Order cycle
 - c) Distribution cycle
 - d) None of the above

- 6) KANBAN is a term related to:Shipping
 - a) Warehousing
 - b) Manufacturing
 - c) Logistics decision making

- 7) Issuing from the recently acquired material, leaving those acquired at an earlier time period is:
 - 1) Average cost
 - 2) FIFO
 - 3) ROL
 - 4) LIFO

- 8) Which of the following is **NOT** a *Packaging* function:
 - a) Communication
 - b) Damage protection
 - c) Utility / Convenience
 - d) Product-Mix consideration

Q.2 - State whether TRUE or FALSE:

- 1) Providing *Customer service* is the primary goal of logistics management
- 2) *Striking a balance between supply and demand* is one of the functions of inventory
- 3) *Packaging* influences the efficiency of the logistical system
- 4) *Inventory carrying costs* are those associated with the amount of inventory stored.
- 5) *Economic order quantity* (EOQ) is the quantity to be ordered when total cost is at maximum.
- 6) *Price forecast* is based on information gathered and analyses about demand and stock.
- 7) *International transportation* is more competitive than domestic transportation.
- 8) *Pull system* depends on information and is based on constant monitoring of supply.

Q.3 Fill up the blanks (Choose from the bracket):

- 1) A ----- is a route in which a truck delivers a product from a single supplier to multiple retailers[Channel, Milk run]

- 2)International Transportation is more ----- than domestic Transportation[Expensive, Competitive]

- 3)Warehousing has 3 basic functions – Movement, Storage and ----- [Information transfer, Inventory

- 4) Distribution requirement planning (DRP) is the application of ----- principles to the distribution environment [Inventory management, MRP]
- 5) Barcodes enable quick, accurate ----- [Checking, Identification]
- 6) Cross Docking decreases ----- cost [Warehousing, Inventory]
- 7) LCL stands for ----- [Levelled Cargo Load, Less than Container Load]
- 8) Transit Warehouse function is temporary in nature and the activities are -----
----- [Unloading & Invoicing, Loading & Unloading]

Q.4 Match column A with column B:

A	B
1. PWB	a) Air cargo
2. Hoover's Model	b) DDC
3. Channel Mapping	c) Identification
4. Perishable items	d) Parcel Way Bill
5. IATA	e) LIFO
6. TOFC	f) Warehousing
7. Barcode	g) Transportation Network planning
8. Direct Distribution Channel	h) Trailer On Flat Car

PART – B

Answer any 3 questions

- 1) Warehouses and Distribution centers are not the same – Substantiate this statement?
- 2) The daily requirement of furnace oil in an industry is 60 liters and the industry works 250 days in a year. The inventory carrying cost is 20% of unit price. The unit price is Rs 2/- per litre. The ordering cost is Rs 1/- per order. What is the Economic Ordering Quantity?
- 3) Describe the criteria which determine the design of a Warehouse? What are the principles to be kept in mind while estimating the storage space in the design of a warehouse?
- 4) What is meant by *stockless purchasing*?
- 5) What are the major functions of Logistics?

Part - C

Case Study (Compulsory)

A control valve manufacturing company has its main plant at X and another plant at Y situated 400 Kms apart, both located in South India. Plant Y is manufacturing accessories for main product, which is tailor-made equipment. Initially plant Y was catering to the requirements of plant X alone, but later changed to *Batch* type production to meet the demand from the market. To keep the operational cost low, plant Y was outsourcing activities like machining, welding and painting. Only assembling and testing operations are done *in-house*. Packing and delivery of *finished products* to plant X and other locations have also been outsourced. Despatch activity at plant x is also outsourced.

Transshipment is mainly done through road in India and only during emergencies, airfreight is resorted to. Warehouses are operated at both plant locations.

The total sales turnover of the company is Rs 55 crores per annum whereas that of plant X is Rs 35 crores and of plant Y is Rs 20 crores. Average inventory (in Rs crores) during the four quarters of both the plants are shown in the following table:

Quarter	Plant X	Plant Y
I	5	3
II	9	5
III	8	5
IV	6	3

20% of the total turnover is from exports and it is being done from plant X alone. For export, air and sea transshipment is selected according to customer need. Here also despatch activities are outsourced.

The company has regional centers at 4 metros where *Marketing and Servicing* functions take place. Here *accessories* are as well as *spare parts* are stocked to cater to the Customer at short notice. Replenishment of stocks is made from manufacturing plants on reaching *minimum level*.

The company has adopted ASTM standards for material procurement, ANSI standards for testing and is accredited with ISO-9000. It has implemented ERP (SAP/R3) system. Manufacturing plants and regional centers are well connected with telephone, fax and internet.

Questions:

- 1) Calculate the inventory turnover ratio of plant X and plant Y? Where are the Distribution centers located?
- 2) What are the Transportation modes adopted in the above case? How the role of Despatch outsourcing agency be defined in logistics?
- 3) Cite examples of EDI (Electronic data exchange) in the above case? Can it be stated that the above company is practicing e-commerce?
- 4) What are the manufacturing systems adopted in plants X and Y? What are the quality systems adopted in the above case?
- 5) Cite at least 3 key logistics activities from the above case?
