Q.1. Explain organized problem solving in detail. (10)

Q.2. Explain different types of layout with a neat diagram. (10)

Q.3. Explain the Basic Inventory Model. (10)

Q.4. Explain the elements required for MRP implementation. (10)

OR

Forecast values and the actual values are given below:

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Forecast demand</th>
<th>Actual demand</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>100</td>
<td>90</td>
</tr>
<tr>
<td>2</td>
<td>100</td>
<td>95</td>
</tr>
<tr>
<td>3</td>
<td>100</td>
<td>115</td>
</tr>
<tr>
<td>4</td>
<td>110</td>
<td>100</td>
</tr>
<tr>
<td>5</td>
<td>110</td>
<td>125</td>
</tr>
<tr>
<td>6</td>
<td>110</td>
<td>140</td>
</tr>
</tbody>
</table>

Calculate:

(a) RSFE (b) Forecast error (c) Cumulative error
(d) MAD (e) Tracking signal

(5x2=10)
Q.5. Define **any five**:
(a) Quantity control  (b) Rating  
(c) Methods study  (d) TQM  
(e) Operations process chart  (f) Volume flexibility  

(5x2=10)

Q.6. Explain the characteristics of JIT system  

(10)

Q.7. Explain the concept of forecast with a neat diagram.  

(10)

Q.8. What are the various issues in Materials Management?  

OR  

Explain the importance and application of forecasts in production operations management.  

(10)

Q.9. Write short notes on:
(a) Steps in aggregate planning  
(b) Various classification of production system  

(5+5=10)

Q.10. Choose the right answer:  
(i) A unique Japanese information system that harmoniously controls the production quantities in each process:  
(a) Kanban system  
(b) Japanese system  
(c) Elbert system  
(d) Shiego system  

(ii) Input is equal to:  
(a) Excess + Waste  
(b) Output minus Waste  
(c) Output + Input  
(d) Output + Waste  

(iii) An average that is repeatedly updated is known as:  
(a) Composition Average  
(b) Repeated Average  
(c) Summation Average  
(d) Moving Average
(iv) SPT refers to:
(a) Shortest processing time
(b) Shortest production time
(c) Shortest prevention time
(d) Shortest publishing time

(v) When goods and services are produced by performing same activities in specified sequence repetitiveness, we call it a:
(a) Batch production
(b) Job shop production
(c) Mass production
(d) Assembly line production

B Match the following:
(a) Profit (i) RSFE/MAD
(b) Device for recording a process (ii) High, Medium, Low
(c) HML classification (iii) Group technology
(d) Similarity in design (iv) Flow process chart
(e) Tracking signal (v) Revenue minus cost

(5+5=10)