



**INDIAN INSTITUTE OF MATERIALS MANAGEMENT**  
**Post Graduate Diploma in Materials Management**  
**Graduate Diploma in Materials Management**  
**PAPER No. 10**  
**INVENTORY MANAGEMENT**

**Dec 2011**

**Date : 15.12.2011**

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

**Max. Marks :100**

**Duration : 3 Hrs.**

**Instructions:**

1. The question paper is in three parts A, B & C.
  2. Part A is compulsory. Each question carries one mark. Total : 32 Marks
  3. In Part B, answer 3 questions out of 5. Each question carries 16 marks. Total : 48 Marks
  4. Part C is a case study with sub questions and it is compulsory. It carries 20 marks.
  5. Use of calculator is allowed wherever necessary.
  6. Graph sheets can be used wherever necessary.
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**PART - A**

**Q.1. State True or False**

**Marks: 08**

- 1) A truly effective inventory management system will maximize the complexities.
- 2) High finished goods inventory and economic batch production are synonymous.
- 3) Opportunity cost is a natural cost.
- 4) Greater the inventory, lower the tax liability.
- 5) Independent demand cannot be calculated accurately from BOM.
- 6) Low stock value is called 'x' where as 'z' is high valued items according to xyz selection inventory analysis.
- 7) Kodak system is a 7 digit codification system.
- 8) Inventories do not help to decouple the activities in an assembly line.

**Q.2. Fill in the blanks.**

**Marks: 08**

1. The activities of \_\_\_\_\_ management involves in monitoring item usages, reconciling the \_\_\_\_\_ balances and reporting \_\_\_\_\_ status.
2. Physical inventory control describes overall \_\_\_\_\_ of inventories.
3. Inventories are treated as part of \_\_\_\_\_ in the balance sheet.
4. \_\_\_\_\_ inventory items are very much required in the production process but do not go into making the final product.
5. Packaging \_\_\_\_\_ what it sells and \_\_\_\_\_ what it protects.
6. A qualitative technique having the advantage of its simplicity but disadvantage of highly subjective is called \_\_\_\_\_ of forecasting.
7. MRP II and ERP are concerned with the \_\_\_\_\_ aspects of the expanding mode.
8. Operation managers set various time intervals called \_\_\_\_\_ to regulate changes in the MPS.

**Q.3. Expand the following.****Marks: 08**

1. GIT, 2. MSDS, 3. BIS, 4. ROA,
5. TBO, 6. MRO, 7. NIFO, 8. PERT

**Q.4. Match A and B****Marks: 08**

A	B
1. Obsolescence Cost	a. Balloon Number
2. Long Term Plan	b. Insurance Spares
3. Dabbawalas	c. Kaplan & Cooper
4. OC= ICC	d. Shelf Life Expired
5. Sequence Number	e. WIP.
6. "Ten off" List	f. Strategic Plan
7. PPC Group	g. Box Identification System
8. Activity Based Costing	h. EOQ

**PART - B****Answer any 3 questions out of 5 questions form sl.no.5 to 9.**

Q.5. How do you classify inventory into various analyses and explain each one in detail.

Q.6.a. Mention various costs associated with inventories and explain in detail.

Q.6.b. Classify spare parts based on its functions.

Q.7.a. Explain in detail the factors which influence in determining safety stock?

Q.7.b. Discuss the steps for making efficient procurement & availability of spare parts.

Q. 8. Define surplus inventory? Discuss in detail the various methods of disposal of surplus inventory.

Q.9. Write short notes on any four (4) on the following.

- a. MRO inventory
- b. Periodic Review System
- c. Three Bin System
- d. Goals of Material Handling
- e. Determination of Contingency Stock

## **PART – C**

### **Case Study**

Dr.Peethambaram is the MD of Ambi Scooters Limited. ASL manufactures two wheelers, located in North India. To boost up their sales and gain market share Mr.Peethambaram invited his Manager-inventory Mr. Mahesh to study the various methods to forecast the demand. Inventory Manager has accepted the challenge and called his team for a discussion. His assistant manager Mr.Amar has indicated last period method and simple averages to get a good forecast. Other aides Mr.Akbar and Mr. Anthony has indicated moving averages and weighted averages respectively (Assigned weights are 3, 2, 1, 2, 4, and 3 for the sales from Jan to June 2011). Mrs.Veena who is an expert in statistics, looking after MIS part in MM division indicated exponential smoothing method for overcoming this task of predicting the right demand. Mr.Rakesh area sales manager gave the demand data figures of scooter for the last 6 months as detailed below.

Month	Demand (units)
Jan 2011	1700
Feb	1000
Mar	1200
Apr	2300
May	1500
Jun	2000

Based on the above data, find out the demand for July 2011.

- What demand Mr.Amar indicated to his boss? Name the forecast method (2marks)
- Who gave the demand through simple average method? What is the demand quantity and show the final units through workings. (4marks)
- What is Mr. Anthony's forecasted figure? Prove the final demanded units with workings. (4 marks)
- One of them used moving average method. Name the person & the demand indicated by him? Prove with supporting calculations? (4marks)
- Explain exponential smoothing? What demand Mrs.Veena gave to the IM through the method. (4marks)
- Put a matrix with person, method & demand quantity for July 2011. (2marks)

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