

DEC-2010

INDIAN INSTITUTE OF MATERIALS MANAGEMENT
Post Graduate Diploma in Materials Management
Graduate Diploma in Materials Management
Paper 11
LOGISTICS & SUPPLY CHAIN MANAGEMENT

Date : 12.12.2010
Time: 10.00 am to 1.00 pm

Max Marks: 100
Duration: 3 hours

Instructions:

1. **PART A** is compulsory. Answer all questions.
2. From **PART B**, answer any three questions. Each question carries 16 marks.
3. **PART C** is **Case Study** and is compulsory. Answer the questions reflecting through understanding of the case.
4. Please read instructions on the answer sheet carefully.

PART A

Q.1 Please state whether the following statements are “True” or “False”. (1 Mark each)

[Total : 16 Marks]

1. Piggyback is a form of containerization in which rail and road transportation coordinates.
2. Logistics packaging is designed considering distribution objectives.
3. Packaging helps in logistics management.
4. The supply chain is the link between procurement, manufacturing & distribution.
5. Exact algorithm does not provide optimal solution.
6. Route planning is required for transportation of perishable goods.
7. Voyage charter refers to shipment by road.
8. Consolidation saves cost on freight.
9. In FOB terms, seller pays the lifting charges.
10. Inventory levels can be reduced by lead time analysis.
11. Time charter allows use of a ship forever.
12. Simulation replicate the functioning of logistics network.
13. FOR is used for any mode of shipments as per INCOTERMS.
14. The effective supply chain integration leads to cost escalation.
15. Inland water transportation is eco-friendly.
16. The strategic alliances are typically multifaceted, goal oriented, long term partnerships in which only rewards are shared.

Q.2 Match the following. (1 Mark each)

[Total : 8 Marks]

(1) Sales rebate contracts	(a) Important for customer service
(2) Stock availability	(b) Custom Duty not paid

(3) Wal-mart	(c) Easy transfer between two transportation modes
(4) ISO – 9000	(d) Cross Docking
(5) Inadequate stock	(e) Quality
(6) Uncertain Demand	(f) Incentive for item sold above certain quantity
(7) Bonded warehouse	(g) Deficiency level
(8) Containerization	(h) storage risk

Q.3 Write the full form of the following. (1 Mark each)

[Total : 8 Marks]

(1) WTO ; (2) ROI; (3) B/L; (4) AITS; (5)TEU; (6) CRM;(7) C & F; (8) JIT

PART B

[Total : 48 Marks]

Write any THREE out of the following five questions i.e, Q.4 to Q.9: (16 Marks each)

- Q.5.** Discuss various service attributes of the logistical system. Which are the value added logistical services extended by logistical service provider?
- Q.6.** What are the components of supply chain? Please discuss importance of each in brief. Describe the role of logistics in the success of supply chain of a firm.
- Q.7** Discuss the functions of warehousing. Discuss the various warehouse performance parameters.
- Q.8** Discuss the reasons for carrying inventory. Discuss the various techniques for inventory control with their merits and demerits.
- Q.9** Discuss the various system used for tracking consignments. How the usage of new technologies will help in effective asset utilization in logistics supply chain?
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PART C
[Total : 20 Marks]

Q.10
Compulsory

CASE STUDY

FlowAir Fans, New Delhi is a distributor of industrial fans used in plants, warehouses, and other industrial facilities. Its market area is Mumbai, Pune, Vapi, Bharuch, Vadodara, Alwar, Goa and Chennai. The fans are manufactured in Bhopal and currently dispatched to New Delhi via road transportation. Mr Ram Kumar , VP , Logistics has asked his team to evaluate using rail transportation.

Mr Rohit Shetty , Manager(Logistics) gathered the following information:

Annual Demand : 36000 fans
Fan Price : Rs 4000
Inventory Carrying Cost : 25%
Order cost to replenish inventory : Rs 200
In transit inventory carrying cost : 15%
Order cycle time using rail : 4 days
Order cycle time using road : 2 days
Rail rate : Rs 1 per kg
Road rate : Rs 1.25 per kg
Unit weight : 250 kg per fan

Questions :

1. What is the economic order quantity for FlowAir Fans?
 2. What is the total cost (not considering transportation related costs) of the EOQ?
 3. What is the total cost using rail transportation?
 4. What is the total cost using road transportation?
 5. What alternative should FlowAir Fans use?
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