



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

**Dec 2015**

**Date : 19.12.2015**

**Max. Marks :100**

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

**Duration : 3 Hrs.**

**Instructions:**

- |   |                         |
|---|-------------------------|
| 1. From Part A – Answer all questions (compulsory). Each sub questions carries 1 mark.                        | <b>Total : 32 Marks</b> |
| 2. From Part B – Answer any 3 questions out of 5. Each question carries 16 marks.                             | <b>Total : 48 Marks</b> |
| 3. Part C is a case study (compulsory) with questions. Read the case study carefully and answer the questions | <b>Total: 20 Marks</b>  |
| 4. Please read the instructions given in the answer sheet   |                         |

**PART – A** **32 marks**  
**Attempt all questions. Each sub questions carries 1 mark**

**Q. 1) Fill in the blanks**

- a) ----- reduces the number of discrete packages or loads, which require handling, saving on costs as well as improving on the level of protection of the product.
- b) ----- packaging should not be used for those products which are too delicate
- c) ----- transmission properties like permeability to gases, water, vapour, odours and extractability test.
- d) ----- is the term used for the successful market sale on a regular basis of a given product or services by a particular entity.
- e) ----- is measured by the number of days (or hours) from the time of shipment leaves your facility to the time it arrives at the customer's location
- f) ----- refers to vehicle space utilisation as it is reflected by product dimensions.
- g) In case of long term lease, containers are usually leased for a period of ----- years
- h) The area of water in a port or harbour totally enclosed by piers is known as the -----

**Q. 2) Match the following**

COLUMN A	COLUMN B
a) Apportionment	1) Important commercial document which bridge the time gap between shipment of goods and receipt of sales amount.
b) Laser sheet labels	2) In this process the EDP's receive supplies directly from suppliers.
c) FPO	3) This function of packaging reduces the output from large scale, high volume industrial operations to the manageable size for the end user.
d) Supply milk run	4) Vertical wall dividing the hull into separate compartments
e) Conveyor	5) is as collection of material so arranged and restrained that it can be handled, stored and controlled as a single entity.
f) Unit Load	6) Loose single sheets that have been manufactured to meet the necessary requirements to run through an ink jet or laser printer
g) Bulkhead	7) Especially useful in applications involving the transportation of heavy or bulky materials.
h) Bill of exchange	8) Objective of this law is mainly to regulate the quality and hygiene of fruits and vegetables products

**Q. 3) State True/false of the following**

- a) Skin packaging is more suitable for products which are sensitive to heat.
- b) A good bag has antistatic properties on both the inside and outside of the bags film construction.
- c) Conveyors can be used in a multiple of ways from warehouse to airport baggage handling system
- d) Packaging also play an important role for portraying information about the product
- e) Class rates refer to the price per kilogram to move a specific product between two locations.
- f) PLUS is a not for profit organisation whose mission is to develop, administer, educate, support and market the PLUS program for the industry.
- g) IATA controls airfreight rate formulation insofar as major world airlines are affiliated to it.
- h) Tramp vessels operate on fixed routes between two ports or two series of ports.

**Q. 4) Expand the following**

- a) LCM
- b) MVB
- c) ESDS
- d) PIMS
- e) DSC
- f) MFPO
- g) SWMA
- h) LTL

**PART B**

48 marks

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

**Q. 5) a)** What re the requirements of cushioning materials?

b) Explain about various types of protective packaging ?

**Q. 6) a)** What are the various tests used for plastic packaging?

b) What are the various elements of packaging cost?

**Q. 7) a)** Explain prevention of food adulteration act ?

b) Explain the distribution audit process ?

**Q. 8) a)** Discuss about transportation functionality and principles.

b) Write short note on palletisation.

**Q. 9) a)** Explain the various types of operating ships

b) Differentiate between RFID and Bar codes.

PART C

20 marks

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

Determine an initial basic feasible solution to the following transportation problem by using a LCM method.

	D1	D2	D3	D4	Supply
S1	1	2	1	4	30
S2	3	3	2	1	50
S3	4	2	5	9	20
Demand	20	40	30	10	

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