UNIT – 3
CLASS 1

BACKGROUND:

- Imagine a small grocery store selling rice, sugar, oil, and biscuits. Every week, customers come regularly, but demand is never exactly the same.
- If the shopkeeper buys too much stock, a large amount of money gets blocked in unsold goods, storage costs increase, and some items may expire or get damaged.
- If too little stock is purchased, products may run out, customers may leave, and sales as well as goodwill are lost.
- So the real business challenge is deciding how much to order and when to order so that total cost is minimized and profit is maximized.
- This is not just a small shop problem-even large companies like Amazon and D-Mart carefully manage their stock to avoid huge financial losses.
- This type of stock kept for future sale or use in business is called **inventory**.
- Managing this stock in a planned and systematic way-so that there is neither excess nor shortage-is known as **Inventory Control**, which helps businesses operate smoothly and profitably through scientific decision-making rather than guesswork.

INVENTORY:

The word *inventory* refers to any kind of resource that has economic value and is maintained to fulfill the present and future needs of an organization. According to Fred Hansman, inventory is *an idle resource of any kind provided such a resource has economic value.* Resources may be classified into three broad categories:

(i) physical resources such as raw materials, semi-finished goods, finished goods, spare parts, lubricants, etc.,
(ii) human resources such as unused labour (manpower), and
(iii) Financial resources such as working capital, etc.

The following are a few examples of the type of inventory held by various organizations. Since the final product (output) of a service organization such as a bank, hospital, etc., cannot be stored

for use in the future, the concept of inventory control for them is associated with the various forms of productive capacity.

Type of Organization	Type of Inventories Held
Manufacturer	Raw materials; semi-finished goods; finished goods; spare parts, etc.
Hospital	Number of beds; stock of drugs; specialized personnel, etc.
Bank	Cash reserves; tellers, etc.
Airline company	Seating capacity; spare parts; specialized maintenance crew, etc.

Inventory of resources is held to provide desirable product or service to customers (users) and hence to achieve sales targets. Since investment in inventory represents substantial portion of the total capital investment in any business, therefore investment in inventories beyond a certain level affect organization's cash flow and working capital. Hence, to ensure total minimum inventory cost, it is essential to balance the advantage of having inventory of resources and the cost of maintaining them.

INVENTORY CONTROL:

The following few basic factors are required to be taken into consideration for an efficient control of inventory.

1. **Items to be stocked:** Since physical storage of inventory items is expensive, therefore a control is needed to ensure that inventory level remains as low as possible. This implies that:

- Inventory level of existing items is kept at reasonable level.
- Unnecessary items are not added to the inventory.
- Items which have not been used for long time are removed from the inventory.

The decision to maintain specific inventory level of items need a cost-benefit analysis for holding an item in stock and its demand. Thus, regular audit is required on the usage of items already in stock.

2. **Time to replenish inventory:** There are two different approaches to check stock of inventory items:

- *Periodic review system*, where orders are placed at fixed intervals of time. The quantity ordered varies, depending on the inventory in hand and consumption level at the time of review.

- *Fixed order quantity system*, where stock level of inventory items is monitored regularly and when it drops to a specified level, a replenishment (to fill stock again) order for a fixed quantity is placed.

3. **Quantity of replenishment order:** Every time an order is placed, there are certain costs incurred on account of administration, transportation, inspection, etc. If large and frequent orders are placed, it increases the average stock of inventory items. If small and frequent orders are placed, it increases the cost of ordering and delivery but the average stock of inventory items becomes low. Thus, an optimal inventory control policy is required to minimize the total inventory cost. The order quantity usually depends on:

- Demand pattern

- Price of an item, discount options, total budget and warehouse space, etc.

- Lead time