

## INVENTORY CONTROL

Inventory control refers to the process of managing and regulating the supply, storage, and accessibility of inventory to ensure the right quantity of materials or products is available at the right time. It helps minimize costs, avoid overstocking or stockouts, and optimize production and sales operations.

### Types of Inventory Control Systems:

1. **Perpetual Inventory System** – Continuously updates stock records using technology like barcode scanners or RFID.
2. **Periodic Inventory System** – Stock is counted at regular intervals to determine usage and reorder needs.
3. **Just-in-Time (JIT) Inventory** – Materials are ordered and received only when needed to reduce carrying costs.
4. **Economic Order Quantity (EOQ)** – A formula-based approach to determine the ideal order quantity that minimizes total inventory costs.
5. **ABC Analysis** – Classifies inventory into three categories (A, B, and C) based on value and usage frequency.
  - *A-items*: High value, low quantity.
  - *B-items*: Moderate value, moderate quantity.
  - *C-items*: Low value, high quantity.

### Inventory Control Techniques:

- **Reorder Point (ROP)**: Determines the stock level at which a new order should be placed.
- **Safety Stock**: Extra inventory maintained to avoid stockouts due to demand fluctuations.
- **Vendor-Managed Inventory (VMI)**: The supplier is responsible for managing stock levels at the customer's location.
- **Batch Tracking**: Monitors groups of inventory with common characteristics to ensure quality and traceability.

### Benefits of Inventory Control:

- Reduces storage and carrying costs.
- Improves cash flow by avoiding excessive stock.
- Enhances production planning and order fulfillment.
- Minimizes waste and obsolescence.

- Prevents stockouts and delays.

