



# MODULE - II

# MATERIALS



- INTRODUCTION :-

Material management is a function responsible for co-ordination of planning, sourcing, purchasing, moving, storing and controlling materials in an optimum manner so as to provide pre-determined service to the customer at a minimum cost. The important advantages of materials management are better accountability, better performance, better growth and adaptability to electronic data processing.



# CLASSIFICATION OF MATERIALS

The term material refers to all commodities consumed in the process of manufacture materials can be broadly classified finished product.

1) **Direct material** :- Direct material is that material which can be conveniently identified with the particular cost unit .it is a part of the finished product.

For example :

cotton used in textile mills. Steel used in manufacturing machines ,familiar used in manufacturing furniture ,lather used in marking shoes etc...

## 2) INDIRECT MATERIAL :-

Indirect material is that material which cannot be conveniently identified with a particular cost unit. Indirect material also become a part of the finished product but is used in small quantities.

For example :-

Nails used in the manufacturing of furniture thread used in the manufacturing of shoes etc..



# Inventory Or Material Control

Material control is a system which ensures that right quality of material is available in the right quantity at the right time and right place with the right amount of investment. in simpers words materials control; is a systematic over the control over the purchasing strong and using of materials as so have to minimum possible of a materials.





# BIN CARD

Materials are kept in appropriate bins or containers' Bin card is made out for each type of material carried and may be attached to storage bins or containers. Bin card shows quantities of each material received issued and stock . It service the purpose of providing ready reference.





# ABC ANALYSIS

The ABC method is an analytical method of stock control which aims at concentrating efforts on those items where attention is needed most. It is based on the assumption that a small number of the items in inventory may typically represent the bulk money value of the total material used in production while a relatively larger number of items may represent a small portion of the money value of stores used and that small no of items should be subject to the greatest degree of continuous control.





# TYPES OF STOCK LEVELS

- Maximum level
  - Minimum level
  - Recorder level
  - Average level
  - Danger level
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- RECORD LEVEL :-

It is that level of material at which new order for material is to be placed. in other words this is the level at which purchase requisition is made out. this level will be fixed somewhere b/w max.and min.level.

the formula for computing record level is as follows:

Record level=(Maximum consumption Maximum record period)

- AVERAGE STOCK LEVEL:-

This is computed with the help of the following formula

Average stock level=Minimum level +Maximum level



- DANGER LEVEL :-

It is theta level below which stock should not be allowed to follow except under emergency conditions. When stock reaches this level, urgent action for purchase is initiated.

The formula for computing danger level is as follows:

Danger level = Average consumption \* Maximum record period for emergency purchases.



# METHODS OF PRICING MATERIAL ISSUES

The different methods used for pricing the material issues are summarized below:

- Actual cost:
  - 1) Specific price
  - 2) First in first out method(FIFO)
  - 3) last in first out method(LIFO)
  - 4) Highest in first out method(HIFO)
  - 5) Base stock method
- Average cost :
  - 1) Simple average price method
  - 2) Weighted average price method

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- Current price method :
    - 1) Replacement price method
    - 2) Next in first out method (NIFO)
  - National price method
    - 1) Standard price method
    - 2) inflated price method
    - 3) Re-use price method.
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# FIRST IN FIRST OUT METHOD

This method assumes that materials are used in the order in which they are received in stores. The issues are priced in the chronological order of receipts. as a result closing stock will be valued at latest purchase price.

## ❖ Merits Of FIFO Method :-

- It is a easiest and a simple method.
- this method agrees with the recent purchase price prevailing in the market.
- it a logical method.
- when there is a fall in price in the market this method gives better results.
- it is suitable where materials are slow moving bulky and when the cost is high.
- material cost represents actual cost which should be charged to product or process.



## ❖ Demerits of FIFO method :-

- when materials are purchased frequently complicated calculation will invite clerical errors.
  - when price fluctuate ,calculations become tedious
  - it overstates profit at the time of rising prices.
  - if price changes frequently compression of one job with other will not serve useful purpose.
  - the old materials which are returned to stores from production centers will be send to other production units bas fresh issues.
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## LAST IN FIRST OUT METHOD (LIFO)

This method based on the assumption that the last times purchases are first to be used. here, issues are valued at current prices, while stock remains at historical cost. the method has advantage under inflationary conditions of the market.

### ❖ Merits of LIFO method:-

- 1) under this method issues are charged at current price which is more appropriate.
- 2) profit is realistic
- 3) it ensures complete recovery of material cost from production
- 4) its is more useful during the period of rising prices.



❖ Demerits of LIFO method :-

- if purchase are made frequently calculations become tedious.
- unfair comparison of job cost when price changes too frequently
- stock value does not represent current market price.
- stock taking on LIFO basis is not acceptable for income tax purpose.
- it does not show the true position of stock.



## SIMPLE AVERAGE PRICE METHOD

Simple average price is the average of the prices without any regard to quantities. the calculation of simple average price involves adding of different prices and dividing by the no. of different price.

under this method issues are valued at simple price of the number of prices available at the time of issue irrespective of the quantities purchased. the lot which is exhausted based on first out principles is excluded in computing the average.





❖ Merits of simple average price method :-

1. it is simple and easy to operate
2. if prices do not fluctuate accurate results can be obtained.

❖ Demerits of simple average price method :-

1. When there is a fluctuation in prices this method gives incorrect results
  2. Verification of closing stock becomes difficult
  3. Value of closing stock may indicate vague results in case of drastic price change.
  4. There may be clerical errors in calculations.
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## WEIGHTED AVERAGE PRICE METHOD

This method gives due importance on quantities received. Issue prices are calculated at the average cost price of materials in mind. Weighted average rate is calculated each time a fresh lot is received. This issue prices are derived at the time of receipt not at the time of issues.

Weighted average price is calculated by dividing the total cost of materials in stock by the total quantity of material in stock. This method average prices after weighted by their quantities. This average price at any time is simple by balance value figure divided by the balance units figures.



❖ Merits of weighted average price method:-

1. under this method calculations are simple and easy.
2. when prices fluctuate considerably, it smoothes out the fluctuations.
3. closing stock value is acceptable.
4. it is suitable in case of materials subject to wide price fluctuations
5. another merit of this method is for every new issue, new rate is not calculated.

❖ Demerits of weighted average price method:-

1. fresh calculations will have to be made every time fresh purchase are made.
2. errors are more possible in this method
3. verification of closing stock becomes difficult.
4. Issuing and closing stock are not at current cost.

THE END