

Class - B. Com Part III

Subject - Cost Account.

Topic - Problem & solution on Determination of Material Limits and Level.

Lecture by - Dr. Surekha Saha.

Problem:

The average consumption of coal in a factory is 5 Ton per days, the maximum consumption per day is 9 Ton. Minimum level is 45 Tons and EOQ is 208 Ton. It is estimated that the supply would take eight to ten days. The emergent supply time is 2 days. Find out different level of inventory.

Solution:-

① Order point or Order Level =

$$\begin{aligned} & \text{Maximum Rate of Usage} \times \text{Maximum lead Time} \\ & = 9 \text{ ton} \times 10 \text{ days} = 90 \text{ ton.} \end{aligned}$$

② Minimum level = Order Point - (Average Usage Rate  $\times$  Average lead Time)

$$\begin{aligned} & = 90 \text{ Ton} - (5 \text{ ton} \times 9 \text{ Days}) \\ & = 45 \text{ ton.} \end{aligned}$$

③ Maximum level = Order Point - (Minimum Usage Rate  $\times$  Minimum lead Time) + EOQ.

$$\begin{aligned} & = 90 \text{ Ton} - (1 \text{ Ton} \times 8 \text{ days}) + 208 \text{ ton} \\ & = 290 \text{ ton.} \end{aligned}$$

④ Average Stock Level = Minimum level +  $\frac{1}{2}$  EOQ

$$\begin{aligned} & = 45 \text{ ton} + \frac{1}{2} \times 208 \\ & = 149 \text{ ton} \end{aligned}$$

⑤ Danger level = Normal Usage  $\times$  Emergent Lead Time

$$= 5 \text{ ton} \times 2 \text{ days} = 10 \text{ Ton.}$$