EOQ?

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⇒. EOQ (Economic Order Quantity):

EOQ is an ancient or old technique of inventory control. F.W Haris invented first the EOQ model in 1915. Since then it has been largely used. EOQ is the quantity of goods which ~~determines~~ incurs minimum inventory cost.

According to F.N. Broom –

"The order size associated with such minimized cost is called ~~an~~ Economic Order Qualontity."

A.C. Laufer said –

"The economic lot size is that quantity of an item which can be ordered to replenish the inventory at the minimum total cost."

EOQ is used in processing procuring goods. It determine the order quantity of goods which incurs minimum cost.

Determination of EOQ mathematically:

We can determine EOQ mathematically in the following ways –

$$EOQ / Q = \sqrt{\frac{2XA \cdot O}{IC}}$$

here, A = Annual demand
O = Ordering or procurement cost.
IC = Inventory carrying or Holding cost.

mple:

ere was demand for an item is 40,000 units when Ordering st was tk. 125 & holding cost 0.50tk. per unit. Determine EOQ.

Here. $A = 40,000$

$O = 125$ tk.

$IC = .50$tk.

$\therefore EOQ. = \sqrt{\frac{2 \times 125 \times 40000}{.50}}$

$= \sqrt{20,000}$

$= 4772$ unit.

the requirement for a particular inventory item is 10000 its per year. ordering cost tk. 4 and carrying cost tk. 2. termine- i) EOQ

ii) Optimum no. of order per year.

iii) Total inventory cost for the year.

(a) $EOQ = \sqrt{\frac{2 \times AO}{IC}}$ where, $A = 10000$

$O = 4$tk.

$IC = 2$ tk.

$= \sqrt{\frac{2 \times 10000 \times 4}{2}}$

$= \sqrt{40,000}$

$= 200$ unit.

(b) Optimum no. of order per year $= \frac{A}{Q}$

$= \frac{10000}{200}$ here, $Q/EOQ = 200$.

$= 50$

(c) Therefore the enterprise should place order 50 times per year.

tal inventory cost (T.C) = $\frac{A}{Q} \times (O) + \frac{Q}{2} (IC)$

$= \frac{10000}{200} \times 4 + \frac{200}{2} \times 2$

$= 200 + 200$

$= 400$ tk.

Ans: ⓐ EOQ = 200 unit.

ⓑ Annual optimum no. of order = 50.

ⓒ Total inventory cost = tk. 400.

Reorder point or Maximum - Minimum System:

A firm determines the reorder quantity and minimum inventory after analyzing the relevant matter. A firm desires to maintain always 200 units of inventory i.e the minimum inventory is 200 units and reorder quantity 800 units. But at what point the firm will reorder for 800 units of goods? It requires some information such as procurement time and rate of use of the inventory. Let us suppose that procurement of 800 units of goods will require one month time and the rate of use of inventory is 300 units. Now we can determine the reorder point.

Reorder point = Minimum inventory + (Procurement time X rate of use)

$= 200 + (1 \times 300)$

$= 500$ units.

Production control &—

Meaning and defination:

When the product is being manufactured, the production must be controlled to ensure that the programme output is constantly maintained. This function is known as production control.

According to H.N. Broom:—

"Production control is concerned with planning and time scheduling production and with efficient co-ordinatin of manufacturing activities, so the production flows through the plant on schedule.

R.R Mayer defines —

"Production control involves the development and implementation of a plant which is capable of yielding t desired results."

In any production organization, production control involves the process of seeing that production goes in th right quantity in the right quality and at the right time.

Functions or steps of production control:

i) Production planning: