

**JUN-2010**

**INDIAN INSTITUTE OF MATERIALS MANAGEMENT**  
**Post Graduate Diploma in Materials Management**  
**Graduate Diploma in Materials Management**  
**Paper – 10**  
**INVENTORY MANAGEMENT**

**Date: 12.6.2010**

**Time: 10.00 am to 1.00 pm.**

**Max Marks: 100**

**Duration: 3 hours**

**Instructions:**

1. The question paper is in three parts.
2. Part A is compulsory. Each question carries one mark
3. In part B answers 3 questions out of 5. Each question carries 16 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 sheet can be used wherever necessary.

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**PART - A**

Q.1. State True or False

Marks: 08

- 1.1) Consumables act as 'catalyst' in the production process and enter into the end product.
- 1.2) Inventory which is acquired at a price has some apparent and hidden costs.
- 1.3) Top management being concerned with strategic planning normally involves in short term planning.
- 1.4) PQR classification of selective inventory control is based on the unit value of the item.
- 1.5) In EOQ, the purchasing cost is unequal to the inventory carrying cost.
- 1.6) The stock out acceptance factor follows Poisson distribution.
- 1.7) Continuous type of WIP involves very low volume of highly standardized goods.
- 1.8) FGI is the inventory which normally ends all other inventories.

Q.2. Fill in the blanks.

Marks: 08

- 2.1) Inventory is usually a company's largest -----.
- 2.2) Finished Goods are those goods that are ready for ----- to customer and it acts as ----- between Production Department and Marketing Department.
- 2.3) Activity Based Costing evolved into Activity Based -----.
- 2.4) The ----- method is based on surveys conducted and is usually employed by organizations to forecast new product sales.
- 2.5) HML classification is based on the ----- of materials.
- 2.6) EOQ fails when the goods in question are ----- goods.
- 2.7) Fixed Time System involves scheduled ----- of the stock levels of the items.
- 2.8) The function of a manufacturing ----- system is to translate the Master Production Schedule into detailed component material requirements orders based on -----.



**PART – C**  
**Case Study**

Mr. Ramdas, Managing Director of M/s. Sweethot Products Limited has employed Mr. Kasim as the Inventory Controller (IC) to strengthen the materials department. Mr. Kasim with couple of years experience and a graduate diploma in materials management from IIMM, XYZ Branch has joined the company with lot of fervour and good hope in his career. He has been asked to report to Mr. John, Materials Manager (MM), who is also a member of IIMM, XYZ Branch.

Few days back to the joining of IC, MM has received an internal note from Ms. Swarna, a Buyer in the organization regarding placing of order in comparison of EOQ and Minimum Quantity for Discount (she has indicated that 150 units is the minimum quantity for discount) .

Post induction, the MM has asked IC to find out the ordering cost (OC) and inventory carrying cost (ICC) to determine the EOQ. Both MM & IC has brainstormed on the above issue and arrived at the OC & ICC as follows.

They documented that OC is the cost that incurred by the purchase dept. involving calling for quotations, scrutinizing the quotations , deciding on the supplier whom the order should be placed , issuing the purchase order , follow up etc. And it also includes costs of receiving the materials, the clerical costs incurred by the accounts dept like making payment to the supplier. With regard to ICC, they have confirmed that it consists of interest on the money locked up, taxes payable, insurance on the goods, obsolescence, shrinkage, evaporation, rental, labour costs, overheads in stores etc.

An ace in inventory control, Mr. Kasim has tabulated the following expenditures and determined the OC & ICC and worked out the EOQ as per the requirement of purchase department.

Purchase dept expenses Rs.1 lakh, Stores Personnel expenses Rs. 1 lakh, Obsolescence Rs.0.30 lakhs , Rental charges of warehouse Rs.0.70 lakhs , collection cost Rs. 0.20 lakhs , receiving cost Rs.0.17 lakhs , inspection cost Rs.0.25 lakhs , Stores material handling costs Rs.0.80 lakhs , Bill payment expenses Rs.0.38 lakhs , interest charges @ 7% , insurance charges @ 1% , number of orders placed is 4000 and average total inventory is Rs.50 lakhs. Also he has collected the data like annual demand as 6000 units and unit cost as Rs. 150/-.

Coming to know about the expertise of IC in the company, Mr. Karsan Ghavri, an accountant wants to know whether to follow LIFO or Weighted Average Method for the following data. (Price fluctuation is high).

Receipts = 100 units each on 01.06.2009, 02.07.2009 & 01.09.2009.

Unit Value = Rs.100/- on 01.06.2009, Rs.150/- 02.07.2009 & Rs. 250/- 01.09.2009.  
Issues = 25 units on 02.07.2009 , 75 units on 06.07.2009 , 40 units on 09.07.2009 , 10 units on 17.07.2009 and 90 units on 05.09.2009.

The MM sure about the knowledge of his subordinate (IC) has given one more problem to IC to solve. This time it has come from Mrs. Ranganayaki, an internal auditor in the company with regard to a pattern of issue of spares from stores and wants the list of non moving items to take suitable action.

As usual our IC has collected the following data and applied FSN classification to overcome the problem given to him by the MM.

There are 1500 spares in the stores. Spare Sl. No. 1 to 500 received on 01.04.2006 and last issued on 01.07.2006. Spare Sl. No. 501 to 850 received on 01.06.2006 and last issued on 01.12.2008. Spare Sl. No. 851 to 950 received on 01.04.2006 and last issued on 31.03.2008. Spare Sl. No. 951 to 1450 received on 01.04.2006 and last issued on 01.07.2006. Spare Sl. No. 1451 to 1495 received on 01.04.2006 and last issued on 01.07.2009. Spare Sl. No. 1496 to 1500 received on 01.04.2006 and not issued till date (31.12.2009).

Assume the role of Inventory Controller (Mr. Kasim) and solve the following problems based on the facts given above in the case study.

10. a. Find out the Inventory Carrying Cost? Marks: 05
- b. Work out the EOQ and confirm to the Buyer whether to go for EOQ or Minimum quantity with discount. Is there any problem in going with EOQ? Marks: 05
- c. Work out the LIFO method of valuation and explain to the accountant that which method is suitable in the present scenario? Marks: 05
- d. Determine F, S and N values and inform the internal auditor about the N class items? Marks: 05