

MATERIAL COSTING

- 1) Reorder level = Maximum usage rate * Maximum lead time or
= Minimum level + (Average usage rate * Average Lead time)
- 2) Minimum level = Reorder level - (Normal or average usage rate * Average lead time)
- 3) Maximum level = Reorder level + Reorder quantity - (Minimum usage rate * Minimum lead time)
- 4) Average level = $\frac{\text{Minimum level} + \text{Maximum level}}{2}$
= Minimum level + $\frac{1}{2}$ Reorder quantity
- 5) Danger level (or) Safety stock level = Average usage rate * Lead time for emergency purposes
- 6) EOQ (Economic Order Quantity-Wilson's Formula) $EOQ = \sqrt{\frac{2UO}{C}}$
Where U = Annual usage units
O = Order costing per unit
C = Annual carrying cost of one unit
i.e Carrying cost % * Carrying cost of unit
- 7) Associated cost = Buying cost pa + Carrying cost pa
- 8) Under EOQ Buying cost = Carrying cost pa
- 9) Carrying Cost = Average inventory * Carrying cost per unit pa * Carrying cost %
= Average Inventory * Carrying cost per order pa
- 10) Average inventory = $EOQ / 2$
- 11) Buying cost = Number of Orders * ordering cost
- 12) Number of Orders = Annual Demand / EOQ
- 13) Inventory Turnover (T.O) Ratio = $\frac{\text{Material consumed}}{\text{Average Inventory}}$
- 14) Inventory T.O Period = $\frac{365}{\text{Inventory Turn over Ratio}}$
- 15) Safety stock = $\frac{\text{Annual Demand}}{365} * (\text{Maximum lead time} - \text{Average lead time})$
- 16) Total Inventory cost = Ordering cost + Carrying cost of inventory + Purchase cost
- 17) Input Output Ratio = $\frac{\text{Quantity of input of material to production}}{\text{Standard material content of actual output}}$