

INDIAN INSTITUTE OF MATERIALS MANAGEMENT
Post Graduate Diploma in Materials Management
Graduate Diploma in Materials Management

Paper No: 10
INVENTORY MANAGEMENT

Date: 08-06-2009
Time: 10.00am To 1.00pm

Max.Marks:100
Duration: 3 Hrs.

Instructions:-

1. From Part 'A', answer all questions (Compulsory)
Each sub-question carries one mark Total Marks - 32
 2. From Part 'B', answer 3 questions out of 5 questions
Each question carries 16 marks Total Marks - 48
 3. Part 'C' is a Case Study with 5 sub-questions (Compulsory) Total Marks - 20
 4. Use of the calculator is allowed wherever necessary
 5. Graph Sheet can be used wherever necessary
-

Part – A

The following are objective type questions.

Q.1 Indicate the correct answer from amongst the choices viz. (a), (b), (c) or (d).

- 1.1. Inventory Turnover Ratio for the year is:
(a) Value of stock / 12 (b) Turnover / Average Stock Value
(c) Stock Value Reduction during the year
- 1.2. Inventory Controller is responsible for:
(a) Meeting Customers' Demand (b) Planning Inventory Reduction
(c) Monitoring Inventory Control (c) All of the above
- 1.3. Inventory Carrying Cost is:
(a) Bank Interest paid on loan taken (b) Logistics Cost of carrying Inventory (c)
Cost of materials, storage and maintenance
- 1.4. Concept of Selective Inventory Control is:
(a) ABC Analysis (b) Electronic Data Interchange (c) Kanban Introduction
- 1.5. Safety Stock is accounted from:
(a) Variations in Lead Time (b) Variations in Consumption
(c) Both of the above (d) Material shortages
- 1.6. WIP Inventory accumulates because of
(a) Batch Manufacturing (b) Bottleneck Machines
(c) High set up time (d) All of the above
- 1.7. Spares Parts Inventory Management is more complex because of
(a) Independent Demand Estimates (b) Suppliers not available
(c) Quantity required is low (d) Need for imports

- 1.8. Rotable Spares are
(a) Spares used in Rotary Equipments (b) Spares kept for preventive maintenance (c) Spares that can be repaired and reused (d) All of the above

Q.2 State whether the following statements are True or False.

- 2.1 Computerization reduces lead time.
2.2 Total Ordering Cost = Cost of Ordering X Number of Orders placed
2.3 ROP = Safety Stock + Lead time Consumption Requirement
2.4 Forecast of demand is always judgmental
2.5 MRP is triggered by receipt every order from each customer
2.6 Maintenance Spares Procurement uses ROP system
2.7 Kanban is a pull system controlled by empty containers
2.8 Perpetual Inventory Taking is stock held for JIT supplies

Q.3 Fill in the blanks:

- 3.1 Inventory Management isInventory holding.
3.2 Brisch System representsSystem
3.3 XYZ Classification is based on
3.4 Un-useable Stocks kept in stores are called
3.5 Service Level is defined as
3.6 "Exponential Smoothing" is a technique used in
3.7 Reduction in transit time will lead to reduction in
3.8 In a JIT system material movement is controlled by

Q.4 Expand the following:

- 4.1 STR
4.2 VED
4.3 MPS
4.4 BOM
4.5 FIFO
4.6 ROP
4.7 VAVE
4.8 DRP

Part – B

Answer any three questions from the following:

- Q.5** (A) Describe the technique of ABC Analysis in detail
(B) How is ABC Analysis useful in controlling Inventory?
- Q.6** (A) Why are Safety Stocks required?
(B) How do you decide how much safety stock you must hold for each item?
- Q.7** (A) Explain the salient points of Fixed Quantity Ordering 'Q' System and Fixed Time Ordering 'P' System
(B) Discuss their merits and explain where you select use of each system.
- Q.8** (A) What do you mean by JIT Manufacturing and what are the benefits?
(B) What is the difference between a Push System & Pull System?

Q.9 Answer any four of the following:

Write Short Notes on:

- (A) Inventory Carrying Cost
 - (B) Economic Order Quantity
 - (C) FSN Classification
 - (D) Benefits of MRP System
 - (E) Dependant Vs Independent Demand
 - (F) Two Bin System
 - (G) Kanban System
 - (H) Bar Coding System
-

Part – C

Case Study (Compulsory) (Answer all five questions)

Q 10 Make a careful study of the case presented and answer all the questions asked.

Mr. Govind, GM Operations of Precision Parts Company convened a meeting of all Executives. He was upset that customers have complained that supplies are not coming on time. He new that customers' demands were known much earlier and there is no reason for failure. He was also under compulsion to reduce prices to get fresh orders and wanted his people to look in to all avenues of material cost and operations cost reduction.

Mr. Ram Kumar, Production Manager said that material supply was the problem. The shafts received were rejected for quality reasons. The gear wheels have not yet been supplied since supplier is facing capacity constraints.

Mr. Chandran, Purchase Manager said that they have not properly communicated our schedules to vendors because of change in production plan.

While walking through the plant Mr.Govind pointed out high stocks of pressed parts kept in various bins. Mr.Ram Kumar said that since the set up time is very high they have to run bigger batch of Sealing Covers. When all went to stores they could see high stocks of various materials stored. Mr.Chandran explained that they are all safety stocks procured anticipating supply failures.

- Q1. What are the objectives of the company?
- Q2. What are the two major issues that they need to address urgently?
- Q3. What immediate steps to take for ensuring regular continuous supplies?
- Q4. How to reduce WIP Inventory?
- Q5. What is to be done for Safety Stock reduction?
