Instructions:
1. From Part - A, answer all questions, each sub question carries 1 mark
2. From Part – B, answer any three questions out of five questions. Each question carries sixteen marks.
3. Part –C is a case study of 20 marks.

Q.1.A) State whether true or false:

a. It is the objective of Inventory Control to ensure adequate supply of products to Customer.
b. Two bin and three bin are storage system for inventory control.
c. The location of warehouse does not affect the primary transportation cost.
d. Local levies like sales tax, octroi charges in the region do not affect the site selection for warehouse.
e. Moving average method is used for Inventory control.
f. Mean absolute deviation is a measure of forecast error.
g. Unitization describes the physical grouping of master carton into one restrained load for material handling.
h. Lower is the value of the product higher is the value of packaging.

B) Match the following:

<table>
<thead>
<tr>
<th>a. Order cycle</th>
<th>I. Environment should be saved from them</th>
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<tbody>
<tr>
<td>b. Safety stock</td>
<td>II. Entire facility under the financial and administration control of the firm</td>
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<td>c. Plinth</td>
<td>III. Tells about the product inside the packaged material</td>
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<tr>
<td>d. Private Warehousing</td>
<td>IV. Essential for product design and development</td>
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<td>e. Time Series Method</td>
<td>V. An open area in warehouse premises were goods are stored</td>
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<tr>
<td>f. Forecasting provides future trend which is</td>
<td>VI. The time period between two successive orders</td>
</tr>
<tr>
<td>g. Communication</td>
<td>VII. A forecasting method</td>
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<tr>
<td>h. Hazardous material</td>
<td>VIII. Buffer stock</td>
</tr>
</tbody>
</table>
C) Fill in the blanks
  a. Inventory generally refers to ____________ in stock.
  b. EOQ stands for ________________.
  c. ________________ is used to prepare material planning to take up replenishment action.
  d. Forecast which cover the periods less than _________ year is limited as short term forecasting.
  e. ________________ are designed for handling the most general packaged products or commodities.
  f. The elements of warehousing cost are ____________, storage and administration.
  g. Packaging has significant impact on ____________ and _______________ of logistical system.
  h. Packaging is categorized in two types 1. ____________ 2. ________________.

D) Choose the correct answer/s.

  a) Various types of inventories are
     I. Raw material
     II. Work in Progress inventory
     III. Finished goods
     IV. All the above

  b) Inventory models are
     I. Deterministic models
     II. Probabilistic model
     III. Logistic model
     IV. A and b
     V. All the above

  c) Performance parameters of warehousing does not include
     I. Stock turnover ratio
     II. Warehouse cost to sales ratio
     III. Warehouse location to transportation cost
     IV. Warehouse cost per unit handled
     V. Occupancy rate of warehouse space

  d) Warehouse options are
     I. Private
     II. Public
     III. Contract
     IV. All the above

  e) Correlation types are
     I. Positive and Negative
     II. Linear and Non- linear
     III. Scalar and Vector
     IV. Only a and b above
     V. a, b and c.

  f) Accurate forecast are essential for
     I. JIT
     II. MRP I
III. MRP II
IV. ERP
g) Emerging trends of packaging are
   I. Film based pack
   II. Blanket Wrap
   III. Unitization
   IV. a and b above

h) Which one of the following is not International size of packaging
   I. 40" * 48"
   II. 32" * 40"
   III. 32" * 36"
   IV. 32" * 32"

PART - B
(Answer any three questions)

Q. 5) Describe various warehousing functions.

Q. 6) What are the factors which affect the warehouse site selection? What are the quantitative techniques for warehouse site selection?

Q. 7) What is packaging? Discuss about packaging material.

Q. 8) List various types of inventories. Why control on inventory is required and what are its benefits.

Q.9) A company uses simple exponential smoothing with smoothing constant $\alpha = 0.2$ to forecast the demand. The forecast for the first week of the March was 400 units and actual demand turnout to be 450 units.
   I. Estimate the demand for second week of March.
   II. If the actual demand for the second week of March is 460 units, forecast the demand upto April second week. Assume that the demands for subsequent weeks are 465, 434, 420, 498, 462 and 470 units.

PART- C
(Compulsory Question)

Q. 10) ABC corporation has got a demand for a particular part at 10,000 units per year. The cost per unit is Rs.2 and it costs Rs. 36 to place an order and to process the delivery. The inventory carrying cost is estimated at 9 percent of average inventory investment. Determine
   I. Economic Order Quantity.
   II. Optimum number of order to be placed per annum.
   III. Minimum total cost of inventory per annum.

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