

Material Cost.

- Material (also, called, raw material) is an **imp input factor** or factor of production. Raw materials are in their **natural state** before they are processed or used in **production**.
- They are **used in the primary production** / manufacturing of goods and services.
- They are input goods or inventory that a company **needs for the purpose of manufacturing** its products.
- It is defined as the basic material from which a product is made.
- It is also known as **unprocessed material** / primary commodity.

Types :- a) **Direct** b) **Indirect**.

a) Raw materials which are directly used in the manufacturing process are called, direct raw materials.

E.g. wood used for a chair

b) Raw materials that are not part of the final product but are used in the production processes are called, indirect raw materials.

E.g. Fitting and nails, wood glue etc.,

Inventory or Stock levels :-

In order to requisition the stores for replenishment, the store-keeper should have a complete idea about different inventory level viz, Maximum Level, Minimum Level, Re-order Level, Average Level and Danger Level.

a) **Maximum Level** - represents the upper limit beyond which the quantity of any item is not normally to rise. This is to ensure that the working capital is not blocked in the stores unnecessarily.

$$\text{Maximum Level} = \left[\text{Reorder Level} - \text{Minimum Consumption} \right] + \left[\text{Re-order Quantity} \right]$$

b) **Minimum Level** - Minimum Stock level which is also called, Safety or Buffer, is lower limit below which the stock of any item should not normally be allowed to fall.

The objective behind this is to see that prodⁿ activities are not stopped for want of material.

$$\text{Minimum Level} = \text{Reorder Level} - \left[\text{Normal Consup per unit of time} \times \text{Average Lead time} \right]$$

c) **Average Level** - This is the average of Max & Min

$$\text{Average level} = \frac{\text{Minimum} + \text{Maximum}}{2}$$

$$= \text{Minimum} + \left[\frac{\text{Reordering Quantity}}{2} \right]$$

d) **Re-order level** - The inventory level at which the order is placed for the purchase of material is called the Re-order level.

When the stock of a material reaches this level, the store-keeper initiates action for the purchase of material.

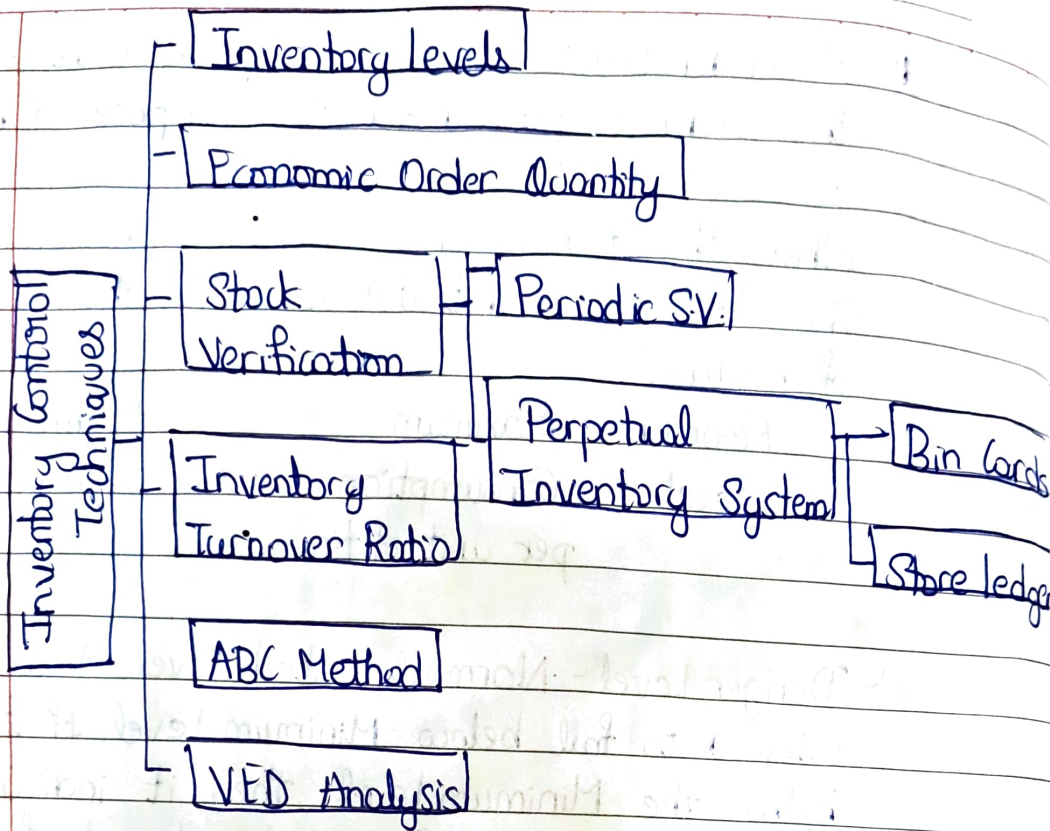
$$\text{Re-order Level} = \text{Maximum Consumption per unit of time} \times \text{Maximum Lead time}$$

e) **Danger Level** - Normally, stock level should not be allowed to fall below Minimum level. If it falls below the Minimum level, then it indicates that urgent action for replenishment of stock must be taken to avoid stock-out situation.

$$\text{Danger level} = \text{Minimum Consumption per unit of time} \times \text{Maximum lead time for emergency purchase}$$

Inventory Control Techniques.

Inventory Control :- The process of ensuring the right amount of supply is available in an organization.



[EOO]

b) Economic Order Quantity - is the ideal quantity of units a company should purchase to meet demand while minimizing inventory cost such as holding costs, shortage costs, and order costs.

- Ordering Cost
- Carrying Cost

c) Stock Verification - Verification in the form of either counting, measurement or weighing of materials and supplies held in the stores department and its comparison with the stores records are necessary for the purpose of detecting discrepancies.

- Periodic S.V - Under this method, stock checking or verification is done periodically say, quarterly, half-yearly or yearly or a combination.

- Perpetual or Continuous S.V - Under this system, continuous verification of stock and the comparison of actual physical quantity of different items of materials with their figures in the records is undertaken.

→ Bin Cards - Bin Card place, shelf, rack or any help of shortage container where materials are kept a card is attached to each bin to record the position of store in the bin. This card is card known as Bin Card / Shores card.

It is maintained by the store keeper & the quantities of materials are recorded in it. It shows the receipt issued & balances of each material separate columns are maintained to record receipts, issues & balance

BIN CARD

Name of the material _____	Minimum level _____
Code no. _____	Maximum level _____
Bin no. _____	Re-order _____
Shores ledger folio no. _____	Reorder quantity _____

Receipts			Issues			Balance	
Date	Goods receipts	Qty	MR	Qty	Qty	Qty	Remarks
	Noteno.						

→ Stock ledger - is kept in costing department. It contains a/c of every material. In stock ledger stores are recorded both in quantity & value it contains the particulars regarding maximum and minimum of level of stock, Re-order level, re-order quantity etc.

Stores Ledger

Date	Receipts			Issues			Balance		
	Qty	Rate	Value	Qty	Rate	Value	Qty	Rate	Value

★ Difference b/w Bin Card and Store keeping.

Bin Card	Store keeping.
It is maintained by the store keeper	It is maintained by Cost a/c Department.
It is attached to bin. It is maintained the inside the store	It is kept in the cost office and it is maintained outside the store.
Every transaction is entered in the bin card separately.	It transaction summarized and entered in the store ledger periodically.
The record of materials is made in quantity only.	The record of materials is made both in quantity and values.
Entries in bin card are made and when the transaction occur	Entries are made after the transaction take place.

d) Inventory Turnover Ratio - Also called as Stock Turnover Ratio / Stock velocity, it establishes the relationship b/w $i)$

- i) the cost of raw materials consumed during a given period.
- ii) the average costs of opening and closing stocks of raw materials.

$$\text{Inventory Turnover Ratio} = \frac{\text{Cost of raw materials consumed during yr}}{\text{Average of stock of RM.}}$$

e) **ABC system** - classifies inventory items into 3 categories based on their value and importance to business : A (High value items)
 B (medium-value items)
 C (low-value items)

f) **VED analysis** - deals with the classification of materials based on their importance to other materials.

Methods of Pricing Material Issues

a) **FIFO** - is based on assumption that the units which are acquired first are issued (to the prodⁿ departments) first. Hence, the materials issued are priced in chronological order of the purchases & at their cost prices.

b) **LIFO** - Under this method, the price of the last batch purchased and received in store is used for all issues until all units from that batch are issued

c) Simple Average Price method - CIMA, London defines it as "a price which is calculated by dividing the total of the prices of the materials in the stock from which the material to be priced could be drawn by the number of prices used in the total."

d) Weighted Average Price Method - CIMA, London defines it - This method considers both the cost of materials and the number of units of material. It is computed by dividing the total cost of material by the total no. of units of material in stock.