INVENTORY MANAGEMENT

Date : 17.12.2015 Max. Marks : 100
Time : 10.00 a.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
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)**

**Q1. State TRUE or FALSE**

- 1 Mark each (8 Marks)
  1. Perishable products and seasonal products fall in single period inventory model.
  2. XYZ analysis is based on annual consumption value.
  3. Increase in material cost increases ROI.
  4. Dependent demands are calculated from BOM.
  5. Annual maintenance contract is extension of the concept of VMI.
  6. Delphi method is a part of quantitative forecasting technique.
  7. A good warehouse layout can reduce costs.
  8. Rotable spares can be repaired and reused.

**Q2. Fill in the Blanks**

- 1 Mark each (8 Marks)
  1. Safety stock arises due to ____________ in lead time and consumption.
  2. ____________ spares have life equivalent to life of machine.
  3. ____________ file is also called product tree.
  4. The importance of WIP inventory is a function of two factors, _______ and ________.
  5. ________ analysis is based on shelf life of the items.
  6. Brisch system of codification is _____ digit system.
  7. Loss of kerosene due to evaporation is called ________ loss.
  8. Raw materials converted into final product are called ________ inventory.
Q3. A. Expand the following abbreviations (1 mark each) - 8 Marks


Q4. Match the following in column A with those in column B - 1 Mark each (8 Marks)

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
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</thead>
<tbody>
<tr>
<td>1. VED analysis.</td>
<td>A. Materials handling.</td>
</tr>
<tr>
<td>2. MSDS</td>
<td>B. Stock valuation.</td>
</tr>
<tr>
<td>4. MRP</td>
<td>D. Work in process.</td>
</tr>
</tbody>
</table>

PART - B

Write any three (3) of the following questions – 16 marks each (48 Marks)

Q5. What do you understand by ABC, XYZ, and VED analysis of inventory?, Which one will you use for effective inventory management and why?

Q6. What costs/expenses you will take into account to calculate ordering cost? Calculate EOQ if annual demand is 500nos, ordering cost is Rs.100/- , Inventory carrying cost is 30% and price is Rs.200 per unit.

Q7. Write short notes on any two.
   1) Safety stock.
   2) MRO items
   3) Types of demands in MRP.
   4) Valuation of stocks.

Q8. Fix reorder level for item having consumption of 800 to 1000 nos per annum and lead time of 6 to 8 weeks. What method of replenishment will you use for this item?

Q9. What is importance of materials handling in a warehouse? Considering materials handling a non value adding activity, what steps you will take for efficient system of handling?
A process industry has many pumps, compressors and related machinery. There are about 10000 items of spare parts with a value of Rs. 50 crores. The company appoints you as manager in charge of inventory control of spare parts.

1) What steps you will take to analyze stock of spare parts?
2) What will be your replenishment system to ensure right quantity procurement?
3) How will you deal with non-moving spares?
4) What will be your action plan to optimize inventory?.