

DEC-2009

INDIAN INSTITUTE OF MATERIALS MANAGEMENT

Post Graduate Diploma in Materials Management

Graduate Diploma in Materials Management

Paper 11

LOGISTICS & SUPPLY CHAIN MANAGEMENT

Date : 09.12.2009

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.
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PART A

**Q.1 Please state whether the following statements are “True” or “False”. (1 Mark each)
[Total : 12 Marks]**

1. Exact algorithm is those that found optimal solution.
2. Safety stock increases as firm moves from decentralized system to a centralized system.
3. Packaging is important to market the product.
4. Voyage charter refers to shipment by road.
5. Transportation by road is an eco-friendly transportation mode.
6. Consolidation ensures cost saving on freight.
7. The purpose of supply chain mapping is to identify non-value added activities.
8. Cobbling strategy is used with players who are not competitors but cater to the need of similar group of customers and have a similar distribution channels.
9. Logistic packaging is designed with a view to distribution objectives.
10. Heuristic algorithm is those that found optimal solution.
11. Outbound logistics includes the warehousing, transportation and inventory management of finished products.
12. Route planning is not required for transportation of perishable commodities with short shelf life.

Q.2 Match the following. (1 Mark each)**[Total : 12 Marks]**

(1) Cross docking	(a) Storage Risk
(2) Time Charter	(b) Connection between source of supply and demand
(3) Nodal Network	(c) Use of a ship for an agreed upon period
(4) Bonded Warehouse	(d) For easy transfer between two transportation modes
(5) Logistics	(e) warehouses are inventory coordination points
(6) Automated identification	(f) Goods under 'Customs' verification
(7) Uncertain Demand	(g) Multiple transshipment, pick up and delivery points
(8) Containerization	(h) Bar Code
(9) TQM	(i) Inventory Control
(10) Lead Time Analysis	(j) Quality
(11) Inadequate stock	(k) Hazardous liquids
(12) Dedicated Tankers	(l) Deficiency level

Q.3 Write the full form of the following. (1/2 mark each)**[Total : 4 Marks]**

(1) AQL ; (2) ECO; (3) FSN; (4) CAN; (5) HAWB; (6) VED; (7) ERP; (8) AITS

Q.4. Write in brief for the following: (Any TWO)(2 Marks each)**[Total : 4 Marks]**

(1) Artificial Intelligence; (2) Integrated logistics management; (3) Lean supply chain;
(4) Sea worthy packaging

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 the importance of various linkages of supply chains in the light of prevailing business environment. Please list the benefit of e-business solution implementation.

Q.6 What are the warehousing strategies organizations normally adopt, based on their product market characteristics? Discuss the various warehouse performance parameters.

Q.7 "Inventory control is the key to the profitable running of a business" Comment. Discuss the various approaches to control inventory investment.

Q.8 Describe the role of logistics in the distribution channel of a firm. Discuss the role of information technology in logistics and channel management.

Q.9 Discuss the various systems used for tracking consignments with their relative merits and demerits.

PART C
[Total : 20 Marks]

Q.10
Compulsory

CASE STUDY

Modern Cements Ltd (MCL) has manufacturing set up at sea coast of Gujarat at Veraval with capacity of about 10 million tons per annum since 2001.

Cement being a bulk commodity, transportation is a vital component in the cost calculation. MCL's board members understood the importance of logistics activity in cost reduction.

Company sells the cement through a network of 112 CF agents and 3020 stockists. Company also sells product directly to large construction sites. The whole process of cement transportation depends on the marketing plan of company. MCL serves to Maharastra(approx 25%), Rajasthan(approx 15%),Gujarat(approx 25%), North & Central India(approx 15%), South Zone(approx 20%).

MCL prefers to move product by rail where the distance is more than 150 kms to the interior parts of Central & North Zone of India. For dispatching product in southeast and southwest zones, company prefers to use sea routes to send products in bulk to major southern ports where they have packaging units to sell the product in 50 kg bag packing in South Zone. In bulk transportation the cement is vacuum filled into a vessel of transportation.

MCL is also looking for feasibility of transporting through inland waterways.

MCL is also studying feasibility of offering Ready Mix Concrete to large construction sites having advantages of a faster construction period, good quality, no pollution and lower storage requirement at site.

MCL is also planning to expand manufacturing capacity to the tune of 15 million tons per annum. They want to expand their marketing operations in Northeast part of the country.

MCL is still foreseeing a potential for cost saving by reorganizing logistics operations.

Answer the following questions:

- 1) Considering marketing locations and future expansion, does MCL has further scope to reduce its outbound logistics costs? If yes, how the same can be achieved?
 - 2) What can be strategies for improving overall logistics function?
 - 3) How will you manage competitiveness in selling product in Northeast India?
 - 4) Should company expand for establishing Ready to Mix Concrete plants at various remote locations in India? How will it help in the growth of the MCL looking to current scenario of Infrastructure Development in India.
 - 5) Should company use any vehicle tracking system? If yes, which one will you recommend and why?
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