# SNS College of Technology

Coimbatore - 35

## 19BAE711 – Working Capital Management

## Unit III - Inventory Management

Presented by

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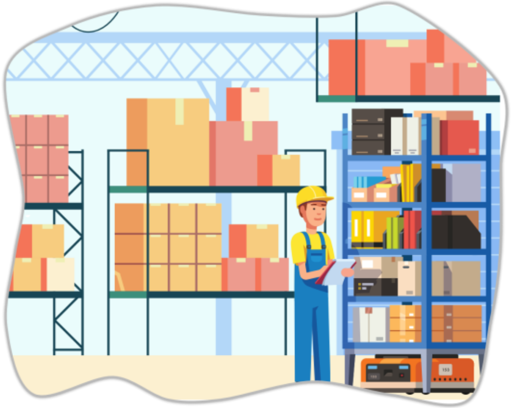
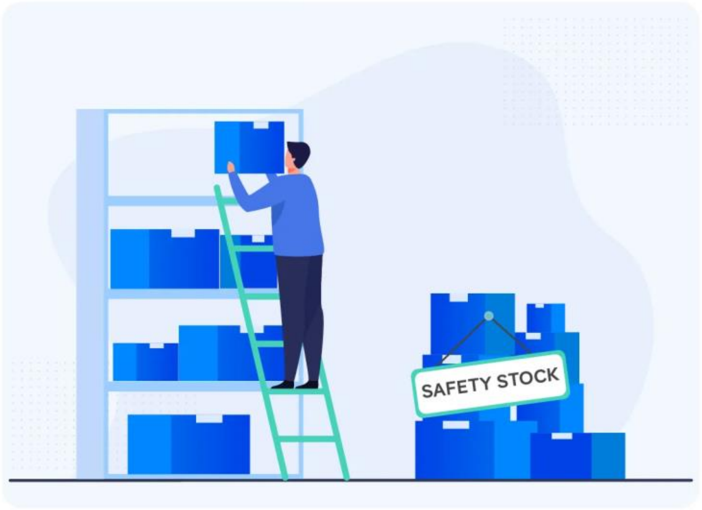
*Design Thinker*

# Guest the topic

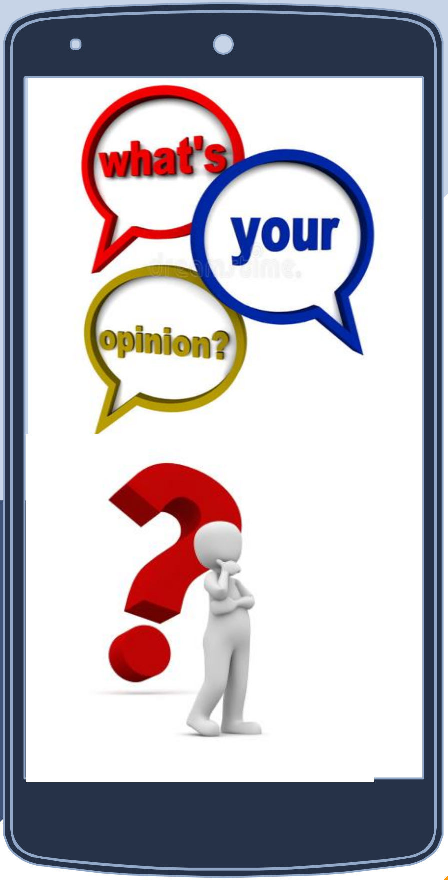




# Recall

- Factors affecting safety stock
- Safety stock challenges
- Benefits of safety stock

# What is Order / Reorder?



# Reorder Point

- The reorder point is the point at which a company orders more inventory to replenish its stock.
- This point is calculated based on the company’s average daily sales and the lead time (the time it takes to receive new inventory from the supplier).

# Cont…

- Both safety stock and the reorder point are important to keep in mind when managing inventory.
- By having a safety stock, you can avoid stock outs and keep customers happy.
- And by knowing your reorder point, you can make sure you have the inventory you need on hand when you need it.

# Cont...

- The reorder point is calculated by taking the average daily usage and multiplying it by the lead time. The lead time is the amount of time it takes to receive an order from the supplier.

- For example, if a company has an average daily usage of 10 units and a lead time of 5 days, the reorder point would be 50 units. This means that the company needs to have 50 units on hand at all times to meet customer demand.

- The reorder point is a crucial part of inventory management. It ensures that companies have enough inventory on hand to meet customer demand, while also avoiding excess inventory.

# Formula

- The reorder point formula is:
- Reorder point = Safety stock + (Lead time x Average daily demand)
- For example, if a company has a lead time of two days and an average daily demand of 100 units, the reorder point would be:
- Reorder point = (2 x 100) + 500
- Reorder point = 300 units.

# Reorder Quantity

- Reorder point is the level of inventory at which a company must place a new order to replenish stock.
- Reorder quantity is the amount of inventory that a company must order to replenish stock.
- The main difference between reorder point and reorder quantity is that reorder point is the point at which a company must place an order to replenish stock while reorder quantity is the amount of inventory that a company must order to replenish stock.

# Economic Order Quantity

- Economic order quantity (EOQ) is the number of units of a product that a company should order to minimize the total costs of inventory. The EOQ model is based on the following assumptions:

- There is no quantity discount.
- There is no production lead time.
- The demand for the product is constant.
- The unit cost of the product is constant.
- There is no interest cost.

# Economic Order Quantity

- The EOQ formula is as follows:
- $EOQ = \sqrt{(2DL/H)}$
- Where:
- D = Annual demand
- L = Ordering cost per order
- H = Holding cost per unit per year
- The EOQ model can help a company determine the optimal number of units to order so that it can minimize the costs of inventory.

# Open to Buy

- Open-to-buy (OTB) is an inventory management technique to determine how many items you have to purchase.
- Open-to-buy is a budget forecast that a store creates for a specified time period in order to buy potential future goods or things with an aim to ensure better inventory management and maximize profit.

# Formula

- OTB(Open-to-buy ) = Planned sales+ planned markdowns+ planned end of month inventory- planned beginning of month inventory.

- Where,
- Planned beginning of month inventory: Expected inventory (in your business base currency) to have at the beginning of the month.
- Planned sales: Predicted sales (in your business base currency) during a given month.
- Planned markdowns: A projection of product markdowns (in your business base currency).
- Planned open-to-buy: The amount that you have available to purchase inventory at the end of the month.
- Planned end-of-month inventory: Predicted inventory balance(in your business base currency) at the end of the month.

# Summary

- Reorder Point
- Reorder Quantity
- Economic Order Quantity
- Open to Buy

# Assessment

Safety stock will to help to respond during sudden spike in demand

True / False

Ans: True

# Reference

- https://www.zoho.com/inventory/guides/what-is-safety-stock.html
- https://www.netsuite.com/portal/resource/articles/inventory-management/safety-stock.shtml
- https://retalon.com/blog/what-is-safety-stock
- https://cashflowinventory.com/blog/safety-stock/

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