



INDIAN INSTITUTE OF MATERIALS MANAGEMENT
Post Graduate Diploma in Logistics Management

Dec 2013

PAPER-5

LOGISTICAL SYSTEMS OPERATION

Date: 14.12..2013
Time: 2.00 p.m. to 5.00 p.m.

Max Marks: 100
Duration: 3 Hours

Instructions:

- 1) Part A- Answer all questions compulsory
- 2) Part B-Answer any three questions
- 3) Part C -Compulsory

Total Marks=32
Total Marks=48
Total Marks=20

PART – A

(32 x1 = 32 marks)

Q.1 True or False

Marks (8)

- a) Shipment consolidation is an economic benefit of warehousing.
- b) Forecasting demands can be classified as either dependent or independent.
- c) Safety stocks do not protect against uncertainty.
- d) Moving average forecasting uses an average of the most recent period's data.
- e) Establish appropriate forecast feedback loop so that the process can be improved.
- f) Inventory decisions are low risk and low impact from the perspective of logistics operation.
- g) The ideal inventory process consists of manufacturing a product to a customer's specification once the order is placed.
- h) Forecasts can be developed with either the top-down or the bottom-up approach.

Q.2. Fill in the blanks.

Marks(8)

- a) A warehouse is typically viewed as a place to inventory.
- b) Full warehouse utilisation throughout the year is possible for goods.
- c) Safety stocks protect against
- d) Logistics requires a quantity for planning and coordination.
- e) techniques cover time analysis of forecasting.
- f) Forecast approach bottom-up issince each distribution centre forecast is developed independently.
- g) The time horizon for logistics operation is normally one year or less.
- h) The three forecast techniques are – quantitative, time series and

Q.3. Give full-form of the following.

Marks(8)

- | | | | |
|---------|---------|--------|--------|
| a) OECD | b) MAD | c) MRP | d) LIS |
| e) COFC | g) AFTA | h) CLM | i) POQ |

Q.4 Match the following from Colum A and Colum B

Marks(8)

Column A

Column B

- | | |
|----------------------------|---|
| 1. Logistical objectives | a) most widely used intermodal transport system. |
| 2. Bonded warehouse | b) rely heavily on expert opinion and preferences. |
| 3. Decoupling | c) statistical method using historic data with clear, stable relationships and trends |
| 4. Quantitative techniques | d) should be established if it can render either service or cost advantage. |
| 5. TQM | e) licensed by the government to store goods prior to payment of taxes and duties. |
| 6. Ware house | f) ensures proper balance between total logistics cost & desired level of customer service. |
| 7. Time series analysis | g) most advanced logistics change driver |
| 8. TOFC | h) provides for maximum operating efficiency. |

PART – B (any three)

16 x 3 = 48 marks

Q5. What are inventory management policies? Explain in detail the different approaches.

Q6. What are the benefits and constraints of DRP? Explain in detail.

Q7. What are the economic and service benefits derived from the warehouse? Explain in detail.

Q8. What are warehousing alternatives? Explain in detail.

Q.9. Write short notes (Any four)

- a) Pareto's rule – ABC Analysis
- b) Training of Materials Management personnel.
- c) Ware house productivity
- d) Advantages of DRP
- e) Types of packaging
- f) JIT inventory
- g) Robotics

PART- C

Q.10. CASE STUDY

20 marks

M/s XYZ is a limited company with sheet metal work, fabrication, manufacturing and assembly as the main work. The materials handled are both metallic and non-metallic, including some non-ferrous items. Considering the nature of work, off cuts, end pieces, wastage and scrap generation is inevitable. The same is being dumped in one of the company warehouse from where it was periodically disposed off. The yearly turnover is estimated to be about Rs 100 crore, and the overall wastage was in the order of 8-10%

There are more group companies close by, and are doing similar sheet metal work but with different sizes. The parent unit – M/s XYZ supplies basic raw materials to all these group companies by trucks some of which return empty after delivery. The work culture is such that all the wastage and scrap generated is sold by individual units on as is where basis is.

During a casual get-together of managerial personnel of group companies, one of the Managers suggested that some of the off-cuts or part of the wastage can be used by the other group companies, and also the method of collection of wastage and scrap needs to be reviewed for better realisation of revenue. The other Managers supported this and therefore it was decided by the top management to have a total review of this whole collection and disposal process.

You are already working as the plant Manager of the parent company M/s XYZ. The top management desired that you be given the extra responsibility for doing this work. You are called upon to review the whole process from delivery of raw materials to group companies, collection and disposal process including recycling/salvage to show clear financial benefits. The company will reward you suitably. You may assume any data as may be considered necessary.

Please outline five major steps that you will take to revamp the whole process. Please also explain these five major steps in detail.
