INTRODUCTION TO IMPORTANT CONCEPTS IN COST & WORKS ACCOUNTING

BASIC CONCEPTS:
Cost Accountancy, Cost Accounting, Cost Centre, Cost Unit, Types of Cost.

ELEMENTS OF COST:
Direct and Indirect Material, Labour and Expenses, Prime Cost, Cost Sheet, Overheads.

MATERIAL ACCOUNTING:
Scientific Purchasing, Purchase Documentation, Types of Stores.

METHODS OF PRICING ISSUES OF MATERIALS:
A: Cost Price Method
B: Average cost price method
C: Notional price method

COST PRICE METHOD:
1] First in first out price {FIFO}
2] Last in first out price {LIFO}
3] Next in first out price {NIFO}
4] Highest in first out price {HIFO}
5] First in last out price {FILO}
6] Actual cost price
7] Base stock methods

AVERAGE COST PRICE METHOD:
1] Simple average price
2] Periodic simple average price
3] Moving simple average price
4] Weighted simple average price
5] Periodic weighted average price
6] Moving weighted average price

NOTIONAL PRICE METHOD:
1] Standard price
2] Inflated price
3] Replacement price
4] Realizable value

STOCK LEVELS:
To avoid the problem of overstocking and under stocking inventory levels are planned. Following are the important inventory levels and the formulas used to compute them:
1] **Re-order Level:**
Maximum Usage X Maximum Re-order period

2] **Minimum Stock Level:**
Reordering level – (Normal Consumption X Normal Reorder Period)

3] **Maximum Stock Level:**
Reordering Level + Reordering Quantity – (Minimum Consumption X Minimum Reorder Period)

4] **Average Stock Level:**
50% of Maximum Level + 50% of Minimum Level

5] **Normal Reorder Period:**
50% of Minimum Period + 50% of Maximum Period

6] **Danger Level:**
Average Consumption X Maximum reorder period for emergency purchase.

**LABOUR TURNOVER:**
The mobility or change in the labour force is known as labour turnover.

**Popular techniques of measuring labour turnover:**
1] Separation Method:
2] Flux method:
3] Replacement Method

**COST ALLOCATION, APPORTIONMENT AND ABSORPTION:**

**Overheads:**
The aggregate of indirect material cost, indirect labour cost and indirect expenses is known as overheads.

**Allocation:**
Allocation is the process of allotment of the whole cost of items on the basis of cost centers or cost units.

**Apportionment:**
The allotment in proportion of items of costs to the concerned cost centre or cost unit is known as apportionment.

**Absorption:**
The process of allotment of overheads to cost units according to the units produced by the concerned departments is known as absorption.

**Primary Distribution:**
The distribution of overheads to the production and service departments is known as primary distribution of overheads.

**Secondary Distribution:**
The process of redistribution or reapportionment of the cost of service departments to the production departments is called as the secondary distribution of overheads.
Bases of apportionment in primary distribution:
1] Direct wages
2] Direct allocation
3] Direct labour hours
4] Number of workers
5] Floor area
6] Machine hours
7] Capital value
8] Number of electrical points
9] Technical estimates

Methods of distribution:
1] Apportionment to the production as well as the service departments.
   A] apportionment on a non-reciprocal basis
   B] apportionment on a reciprocal basis through simultaneous equation method,
   Trial and error method and the repeated distribution method.

Methods of Absorption:
1] Rate per unit of output
2] Percentage on direct material cost
3] Percentage on direct wages
4] Percentage on prime costs
5] Direct Labour hours
6] Machine hour rates
7] Dual hour rates
8] Relative sales value

MACHINE HOUR RATE:
Machine hour rate is one of the methods of overhead rate absorption. The basis for computing
the machine hour rate is the number of hours a machine works for a particular job. Machine hour
rate is worked out with the help of following formula.

\[
\text{Total Overhead Cost} / \text{Total number of hours}.
\]

TYPES OF MACHINE HOUR RATE:
1] Ordinary Machine hour rate
2] Comprehensive Machine hour rate
3] Group Machine hour rate

STANDARD COSTING:
The Institute of Cost and Works Accountants, London has defined standard costing as
“An estimated cost, prepared in advance of production or supply, co-relating a technical
specification of material and labour to the price and wage rates estimated for a selected period of
time, with an addition of the apportionment of overhead expenses estimated for the same period
within a prescribed set of working conditions”. It is one of the cost control technique.
VARIANCE:
Variance is the deviation of actual from the standard data.

VARIANCE ANALYSIS:
The process of ascertainment by comparing the standard costs with actual costs is known as variance analysis. The variance may be favorable or unfavourable. Unfavorable variance is also called as adverse variance.

CATEGORIES OF VARIANCES:
1] Direct material variance
2] Direct labour variance
3] Overheads cost variances
4] Profit variances or sales variances

1] DIRECT MATERIAL VARIANCE:
Following are the equations for computing material cost variances:
A] Material Cost Variance
\[
\text{Standard cost of material} - \text{Actual cost of material}
\]
Material Price Variance
\[
\text{Actual Usage} (\text{Standard Price} - \text{Actual Price})
\]
B] Material Usage Variance
\[
\text{Standard Price} (\text{Standard Quantity} - \text{Actual quantity})
\]
C] Material Mix Variance
It is computed when actual and standard do not differ.
\[
\text{Standard Unit Cost} (\text{Standard Quantity} - \text{Actual Quantity})
\]
If standard is revised then the formula for computation is as follows:
\[
\text{Standard Unit Cost} (\text{Revised Standard Quantity} - \text{Actual Quantity})
\]
If the mix differs then following formula is used for computation:
\[
\frac{\text{Total weight of actual mix}}{\text{Total weight of standard mix}} \times \text{Standard cost of revised standard mix} - \text{Standard cost of actual mix}.
\]

D] Material Yield Variance:
\[
\text{Standard Rate} (\text{Actual Yield} - \text{Standard Yield})
\]
\[
\text{Standard Rate} = \frac{\text{Standard Cost of Standard Mix} / \text{Net Standard of Output}}{\text{Net Standard Output} = \text{Gross Output} - \text{Standard Loss}}
\]

2] DIRECT LABOUR VARIANCES:
Formulas for computing various direct labour variances are as follows:
A] Labour Cost Variance:
\[
\text{Standard Labour Cost} - \text{Actual Labour Cost}
\]
B] Labour Rate Variance:
   Actual Time (Standard Rate – Actual Rate)

C] Labour Efficiency Variance:
   Standard Wage Rate (Standard Time – Actual Time)

D] Idle Time Variance:
   Idle Hours X Standard Rate

E] Labour Mix Variance:
   Actual Hours (Standard Rate -- Actual Rate)

3) OVERHEADS COST VARIANCES:

Following are the formulas to compute the overheads cost variances:

A] Fixed Overhead Variance:
   Actual Output (Standard Fixed Overhead Rate – Actual Fixed Overheads)

B] Overhead Expenditure Variance:
   Budgeted Fixed Overheads—Actual Fixed Overheads

C] Overhead Volume Variance:
   Actual Output (Standard Rate – Budgeted Fixed Variance)

D] Overhead Capacity Variance:
   Standard Rate (Actual Capacity – Standard Capacity)

E] Overhead Calendar Variance:
   Decrease or Increase in Number of units produced due to the difference of budgeted and actual days X Standard Rate per Unit

F] Overhead Efficiency Variance:
   Standard Rate (Actual Quantity – Standard Quantity)

G] Variable Overhead Variance:
   Actual Output (Standard Variable Overhead Rate – Actual Variable Overhead)

4) SALES COST VARIANCES:

Following are the formulas to compute the sales cost variances:

A] Sales Value Variance:
   Actual Value of Sales -- Budgeted Value of Sales

B] Sales Price Variance:
   Actual Quantity (Actual Price – Standard Price)
C] Sales Volume Variance:
   *Standard Price (Actual Quantity of Sales—Standard Quantity of Sales)*

D] Sales Mix Variance:
   *Standard Value of Actual Mix – Standard Value or Revised Mix.*

**MARGINAL COSTING:**

ICMA, London defines Marginal cost as the amount at any given volume of output by which aggregate costs are changed if the volume of output is increased or decreased by one unit. Marginal costing is also called as Variable costing, Direct costing, Incremental costing and differential costing.

**CONTRIBUTION:**

The difference between the sales and variable or marginal costs is called as contribution. It is computed for the purpose of recovering fixed costs.

**BREAK EVEN CHART:**

The graphic presentation of the break even analysis is called the break even chart. It represents the inter relationship between sales, fixed costs, variable costs, total costs, profit and loss. It is the chart that shows profit or loss at various levels of activity.

Following are the various types of break-even charts:
A] Simple break even chart  
B] Graphic break even chart  
C] Control break even chart  
D] Analytical break even chart  
E] Capital break even chart  
F] Contribution break even chart  
G] Cash break even chart

**BREAK EVEN POINT:**

The level of activity at which there is neither profit nor loss is known as break-even point. It is the level of output that breaks even the costs and revenues.

**MARGIN OF SAFETY:**

The difference between actual sales and the sales at the break-even point is called the margin of safety.

It is computed by using the following formula:

- Margin of safety = Sales – Break even sales
- Margin of safety = Profit / Profit Volume Ratio
JOB COSTING:
ICMA, London defines Job costing as the category of basic costing method which is applicable where the work consists of separate contract, jobs or batches each of which is authorized by specific order or contract. Under this system a separate card is maintained for each job and the total accumulated cost is recorded on it. A job cost sheet is prepared to analyze and ascertain the actual costs incurred to the individual jobs.

BATCH COSTING:
This is a method used to ascertain the cost for a batch of goods or components manufactured.

CONTRACT COSTING:
It is that form of specific order costing which applies where work is undertaken as per the customers special requirements and each order is of long duration. It is also known as Terminal costing.

RETENTION MONEY:
A percentage of the value of work done deducted from the progress payment is known as retention money.

ESCALATION COST:
The increase or decrease to cover the contract charges in the price of utilization of material and labour is known as escalation cost.

PROCESS COSTING:
It is the method of cost accounting in which costs are charged to processes or operations and averaged over units produced.

NORMAL LOSS:
The loss which is expected under normal conditions is known as normal loss.

ABNORMAL LOSS:
The loss caused by unexpected or abnormal conditions beyond limit is known as abnormal loss.

ABNORMAL GAIN:
If the actual loss is less than the normal loss then it is known as abnormal gain.

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