

* Methods of Valuing Material Issue →

① FIFO → Under this method, material is first issued from the earliest consignment or as per the exit order of purchase on hand & price at the cost at which consignment was placed in the stores. In other words materials received first are issued first. This is the basic principle behind cost price method (FIFO).

Adv → ① It is simple to understand & easy to operate.

② It is a logical method because materials are issued in order of purchase so material received first are utilised first.

③ This method is useful when price are falling.

④ This method " " " material transactions are not too many and prices of the material are stable.

FIFO → First in first out.

3. Average Cost Method → The principle on which this is based is that all the materials in the stores are so mixed up that issue cannot be made from any particular

lot of purchases & therefore materials are issued at an average cost of material. For eg. following are the 3 diff. lots of material in stock
When material is to be issued 1000 units

purchased at Rs 10000

① 2000 units purchased at 11000 Rs.

② 3000 units purchased at Rs. 12000.

eg
taken

Weighted Average price → A price which is calculated by dividing the total cost of material in stock from which material to be priced could be total quantity of material in that stock.

$$\frac{68,000,000}{6000} = 11,333.33$$

Adv → ① This method recovers the cost of material from production

② This method maintains the issue prices as near to the market prices as possible.

③ This method eliminates the necessity for adjustments in stock valuation.

④ Issue prices are not to be calculated each time issues are made. Issue prices are changed only when new lot of material is received

① * Inflated Price Method → Inflated price method is used when material are subject to natural loss & wastage due to climate conditions. In this method the predominant or predetermined percentage is added to the price as per extent of loss.

② Market Price Method → In Market price method we have replacement prices and resaleable value. The replacement price is used in case of items which are held in stock for use in production & resaleable value and price is used in respect of items which are kept in stock for sale.

③ Standard Price Method → In standard price method, the materials with high purchased price are issued a usually followed materials at low prices in respect of their date of purchase. It assumes that under inflation situation product can observe the extra burden of increased prices. and does allocated for low priced material with basic standard price.

* Techniques of inventory Control or Material Cost Control :-

- 1) Purchase procedure
- 2) AVC analysis
- 3) Material issue documentation

- 4) Material storage principal
- 5) Material accounting procedures
- 6) Stock verification procedures
- 7) Control

Page: _____

Date: / /

1) Purchase Procedure → The backbone of the trade by getting goods delivered quickly on ordering in logistics & supply chain. The major components of logistics are: →

- 1) Procurement &
- 2) Material handling
- 3) Packaging & transport

Procurement & supply mg involves buying goods & services that allow an org to operate in profitable & ethical manner. Procurement is the process of identifying & obtaining goods & services it includes sourcing, purchasing & covers all the activities from identifying potential suppliers to the users or beneficiaries.

Purchasing → It is the specific functions associated with actual buying of goods & services from actual sellers.

Sourcing → Simply identifying & working with appropriate suppliers process of acquiring goods & services.

Procurement → Process of product or service sourcing for eg researching, negotiating and applying. It involves activities like → ① Identifying needs & requirements

- ② sourcing + evaluating local, national or international suppliers.
- ③ negotiating terms + conditions + contracts
- Date: / /

- ① Building + managing supplier relationship
- ② Performing cost saving + profit margin analysis
- ③ Receiving goods / services + warehouse mgmt
- ④ Invoicing + organizing payment with the supplier

role of procurement in org → ensures uninterrupted flow of raw material at the lowest total cost.

→ It improves the quality of finished goods produces.

7 R's of procurement → ① Right Price

② Right quantity

③ Right quality

④ Right time

⑤ Right place

⑥ Right source

⑦ Right service

merchandise buyer
industry buyer

Process of procurement → ① ~~Identifying~~ surveying the market

- ② Identifying potential suppliers (suppliers)
- ③ Creating an appropriate list of vendors.
- ④ Assessing internal needs
- ⑤ Preparing a purchase order
- ⑥ Requesting proposals + evaluating quotations
- ⑦ Selecting the right supplier + negotiations
- ⑧ Receiving goods + performing quality checks.
- ⑨ Developing + managing contracts
- ⑩ Invoice appraisal + payment procedures
- ⑪ Establishing a good supplier relationship.

* Areas of decision making in Inventory Management

- 1) What to purchase? → Material production
- 2) When to purchase? → Timing decision
- 3) How much to purchase? → Quantity decision
- 4) From where to purchase? → Suppliers decision
- 5) At what price to purchase? → Price decision

* **ABC analysis** → It is an inventory mng technique that a company can use for the completion of distribution mng. It is also called SIC technique of inventory control which is called Selective Inventory Control technique. Under this ABC analysis inventory is categorised into diff segments/ sections namely ABC. Based upon the value of the material. This inventory mng technique is based on Pareto's analysis or principle. As per this principle 70% of this items account 70% of overall consumption value.

Categories	% in total value	% in total quantity
A	70%	10%
B	20%	20%
C	10%	70%

Annual consumption value =

Annual requirement × Cost per unit of the product

Adv of ABC analysis → It gives the structured view of inventory items. with their quantum and value. It allows the company to control items. that requires substantial working capital. It helps to keep track of inventory and ensures optimum stock of all category items. It helps to improve stock turnover ratio because it is a systematic control technique.

- * A company can maintain its items in category C without compromising on relevant items.
- * This inventory mg technique help with cycle continuing system of inventory holding.

* EOQ → Economic Order quantity is the optimum quantity that should be ordered at a point of time. The main motive of EOQ is to avoid over spending on the items and minimizing the ordering + holding cost associated with the items. EOQ helps to calculate the frequency + volume of order by taking into account the factors like demand factors like holding cost, carrying cost, demand, interest rate etc. The main aim of EOQ is to minimize total cost for every order.

* Ordering Cost → There is a fixed cost incurred with every order. It is generally independent with the number of units ordered or the volume of order. The ordering cost includes packaging + forwarding charges etc.

* Holding Cost → It is also known as carrying cost. It is the opportunity cost of holding a particular product. likewise, there maybe some interest cost associated with the inventory.

The perishability & theft & leakage of goods associated with the inventory.

formula to calculate EOQ \rightarrow

$$\sqrt{\frac{2DS}{H}}$$

Page: _____

Date: / /

D = ~~expense~~ Annual demand in unit of product

S = Ordering cost per order

H = Holding cost per unit of the product

for eg \rightarrow Suppose Mr ABC deals with business of bicycle & has an annual sale of 6000 units. The ordering cost per order is 3000 and the holding cost per unit is 50. Calculate the economic order quantity.

Sol \rightarrow

$$EOQ = \sqrt{\frac{2DS}{H}}$$

$$= \sqrt{\frac{2 \times 6000 \times 3000}{50}}$$

$$= \sqrt{720000} = 268.32$$

* Material Accounting decision

Bin card & store ledger \rightarrow Bin card implies the document which records quantity of material received by issued to and remain in to the store and store ledger is accounting record that remains record of transit of goods in & out of stores it deals with the quantitative & monetary terms of items stored

Quotations \rightarrow Quotations implies a fixed price offer given to the customer as a response to the tender notice. It has a legal binding or authorisation which is accepted by the customer.

Tender → Tender is nothing but a response to an invitation which offer to provide product or services at quoted price, or mentioned price of specified quantity but subject to the specific condition.

Quotation

- ① Quotation is a document of setting out the estimated cost for supplying goods & services or procuring something.
- ② scope of quotation is narrow.

Tender

Tender refers to process of soliciting suppliers its bid on goods & services needed by the buyers.

- ② Scope of tender is wide transparency, openness & fairness.

* Wage & Incentive plans :-

Wage

Halsey plan → This plan is introduced by FA Halsey in 1981. It is a simple combination of time & piece rate system. The main features of Halsey plan are :-

- ① workers are paid at a rate per hour for the actual time taken by them.
- ② A standard time is set for each piece of work, job or operation.
- ③ If worker takes standard time or more than standard time for his work the wage is paid on actual time taken by him.
- ④ If worker take less than standard time. he is paid a bonus equal to 50% of the time saved by him.
- ⑤ Halsey premium plan formula is $\text{Total Earning} = \text{time taken} + 50 \text{ percent of time saved}$

* Rowan Premium plan - The main feature of this plan is similar to Halsey plan. The main features of Rowan premium plan are :-

Page: / /

Date: / /

- ① Wages are paid on time bases for the actual time worked by the workers.
- ② A standard time is determined for each piece of work.
- ③ Bonus is that proportion of wage of actual time taken, which the time saved bears to the standard time.
- ④ Formula \rightarrow Earning = Time take rate + Bonus.

* Overhead Cost Control - Overhead is defined as the aggregate of indirect material cost, indirect wages + indirect expenses; Overhead costs are the operating cost of a business enterprise which cannot be traced directly to a particular unit of output.

* Classification of overheads are further divided into 4 segments.

- 1) Functional
- 2) Variability
- 3) Normality
- 4) Element of Cost
- 5) Controllability.

1) Functional \rightarrow Overheads are classified as \rightarrow

- (i) Factory or Production overhead
- (ii) Office + administration overhead
- (iii) Selling + distribution overhead

2) Variability \rightarrow Fixed Overheads
 \rightarrow variable overheads
 \rightarrow Semi-variable overheads.

3) Controllability \rightarrow Controllable
 \rightarrow Uncontrollable overheads

4) Normality → Normal
→ Abnormal overheads

5) Element of cost → Indirect material
→ Indirect labour
→ Indirect expenses.

Page: _____

Date: / /

Examples of classification

* Factory overhead - Rent & Rates, light, power & fuel, depreciation, insurance & repair of plant & machinery, salary of plant manager, overtime wages, normal loss of materials, bonus & fringe benefits to the workers, expenses relevant to material purchase department, training exp of new workers, telephone, stationery & internet exp, research & laboratory exp, production, supervision exp, labour welfare exp etc.

* Fixed overheads - Rent, rates & insurance of building, repairs & dep of building & fixed assets, research expenses, remuneration of permanent employees, managers salary etc.

2) Variable overheads → Power & fuel, Royalty, travelling agent comm, carriage & cartage, packing charges etc.

3) Semi-variable overheads → Repair & maintenance, supervision & inspection, bank charges, cleaning & lighting, dep of plant etc.

Ques Department K of a certain factory desire to quote the selling price of 10000 units. The detail of cost of 10000 units are material cost - 6000 Rs.

labour cost - 10000 factory overhead fixed 6000. factory overhead variable fixed 4000. Administrative overhead vari. - 8000. Selling & distribution - 6000, & selling & distrib variable 600 Rs. It is required to charge 15% profit. factory overhead 15000

Statement cost & selling price sheet.

Particulars	Details	
sol	Material Cost	6000
	labour Cost	10000
	Prime Cost	16000
	Factory overhead Fixed	8000
	" " Variable	15000
	Work Cost.	39000
	Selling Admin overhead	
	Fixed	4000
	Variable	8000
		51000
	Selling overhead	
	F	800
	V	600
	Cost	52400
	Profit.	7860

7860

* Absorption of Overheads → The total overhead cost pertaining to production department or cost centre is ultimately charged to or absorbed in the cost of products or cost units passing through the centre this is known as absorption.

* Apportionment → It is the process of splitting up an item of overhead cost & charging it to the cost centre on an equitable basis. Absorption refers to charging of the overheads of a particular production department to various

products manufacturer on jobs completed or order executive that department. Hereafter, methods of absorption of methods of absorption of factory overheads.

The rate which is used to charge overhead cost to the product is known as absorption rate.

- 1) Percentage on direct material method.
 - 2) Percentage on direct wages method.
 - 3) Percentage on Prime Cost method.
 - 4) Direct labour ~~hour~~ hour
 - 5) Machine hour rate method
 - 6) Combination of machine hour rate & direct labour hour rate method.
- # Rate per unit produced method.

1) Percentage on direct material method - In this method, total factory overhead of each department are distributed in proportion to direct material used for each job or product during that period. The rate is computed by dividing total factory overheads by total cost of direct material.

eg - The total value of material consumed by the department is 20,000 Rs & factory overheads are Rs 2,000. The rate of Absorption of factory overhead or direct material will be - $10 = \frac{20000}{2000}$

Therefore, if the direct material cost of the job or cost unit is Rs 1,000 the overhead to be absorbed by it will be Rs 100 that is 10% of Rs 1,000.

2) Percentage on direct wage method - This is most widely used & acceptable method of applying overheads to job or products. The overhead rate under this method is computed by dividing the

Overhead expenses by direct labour cost.
for eg → Factory overheads are Rs. 2000 + direct
labour cost Rs. 10000 the overhead rate
this method will be 20%
Date: / /

3) Percentage on Prime Cost method → This is the
combination on percentage of direct material
method + percentage on direct wages method.
The prime cost is taken on the basis of absorption
of factory overheads. Overhead rate in this
rate is calculated by dividing factory overheads
by prime cost. for eg → factory overheads Rs. 2000
+ direct material Rs. 20000, direct labour
cost - Rs. 10000, Rate of Absorption will be - 6.66
$$\frac{2000}{30000} \times 100 = 6.66$$