INVENTORY MANAGEMENT

Date: 18.06.2015
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
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)
(Attempt all questions each question carries 1 mark)

Q.1 State whether the following statements are True or False.
1.1 ERP is extension of MRP
1.2 At EOQ Ordering Cost and Inventory Cost would be the lowest.
1.3 Machines do not die like human beings; they are condemned before they die.
1.4 Forecasting is more accurate for larger group.
1.5 EOQ can be applied to perishable items.
1.6 In Job Shop there relatively large work in process inventory.
1.7 ROL is insensitive to change in demand.
1.8 Stock in trade inventories is called Finished Goods

Q.2 Fill in the blanks:
2.1 PQR classification is based on ............of items.
2.2 Safety Stock is kept due to variation in ......... And ........
2.3 Inspection cost is part of .................Cost
2.4 ........ is the level at which stocks are just sufficient to meet demands during ....... lead time.
2.5 Service Level is defined as ....................................
2.6 ............Demand can be worked out precisely but not ........Demand.
2.7 There is no WIP in ........ Process.
2.8 In a JIT system material movement is controlled by ..........

Q.3. Match A and B Marks: 08

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>3A.1) Push System</td>
<td>3B.1) Not usable</td>
</tr>
<tr>
<td>3A.2) 'Q' System</td>
<td>3B.2) Over Stocking cost</td>
</tr>
<tr>
<td>3A.3) Obsolscant spares</td>
<td>3B.3) JIT</td>
</tr>
<tr>
<td>3A.4) KU</td>
<td>3B.4) 'C' Class item</td>
</tr>
<tr>
<td>3A.5) Obsolete spares</td>
<td>3B.5) MRP</td>
</tr>
<tr>
<td>3A.6) 'P'System</td>
<td>3B.6) Under stocking cost</td>
</tr>
<tr>
<td>3A.7) KO</td>
<td>3B.7) 'A' Class item</td>
</tr>
<tr>
<td>3A.8) Pull System</td>
<td>3B.8) Going to be out of use</td>
</tr>
</tbody>
</table>

Q.4. Expand the following:

1. SKU, 2. MRP II, 3. EERP 4. JIT II
5. HIFO 6. AGV 7. JIS 8. MPS

Part – B 48 marks

Answer any three questions from the following, each question carries 16 marks

Q.5  (A) Prepare ABC Analysis. Classify the items as A., B, and C.

80% Value as 'A' category.

15% Value as 'B' category

5% Value as 'C' category

<table>
<thead>
<tr>
<th>Item No</th>
<th>101</th>
<th>102</th>
<th>103</th>
<th>104</th>
<th>105</th>
<th>106</th>
<th>107</th>
<th>108</th>
<th>109</th>
<th>110</th>
<th>111</th>
<th>112</th>
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</thead>
<tbody>
<tr>
<td>annual consumption</td>
<td>360</td>
<td>300</td>
<td>1800</td>
<td>1800</td>
<td>480</td>
<td>2400</td>
<td>3600</td>
<td>180</td>
<td>500</td>
<td>300</td>
<td>1000</td>
<td>1000</td>
</tr>
<tr>
<td>cost Rs/unit</td>
<td>100</td>
<td>1050</td>
<td>6</td>
<td>5</td>
<td>50</td>
<td>1</td>
<td>2</td>
<td>500</td>
<td>48</td>
<td>2</td>
<td>1</td>
<td>1</td>
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</tbody>
</table>

(B) What are various variety reducing and quantity reducing techniques?

Q.6  (A) Why are Safety Stocks required?

(B) How do you decide how much safety stock you must hold for each item?

Q.7  (A) The annual demand of X is 10,000 nos, Ordering Cost is Rs 200, Inventory Carrying Cost is 20%, Price is Rs 60/- per unit. Party offers 1% discount

Order if placed for 2000 nos and above. Find out

i) EOQ

ii) Total Saving

iii) Advise whether 1% discount should be accepted.

Show working.

(B) Discuss stocking policy for for various types of spares.
**Q.8** What will be your stocking policy for following items:

<table>
<thead>
<tr>
<th></th>
<th>Fast moving</th>
<th>Slow Moving</th>
<th>Non Moving</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Items</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>B Items</td>
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<tr>
<td>C Items</td>
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<table>
<thead>
<tr>
<th></th>
<th>Vital</th>
<th>Essential</th>
<th>Desirable</th>
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</thead>
<tbody>
<tr>
<td>A Items</td>
<td></td>
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<td></td>
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<tr>
<td>B Items</td>
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<tr>
<td>C Items</td>
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</tbody>
</table>

**Q.9** Answer any four of the following:

Write Short Notes on:

(A) Making profit from scrap
(B) Reasons for normal losses in storage
(C) Various reports from MRP System
(D) VMI
(E) Two Bin/ Three Bin System
Case Study (Compulsory) (Answer all questions)

Q 10. Make a careful study of the case presented and answer all the questions asked.

Sonata Electronics is a medium scale unit engaged in manufacturing of electronics systems which are used in automobiles industry. Mahindra & Mahindra is their major client. Due to increase in the raw material prices and slow down in the automobile industry both the organizations are under pressure. M & M put pressure on the Sonata Electronics for cost reduction and reduced inventory their end and ask for short notice supplies. Mr Devendrakumar CEO of Sonata Electronics is in dilemma. He has received a suggestion from Ms Akshata, Purchase Manager of Sonata to implement ERP System and restructure Materials Department. She has expressed confidence to save substantially if materials department is run and organized professionally.

1. Why ERP should be implemented?
2. What Types of data/information will you collect to reduce inventory?
3. What steps you will take to reduce inventory costs and cost of material?
4. Prepare strategy for long term supply of items required by Mahindra & Mahindra.

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