

Class - B Com. Part III

Subject - Cost Acc.

Topic - Economic Order Quantity (Problem & solution)

Problem: The annual demand for an item is 3200 units. The unit cost of it is Rs. 6.00 and inventory carrying cost is 25% per annum. If the cost of an order is Rs. 150 determine:-

- (I) E.O.Q. (II) No. of order per year
(III) Time between two consecutive orders.

Given: $R = 3200$ units, $P = \text{Rs } 6$.

$$C_c = \frac{6 \times 25}{100} = 1.50, \quad C_o = \text{Rs. } 150$$

$$(I) \text{ E.O.Q.} = \sqrt{\frac{2 \times R \times C_o}{C_c}} = \sqrt{\frac{2 \times 3200 \times 150}{1.50}} = 800 \text{ units}$$

$$(II) \text{ No. of order per year} = \frac{R}{Q_o} = \frac{3200}{800} = 4$$

(III) Time between two consecutive orders

$$= \frac{\text{No. of months in a year}}{\text{No. of order per year}} = \frac{12}{4} = 3 \text{ months}$$

Thus the firm is safe in placing the order of 800 units. If he place order more than 800 units at a time he have to bear extra cost of carrying the raw materials. He may incur loss and may shut down.