



CII Institute of Logistics

PGDSCM & Certificate Programs

Semester-end Examination – December 2008

WAREHOUSING & INVENTORY MANAGEMENT

Time : Three Hours

Marks : 100

Part A

Answer all questions (20 x 1 = 20 Marks)

1. Maintaining stock availability for Order Picking is named as
 - a. Order Picking
 - b. Sortation
 - c. Receiving
 - d. Replenishment
2. RDC refers to
 - a. Reliable Dispatch Center
 - b. Return Dispatch Center
 - c. Regional Distribution Center
 - d. Random Distribution Center
3. Goods access to stock is one of the key factors
 - a. Influencing the choice of storage system
 - b. For designing a ware house
 - c. For designing a Material Handling Equipment
 - d. For designing a Production system
4. Collation, which is one of the functions of a Ware House, related to
 - a. Receiving the goods
 - b. Dispatching the goods
 - c. Storing the goods
 - d. Bringing and Consolidating the goods before dispatch
5. One of the ware house performance metrics is:
 - a. Cost reduction in material
 - b. Cash to Cash cycle time
 - c. Shipping accuracy
 - d. Production cycle time
6. Inspection is involved in which activity:
 - a. Cross-Docking
 - b. Receiving
 - c. Picking
 - d. Storing
7. One of the factors affecting the number of ware houses:
 - a. Capital expenditure of material handling equipment
 - b. Ware housing costs
 - c. Procurement costs
 - d. Packing costs
8. Cross Docking requires:
 - a. More storage space
 - b. Less storage space
 - c. No storage space
 - d. None of the above
9. The true Multi-Echelon system would reduce the cycle inventory in the whole supply chain TRUE / FALSE
10. ABC analysis in Inventory control is based on
 - a. Cost of the material
 - b. Stock quantity on hand
 - c. Annual consumption value of the items
 - d. None of the above
11. Bar codes enable quick and accurate data entry TRUE / FALSE
12. Soft ware and Hard ware are the most important pieces of an RFID solution: TRUE / FALSE
13. EOQ may not be applicable when the requirements are irregular or where there is impending price rise. TRUE / FALSE
14. Throughput refers to:
 - a. Storage capacity of a ware housing facility
 - b. Volume through the pipeline
 - c. Inventory in one month period
 - d. Amount of product entering and leaving a facility in a given time period
15. Which is not part of Inventory of an organization?
 - a. MRO inventory
 - b. Stock owned by Customer
 - c. WIP inventory
 - d. Stock at ware houses
16. Raw Material safety stock quantity is dependant upon:

- a. Supplier Lead time
- b. PO Process time
- c. Consumption Rate and per unit value
- d. All of the above

17. Inventory cost will not include:

- a. Procurement cost
- b. Out of stock cost
- c. Over stock cost
- d. Marketing cost

18. Important consideration of EOQ is:

- a. Annual consumption in units
- b. Procurement cost per order
- c. Unit Price
- d. All of the above

19. Robotics and Conveyors are considered as part of the material handling system:

TRUE/ FALSE

20. Material Handling systems are broadly classified as

- a. Mechanized
- b. Semi Automated and Automated
- c. Information Driven
- d. All of the above

Part B

Answer any four (4 x 10 = 40 marks)

1. Explain role of inventory in supply chain
2. Describe in detail the Independent and Dependant demand systems in Inventory Management
3. How Material Handling Systems support ware housing operations?
4. What are the functions of Ware House Management System?
5. Write notes on benefits of Bar code and RFID in logistics
6. Write short notes on:
 - a. DRP
 - b. Multi Echelon Inventory system

Part C

Case Study

The Eagle Machine Company manufactures Market specialty restaurant products and has sales totaling Rs. 72 Million. But sales are declining while costs continue to increase. If things continue in this direction, Eagle may soon have to close its doors. At a special management meeting, the president lays it on a line! He demands that the firm break even in the remaining quarter of the year. For the next year, he calls for 5 % profit, a 20 % increase in sales, and deep cuts in labour, material and over head. Later in the day, the president calls Mr.Manoharan V.P-Finance and Accounts for a discussion.

Manoharan, I want you, Finance and Accounts people carry the ball at the start of this game. We can't get sales moving for six months. But you can improve your house-keeping and Eagle profits right away. Just think what you can do to that chart. Every penny you save is profit! So take a close look at what we buy and what we sell. I don't care how you make your savings- by negotiations, Inventories, Import or anything. But the screws are tight right away.

"Start with inventories, they are sky high. So get together with manufacturing on a 10% cut! We have got Rs.12 Million worth of materials are around here and a percent cut would save at least Rs. 300,000 a year in carrying costs. At the same time, get your pay roll and operating expenses down 10%. That's in line with our company wide cut back. I know this hurts, Manoharan, because we have got some mighty fine people here in purchasing, but we can't be sentimental these days. Our over head has got to come down or we are dead!

I am having an executive committee meeting in one week. Have your plans ready by that time! We are betting on you Manoharan. You have got to get us out of the holes. I know you can do it. Please interact and develop a harmonious proposal".

Mr.Manoharan starts a review with other departments. The purchases total only Rs.43.2 Mio per year. Eagle buy, a wide variety of materials, ranging from a few kgs of rare metals to sizable quantities of metal sheet. A big part of the rupee volume is in non ferrous castings, forgings, stampings, fasteners and sub-assemblies.

The purchasing department consists of one senior manager, three buyers and four clerks. Salaries, fringes and expenses sum to Rs.3, 70,000 a year. The Purchasing department is responsible only for buying and expediting; the manufacturing manager handles production, inventory control, receiving and traffic. Manoharan reports to the President as do other department heads.

Manoharan learns from inventory control that raw stock inventory is Rs.12.2 Mio. The marketing manager controls FG stocks. Manoharan wonders how he can render the cost reduction program.

Answer all the four (4 x 10 = 40 marks)

1. What actions should Manoharan take to reduce inventory by 10 %?
2. What dangers, if any, are there in reducing inventories?
3. In what ways could the cost of goods purchased be reduced?
4. What position should Manoharan take on the president's plan to reduce the purchasing payroll by 10 %?
