



INDIAN INSTITUTE OF MATERIALS MANAGEMENT
Post Graduate Diploma in Materials Management - 3 years
Graduate Diploma in Materials Management.

July 2019

PAPER No. 10

INVENTORY MANAGEMENT

Date : 25.07.2019

Max. Marks :100

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

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.

Part – A (compulsory)

32 marks

(Attempt all questions each question carries 1 mark)

Q.1 State whether the following statements are True or False.

[8 marks]

- 1.1. In XYZ inventory analysis 'X' items represent low stock value whereas 'Z' is high valued items.
- 1.2. In Kodak codification system 7 digits are used for coding.
- 1.3. EOQ is essentially an accounting formula that determines the point at which the combination of order costs and inventory carrying costs are the least.
- 1.4. Maintaining Safety stock / Buffer stock is dependent on Lead time and Consumption pattern.
- 1.5 Inventory carrying cost is the cost of materials excluding materials handling cost.
- 1.6. Economic Order Quantity means purchase of materials at lowest price.
- 1.7. Demand Aggregation facilitates the enterprise to optimize the buying strength.
- 1.8 .FIFO is based on the principle that the first inventory goods received will be the first inventory goods sold.

Q.2. Fill in the blanks.

[8 marks]

- 2.1. _____ and _____ are two broad techniques of forecasting.
- 2.2. Fewer and larger orders will reduce _____ cost
- 2.3. In ABC analyses classification of "A" class items accounts for approx. _____ of the value of consumption.
- 2.4. Materials ordered and paid but not received is called _____ Inventory
- 2.5. Safety stock arises due to variations in _____ and _____
- 2.6. Any difference in quantity resulting from the delivery note or the invoice shall be notified to the Seller in writing, albeit _____ after receipt of the commodities
- 2.7. Twenty-foot-equivalent-unit term used in transportation of _____ in shipping.
- 2.8. Transport Emergency Cards must be visible in the vehicle at all times during the transportation of _____

Q.3. Expand the following

[8 marks]

- 3.1. M A W B , 3.2. MSDS, 3.3.BIS , 3.4. GOLF
- 3.5. MRO, 3.6. NIFO , 3.7. MBOM, 3.8. RFID

Q.4. Match A and B

[8 marks]

A	B
4A.1) Shelf Life Expired	4B.1) Forecasting method
4A.2) Insurance Spares	4B.2) Unit Load
4A.3) Pareto Principle	4B.3) Dabbawalas
4A.4) Material Handling System	4B.4) Spare Parts Inventory
4A.5) Pallet	4B.5) Balance between demand and supply
4A.6) Delphi	4B.6) Vital few, Trivial many
4A.7) World's best food delivery system	4B.7) Fork Lift
4A.8) Optimizing inventory	4B.8) Obsolescence

PART - B

Answer any three (3) of the following questions – 16 marks each [48 Marks]

Q.5 Which are the different methods of Inventory Analysis, Explain each one in detail and its Benefits?

Q.6 What do you mean Inventory Forecasting? Name & explain each Inventory Forecasting models and How to Choose the Right Inventory Forecasting Models?

Q.7. Classify Spare Parts Inventory? Explain the factors which influence Spare Parts Inventory Control?

Q.8.A) Explain Vendor Managed Inventory? What are the Benefits and Risks of VMI? (8 marks)

.B) What is Surplus Inventory? How to Identify, Avoid and Liquidate it, (8 marks)

Q.9 Write Short Notes on (any four) : (4 x4 = 16 marks)

- 9. A) Periodic Review System
- 9. B) Material Handling System
- 9. C) Benefits of implementing RFID
- 9. D) Advantage of Containerisation
- 9. E) Hedging
- 9 .F) Inventory accounting System

PART – C

(Compulsory)

Q. 10 Read the case and answer the questions [20 marks]

Dr. Narayanan MD of Omkar Power Works Pvt. Ltd., OPW Pvt Ltd. manufactures Uninterrupted Power Supply (UPS) and is located in Chandigarh -India. Dr. Narayanan was of the opinion that the present Ordering Cost & Inventory carrying Cost are high as compared to the out up of the company and requires review the Ordering & Inventory carrying costs. Dr. Narayanan MD invited his Manager-Inventory Mr. Murty to study the possibility of reducing the Ordering & Inventory carrying costs. Manager agreed and called his team for a discussion. His assistant manager Mrs. Gitanjali gave a detailed data of UPS manufactured for the last 12 months.

Company OPW Pvt. Ltd produces 450 nos. of UPS per month. It buys the power sockets for UPS from a supplier located near Chandigarh at a cost of Rs.20 per socket , each UPS requires 2 nos. of sockets. The company's inventory carrying cost is estimated to be 15% of cost and the ordering is Rs.50 per order.

Mr. Murty asked his Asst. Mngr, Mrs. Gitanjali to calculate the following so that he can take action if required and give factual picture to his boss on Ordering & Inventory carrying cost. Based on above data calculate the following-

- A. Calculate the EOQ 4- Marks
- B. What is the number of orders per year? 3- Marks
- C. Compute the average annual ordering cost 3- Marks

- D. Compute the average inventory 3- Marks
- E. What is the average annual carrying cost ? 3- Marks
- F. Compute the total cost 3- Marks
- G. With present trend, what is your opinion - Is the Ordering & Inventory carrying Costs of OPW Pvt. Ltd, are High / Very Low/Ok. 1- Mark
