



INDIAN INSTITUTE OF MATERIALS MANAGEMENT

Post Graduate Diploma in Logistics & SCM
Post Graduate Diploma in Materials Management - 2 years
PAPER No.14 (enrolment code –CPM, CPS)

Dec 2023

PAPER No. 12(enrolment code- PMM, PSM, CMM, CSM)[OFFLINE EXAM]

Inventory Management

Date : 16.12.2023
Time : 10.00 a.m to 1.00 p.m.

Max. Marks : 70
Duration : 3 Hrs.

Instructions:

- From Part A – answer all questions (compulsory). Each sub questions carries 1 mark. **Total : 20 Marks**
- From Part B – Answer any 3 questions out of 5 questions. Each question carries 10 marks. **Total :30 Marks**
- Part C is a case study (compulsory) with questions. Read the case study carefully and answer the questions **Total: 20 Marks**

Part – A

[20 Marks]

(Attempt all questions. Each sub question carries 1 mark.)

Q1. Please state whether following statements are 'True' or 'False'. (5 Marks)

- An approximate percentage of A class items in a firm is around 5 to 10%
- F-S-N analysis is based on consumption figure of items
- Raw materials for paper industry are not seasonal item.
- One of the conditions underlying basic EOQ model is replenishment of stock is instantaneous
- For the calculation of ordering cost in decision making of EOQ, variable cost of related departments are more relevant among various other costs.

Q.2 Fill in the blanks (Donot reproduce the Statement) : (Marks 5)

- analysis helps to assess storage and security requirements of items of inventory.-
- The most important cost element for calculation of inventory carrying cost is ----- cost.
- During inflation, closing inventory under FIFO method of inventory valuation will be -----compared to LIFO, having identical opening stock &purchases.
- Most of the insurance spares do not -----during the life of the equipment.
- Two bin system is most suitable for inventory control of _____class items

Q.3 Expand the following (5 Marks)

- a)LTL b)VED c) ERP d)JIT e) ITR

Q.4. Match the following (5 Marks)

Column A		Column B	
Sr no	Description		Description
1	BOM	A	Set up cost
2	Delphi methods	B	Safety stock
3	Cost of idle wages	C	Kanban system of production control
4	Buffer stock	D	Forecasting
5	Pull system	E	Material resource planning

PART B**[30 marks]****(Attempt any 3. Each question carries 10 marks)**

- Q.5 a)** What are the basic assumptions in the derivation of formulae for EOQ (5 Marks)
- b)** What are the top 5 elements of the stock out cost as per you. Explain any 2 of them in brief (5 Marks)
- Q.6 a)** What are the top 5 types of classification methods used in selective control of inventories (5 Marks)
- b)** Explain in brief the criterion employed for the above classification of inventories. (5 Marks)
- Q.7 a)** Physical stock sometimes does not tally with stock record? What are the 5 major reasons as per your understanding? (5 marks)
- b)** Explain in brief the meaning of annual stock taking and continuous stock taking (5 marks)
- Q.8 a)** What are the top 3 categorizations of Machinery spare parts inventory. Explain any one of the types Briefly. (5 Marks)
- b)** MRP is composed of various steps. What are these steps? Simply name them sequentially (5 Marks)
- Q.9** Write short notes on any two (2X5=10 marks)
- a) Made to stock
 - b) Seasonal material
 - c) Inventory shrinkage
 - d) Slow moving inventory
 - e) Exponential smoothing

PART – C**[20 marks]****Q. 10. Case study – Compulsory**

Perfect machine tools Ltd, requires annually 4000 pieces of a bought out component which costs Rs 3 each. It has been estimated to cost Rs 60 to place an order and execute the delivery.

- a) If the carrying cost is 25% of the value of inventory held, what would be the optimum size of each order? How many orders are placed per year? (2+2 marks)
- b) Calculate annual total cost from effecting economic lot size purchases. (4 Marks)
- c) If the order quantity is raised by 25% above the quantity calculated under a), what would be the effect on the annual total cost? (4 Marks)
- d) If the order quantity is lowered by 25% below the quantity calculated under a), what would be the effect on the annual total cost.? (4 Marks)
- e) Comment on the costs obtained under b) c) and d). (4 Marks)
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