



**INDIAN INSTITUTE OF MATERIALS MANAGEMENT**  
**Post Graduate Diploma in Materials Management**  
**Graduate Diploma in Materials Management**  
**PAPER No. 12 (New)**  
**Packaging & Distribution**

**June 2016**

**Date : 18.06.2016**  
**Time : 10.00 a.m to 1.00 pm**

**Max. Marks :100**  
**Duration : 3 Hrs.**

**Instructions:**

1. From Part A – Answer all questions (compulsory). Each sub questions carries 1 mark.
2. From Part B – Answer any 3 questions out of 5. Each question carries 16 marks.
3. Part C is a case study (compulsory) with questions. Read the case study carefully and answer the questions
4. Please read the instructions given in the answer sheet

**Total : 32 Marks**

**Total : 48 Marks**

**Total: 20 Marks**

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**PART – A**

**32 marks**

**Attempt all questions. Each sub questions carries 1 mark**

**Q. 1. Choose correct answer from multiple options** **8 marks**

- i) Which of the following is not a logistical function of packaging
  - a) Containment
  - b) Communication
  - c) Convenience
  - d) Consumption
- ii) Atta is available in the market in 2kg, 5kg and 10 kg pack sizes. This can be identified as which function of packaging
  - a) Apportionment
  - b) Containment
  - b) Communication
  - d) Promotion
- iii) Selection of packaging materials depends on all of the following except
  - a) Production volume
  - b) Transportation methods
  - c) Climate
  - d) Environmental considerations
- iv) Package \_\_\_\_\_ is used to protect fragile items
  - a) Strapping
  - b) Cushioning
  - c) Taping
  - d) Wrapping
- v) Material Handling Institute identifies all of the following as material handling except
  - a) Motion
  - b) Time
  - c) Quality
  - d) Space
- vi) Packaging economics has \_\_\_\_\_ elements of packaging cost
  - a) Four
  - b) three
  - c) six
  - d) seven
- vii) Which of the following have common objective of moving goods from origin to destination
  - a) Shipper and consignee
  - b) Shipper and carrier
  - c) Carrier and consignee
  - d) Carrier and public
- viii) Carrier that provide transport to select customers are called
  - a) Private carriers
  - b) Common carriers
  - c) Contract carriers
  - d) Public carriers

**Q. 2. Fill in the blank (Do not reproduce the statement). 8 marks**

- i) Basic product modified with new features to exceed customer expectations is called \_\_\_\_\_ product.
- ii) Green dot on a packet indicate that the food contained is \_\_\_\_\_ food.
- iii) Ideal package from the point of view of transportation and material handling is a \_\_\_\_\_
- iv) \_\_\_\_\_ are devices used to seal bottles, jars, etc.
- v) \_\_\_\_\_ is sometimes referred to as "final mile".
- vi) The two guiding principles of transportation are economy of scale and economy of \_\_\_\_\_.
- vii) Transportation cost can be optimized through \_\_\_\_\_ .
- viii) \_\_\_\_\_ is not a document of title.

**Q.3. State True or False (Do not reproduce the statement) 8 marks**

- a. Packaging is used to add value to a product.
- b. The determining factors for the degree of protection are volume and fragility of the product.
- c. Principle of space utilization suggests making optimum use of available floor space.
- d. AGV is an example of engineered material handling system.
- e. Common carriers can offer service at discriminatory prices.
- f. The price per kilogram to move specific product between two locations is referred to as the rate.
- g. Bill of exchange is filed at customs to clear import cargo.
- h. Maximum insurance cover is provided by institute cargo clause C.

**Q.4. Expand the following**

**8 marks**

- a) FMCG
- b) MVB
- c) CTD
- d) SWMA
- e) LTL
- f) PLUS
- g) TEU
- h) IATA

## PART B

48 marks

**Answer any 3 questions out of 5. Each question carries 16 marks**

- Q.5. a) Describe in your own words what you understand by packaging.  
b) Explain functions of packaging giving examples for each.
- Q.6. a) Explain the functions of various ancillary packing materials.  
b) Explain the concept of channels of distribution and network design
- Q. 7. Differentiate between  
a) Package sealing and package reinforcement  
b) Packaging cost and packaging economics  
c) Palletization and unitization  
d) Bill of exchange and Bill of entry
- Q.8. a) What are the roles of the players in transportation?  
b) Explain different types of ships highlighting their advantages.
- Q.9. Write short notes on any four  
a) Material handling principles  
b) Declaration and labeling  
c) RFID  
d) Transport economics  
e) Dangerous cargo

## PART C

**20 marks**

### **Q. 10) Case Study- compulsory**

John Vance, President of Vanity Products, is reading the latest financial results reported in the company newsletter. Every time he reads this year's financials, he recalls the company's early days and the struggle to get retailers to stock his new line of bathroom vanities, mirrors and light fixtures. Today, the company is straining to produce enough products to meet retailer demand.

Vanity Products (VP) manufactures a variety of bathroom accessories, including vanities (medicine chest), mirrors, lighting fixtures and shelving. The products are made of rust-and chip-resistant molded plastic and come in a variety of modern designs and colors. The plastic construction permits VP to produce a high-quality bathroom accessory at an affordable price.

In the middle of 1990s, John focused the company's marketing attention on the large home centre chain stores: Home Depot, Walmart, Sears and so on. Today, more than 80 percent of VP's sales are to these retail chains, and they account for 95 percent of its growth. Without these chain customers, VP would be a small, struggling manufacturer.

John's pleasant memories quickly fade to the realities of dealing with these large-chain retailers. In the past two years, VP has been required to install EDI software that permits the buyers to assess VP's

inventory data file to determine availability, to place orders and to verify shipment status. The latest demand from one of the chains, which is a precursor of what the others will want, is for VP to reduce cycle time by shipping orders directly to the stores.

Currently, VP receives an order that is a consolidation of store orders to be served from a chain distribution warehouse. The order is sent in truckload quantity to the distribution warehouse, where the individual store is broken out and sent to the store. Now, each store will be ordering separately, and VP is to deliver the order within five working days.

When John approached Tom White, Manager of logistics, with the latest demand, Tom was not very comforting. He indicated that freight costs would certainly increase because VP would be shipping less-than-truckload quantities at higher freight rates. This higher freight cost could be offset with freight consolidation software that combines stores shipments into truckload quantities for peddle runs. John liked the idea of keeping freight costs down, because VP would have great difficulty increasing prices because of increasing competition.

However the freight consolidation strategy would increase the shipment holding time prior to dispatch, thereby making it difficult for VP to meet the requirement that orders be delivered in five working days. Since cycle time reduction is the primary objective of the chain store's demand, any process adding to the delivery time would not be acceptable.

Tom is working on an idea to establish a series of distribution warehouses in the market areas where the chain stores are located. Tom's vision includes truckload shipments from the plants to the distribution centers and cross-docking of products from incoming trucks delivering orders to specific stores. In addition, each distribution warehouse would maintain a minimal level of inventory to meet emergency orders placed by local stores.

John is skeptical of Tom's distribution warehouse idea because he feels it would increase capital costs, inventory levels and transportation costs. He is not even certain it would meet the delivery time requirements.

Questions:

- i) Is John's apprehension right? Analyze.
- ii) Analyze the growth of Vanity Products from the point of view of distribution.
- iii) In your opinion what VP should do to reduce cycle time?

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