

GOVERNMENT ENGINEERING COLLEGE-DAHOD

Branch: Mechanical Engineering
Subject: Operation Research
Year: 2019-2020

Year: 4th Sem.: 7th
Subject Code: 2171901

Tutorial: 7: Inventory Control

| Sr. No. | Questions |
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| 1 | Explain ABC Analysis. Show its application with suitable example. |
| 2 | Explain different cost associated with Inventory. |
| 3 | <p>Following is the data collected by the company for one of the item having annual demand of 1000 units:</p> <p>Interest on the capital locked for inventory = 15%, pilferage of inventory=5% of total inventory cost, other holding cost= 20% of inventory cost, order processing cost/order= Rs 150, order follow up cost/order= Rs 125, inspection and other procurement cost/order= Rs 125.</p> <p>If the cost per item is Rs 10 and discount offered is 10% for minimum order quantity of 500 items, Should the order be placed without discount for EOQ or with discount for quantity of 500 items? What will be saving by selected option?</p> |
| 4 | The annual demand of a product is 15,000 units. Each unit cost Rs.50/- if the orders are placed in quantity below 150 units. For order of 200 and above the unit prize is Rs.44/-. Assume inventory holding cost is 12% of the value of item and ordering cost is Rs.2/- per order find the economic lot size. |
| 5 | A company is presently buying an item of worth Rs.90, 000/- from a supplier at an optimal purchasing policy at a discount of 1%. Presently the ordering cost is Rs.100/- per order and 20% as inventory handling cost of the average inventory level. The company receives another two offers from the other suppliers. First supplier offers 5% discount if the order is placed twice a year and second supplier offers 3% discount if the order is placed quarterly a year. Which offer the company should accept? |
| 6 | The production department for a company requires 3500kg.of raw material for manufacturing a particular item per year. It has been estimated that the cost of placing an order is Rs.35& the cost of carrying inventory is 25 percentage of the investment in the inventories. The price is Rs.10 per kg. The purchase manager wishes to determine an ordering policy for raw material. Calculate (1)The optimal lot size(2)The minimum yearly variable inventory cost(3)The optimal order cycle time(4)The minimum yearly total inventory cost. |