# Management Accounting

Accounting (recording of transaction)

Financial Accounting (recording of monetary transaction)

Cost Accounting (cost record maintain or record cost reduction)

Management Accounting (future decision taking work)

Provide information

## Management Accounting:-

→ It is consists (comprised) of 2 word
① Management ② Accounting

**Meaning:-**

→ It is study of managerial Aspect of accounting.

→ The emphasis of management Accounting is to redesign accounting in such a way that helpful to the management information of policy, control of execution and appreciation of effectiveness.

→ It is the system of Accounting which helps management in carring out its function more efficiently.

Or

→ Managerial accounting, also called management accounting, is a method of accounting that creates statements, reports, and documents that help management in making better decisions related to their business' performance.

→ Managerial accounting is primarily used for internal purposes.

Def^n

1st → Author - R.N. Anthony

→ Management Accounting is concern with Accounting information that is useful to management.

Long type

2nd American concile & productivity:-

→ Management Accounting is the presentation of accounting information in such a way so as to assist management in creation of policy and day to day operation of an undertaking organization

Nature or characteristic of M. Accounting:-

→ Management accounting provides data to the management on the basis of which they take decisions to achieve organizational goals and improve their efficiency.

1. Provide Accounting Information:-

→ Information is collected and classified by the financial accounting department, and presented in a way that suits managerial needs to review the various policy decisions of an organization.

2. Cause and Effect Analysis:-

→ One step further from financial accounting, management accounting works to know the reasons of profit or loss of an organization.

→ It works to find out the causes for loss and also study the factors which influence the profitability.

→ Therefore, cause and effect is a feature of management accounting.

3. Use special Technique and concepts :-

→ Budgetary control, marginal costing, standard costing are main techniques used in financial accounting for successful financial planning and analysis, and to make financial data more useful.

4. Talking important decision :-

→ Studying various alternative decisions, impact of financial data on future, studying useful data to management, supplying to take decisions is a part of management helping management accounting

5 Achieving of objectives :-

→ financial data is used to set targets of the company and to achieve them.

→ Corrective measures are used if there is any deviation in actual and targeted task.

→ This all is done through management accounting with the help of budgetary control and standard costing.

6. No fixed Norms :- (guideline or Rule)

→ No doubt, tools of management accounting are same but at the same time; uses of these tools depend upon need, size, and structure of any organization

→ Thus, no fix norms are used in application of management accounting.

→ On the other hand, financial accounting totally depends on certain rules & principals.

→ Therefore, presentation and analysis of accounting data may vary from one organization to another.

7. Increasing Efficiency:- (Good set goal)

→ While evaluating the performance of each department of an organization, management accounting can spot the efficient and inefficient sections of an organization.

→ With the help of that, corrective step can be taken to rectify the inefficient part for better performance.

→ Hence, we can say that efficiency of a concern can increase using accounting information.

8. Concern with forecasting:-

→ Management accountant helps management in future planning and forecasting using historical accounting data.

Q What is Management accounting & it's characteri

## Scope of Management Accounting :-

→ Management Accounting provides technique for the interpetation of accounting data. The main aim is to help management in it's function of planning, directly & controling.

→ Management accounting is related to a no. of fields.

→ The following facts of management are of a great significant form the scope of the objects

1. financial accounting:-

→ financial accounting calculates and analysis business transactions, including expenses, inventories, assets and reporting.

→ financial statements are critical in financial accounting and are prepared regularly at the end of each year.

→ financial accounting is significant in that it assists management in operating successfully and implementing cordination across corporate processes to carry out bussiness planning.

2. Cost Accounting :-

→ cost accounting is a crucial accounting technique because it provides cost analysis tools for a bussiness, such as marginal cost, operational cost, inventory costing, budget control etc.

→ These are required by business management to draft & outlines the bussiness needs.

→ Cost accounting assits in determining the total budget for any firm and gives several methods for estimating and calculating the entire cost of providing a service to the consumer.

3. financial Management :-

→ financial management is the administration and planning of a Company's financial resources.

→ Rising cash and using them wisely is critical for sound financial management.

→ In financial management has not only to plan, procedure and utilize the funds but also has to exercise control over finances.

4. Budgeting & forecasting :-

→ Budgeting & forecasting are also part of the mangement accounting scope, including budget control and business forecasting trends.

→ Budget management systems are based on financial data and business performance. Budget control aims in identifying and analysis the causes and weak points that slow down coordination and decrease business performance

→ In the otherhand, forecasting is an essential function of management accounting because it provides a business view form the stackholders perspective.

→ Business budgeting & forecasting outline the company's goals and plans and the expected outcomes of the activities carried out to help prepare the company in case of an emergency.

5. Inventory control :- (Stock)

→ Inventory control is the management of a company's inventory to maximize its use. The goal of inventory control is to generate the maximum profit from the least amount of inventory investment without intri upon constumer satisfaction levels.

→ The raw materials, work in progress & finished goals are 3 different inventory types and the reasons why such inventories are held by the bussiness.

6. Reporting to management :- (all things necessarily reported to accounting)

→ Timely report assists management in making successful decisions and keeps management informed of ongoing operations.

→ Data and reports are presented to management in simple graphs, charts and presentations. According to the company requirements, reports are retrived weekly, monthly, quaterly and yearly and these reports are beneficials when examining corporate data.

7. Data Interpretation :-

→ Data interpretation is described as converting business data into facts and statistics that business management can easily understand.

→ It helps to avoid drawing erroneous conclusions from your business data.

→ The data for the current year is analyized and compared to the past data to better understand the bussiness growth.

8. Control procedure & method :-

→ Control procedure is the integral part of the management accounting process and includes inventory control, cost control, labour control, budgetary control and variance analysis etc.

→ Methods includes in its study all those methods and procedures which help the concern to use its resources in the most efficient and economical manner.

It undertakes special cost studies and

estimations and reports on cost volume profit relationship under changing circumstances.

9. Internal audits:-

→ Internal audits evaluate a company's internal controls including its corporate governance and accounting process.

→ These type of audits ensure compliance with law and regulations and help to maintain accurate and timely financial reporting and data collection.

→ These audits also provide management with the tools neccesary to attain operational efficiency by identifying problems and correcting lapses before they are discovered in an external audit.

10. Tax accounting:-

→ Tax accounting is a structure of accounting methods focused on taxes rather than the appearance of public financial statements.

→ Tax accounting is governed by the internal revenue code, which dictates the specific rules that companies and individuals must follow when preparing their tax returns.

## Cost:-

→ "The amount of expenditure (actual or notional) incurred on, or attributable to, a given thing".

→ The cost is refers to something that must be sacrificed to obtain a perticular thing.

**Costing:-** The technique & process of ascertaining cost.

→ In other words costing is the classifying, recording and appropriate allocation of expenditure for the determination of the cost of products or services and for presentation of suitably arranged data for the purpose of control and guidance of the management.

## Cost Accounting:-

→ Cost accounting is the classifying, recording and appropriate allocation of expenditure for the determination of the costs of products or service and for the presentation of suitably arranged data for purposes of control and guidance of management. It includes the ascertainment of the cost of every order, Job, contract, process, service or unit as may be appropriate.

## ~~Def~~ Defination:-

→ The process of accounting for cost form the point at which expenditure is incurred or committed to the establishment of it's of ultimate relationship with cost centers and cost units.

→ Cost accounting has the following features:-

1. It is a process of accounting for costs.
2. It records income & expenditure relating to production of goods and services.
3. It provides statistical data on the basis of which future estimates are prepared and quotations are submitted.
4. It is concerned with cost ascertainment, cost control and cost reduction.
5. It established budgets and standards so that actual cost may be compared to find out deviations or variances.
6. It involves the presentation of right information to the right person at the right time so that it may be helpful to management for planning; evaluation of performance, control and decision making.

Difference betn cost accounting & financial accn.

not imp

| Cost Accounting | financial Accounting |
| --- | --- |
| → cost accounting is a branch of accounting that deals with the ascertainment, recording and controlling of the costs. | → financial accounting refers to identification of monetary transactions, its classification, summerization, analysis, interpretation & communication of financial information to the users. |

| | |
|---|---|
| → provides information to management for planning, operating, control, and decision making | → Tells about the profit and loss and financial position of business. |
| → Records information in both monetary and non monetary terms (ex. units) | → Records information in monetary terms. |
| → Both historical and predetermined cost. | → only historical cost |
| → Records the data in an objective manner | → Transactions are recorded in a subjective manner. |
| → It Accounts for the costs per unit of products. | → It represents the financial position of firm accurately |
| → Budgeting makes forecasting possible. | → It cannot be forecasted |
| → It always takes into account the cost price of inventories. | → It always takes into account the cost or market price.

→ Difference betⁿ financial, Cost & management Accounting.

| | financial Accounting | Cost Accounting | Management Accounting |
| --- | --- | --- | --- |
| Object | (1) Record transactions and determine financial position and profit or loss. | → Ascertainment, allocation, accumulation and accounting for cost. | → To assist the management in decision-making and policy formulation. |
| Nature | (2) Concerned with historical data | (2) Concerned with both past and present recorded (historical in nature) | (2) Deals with projection of data for the future (futuristic in nature) |
| principle followed | (3) Governed by GAAP. | → certain principles followed for recording costs. | → No set principles are followed in it. |
| Data Used | (4) Qualitative aspects are not recorded. | → only quantitative aspect is recorded | → Uses both quantitative and qualitative concepts. |
| Reporting frequency | (5) Generally at end of year | → As and when desired by management. | → As and when desired by management. |
| Publication | (6) published in case of companies | → Not published | → NOT published |
| information recorded | (7) Monetary transactions only. | → Both monetary and non-monetary information. | → Both monetary and non-monetary information. |

Q Diffⁿ betⁿ cost Accounting and Management Accounting

| Cost Accounting | Management Accounting |
|---|---|
| → The main objective of cost accounting is to determine the cost of production and control the cost. | → The objective of management accounting is to assist the management by supplying necessary accounting information. |
| → The scope of cost accounting is not broad. It deals with cost accept & cost control. | → The scope of management accounting is broad. It related with financial accounting, cost accounting, statistics etc. |
| → The accounting system is concern with both past as well as present fact and figures. | → Management accounting is concern with the transaction relating to the future. |

Q Difference between Costing and cost accounting

| Costing | Cost Accounting |
|---|---|
| → It is boarder in its scope. | → It is narrow in its scope. |
| → It is concerned wit ascertainment of cost. | → It begins where costing ends. |
| → It begin where cost accountancy ends | → It begins where costing ends. |
| → The person involved is cost accountant. | → It persons involved are cost clerks. |

# Importance of cost Accounting :-

→ cost accounting is a specialized branch of accounting that deals with the classification, recording & allocation of current costs and prospective costs.

→ In morden commercial world, it is one of the most important techniques or process for a business.

→ The management of an organization and its workers both greatly benifit from it.

## Importance of cost Accounting in Management:

(1) **Classification of Costs :-**

→ cost is a very generic term, it needs to be classified to be of further use. cost accounting involves the recording and classification of such costs.

Some costs are prime cost, direct cost, factory cost, selling cost etc.

→ Such classification allows the management to control the costs and ascertain the profitability of any such processes and activities. It also helps in calculating efficiency.

2. **Cost Control :-**

→ An efficient bussiness focuses on controlling the cost of inventory, labor and various other overhead costs. Cost accounting allows them to do so.

→ By analysing costs of labour and capacity of machinary their efficiency can be improved also. cost accounting also classifieds overhead into fixed, variable or controllable, uncontrollable to achieve cost control.

Or

→ cost control is the practice of identifying and reducing bussiness expenses to increase profits, and it starts with the budgeting process.

→ cost control is an important factor in maintaining and growing profitability.

3) Price Detemination :-

→ Cost accounting makes the basic distinction between fixed and variable costs. This is then used by management to fix the prices of products, according to the costs of the product.

→ This allows the management to find the most ideal price for the product or the service, not too high & no too low.

→ E.g. the business man has to lower the prices of his products to survive these circumstances. so he can begin by trying to control his variable costs allow him to fix his prices.

4. Fixing of standards :-

→ Organizations use standards to make estimates and budgets for the future. They use these as a basis to measure the actual efficiency of the process or department.

→ There is an entire branch in cost accounting known as standards costing dedicated to this process.

## Importance of cost Accounting to other:-

(1) Workers:-

→ One of the biggest uses of cost accounting is that it helps us calculate efficiency. This will help the company come up with an incentive scheme for workers who shows efficiency in their work, thus they will be awarded accordingly. It is also an incentive for workers with lower efficiency to do better.

(2) Government:-

→ Costing helps the government accessing for income tax or any other such government liabilities. It also helps set industry standard & helps with price fixing, ~~tra~~ tariff plans & cost control etc.

(3) Costumers:-

→ The main aim of costing are cost control & improvement in efficiency. Both of these are very benificial to the company. And ultimately this benifits passes on to the ~~cons~~ costumers of the products or services.

## Classification of costs:-

(a) Classification by nature:-

→ This is the analytical classification of costs. Basically there are three broad categories of this classification, namely labour, material costs & expenses.

→ They help ascertain the total cost and determine the cost of the work-in-progress.

→ All other ... and selling goods or services.

---

**Cost :-**

→ cost denotes the amount of money that a company spends on the creation or production of goods or services.

→ It does not include the markup for profit.

**Cost control :-**

→ cost control, also known as cost management or cost containment.

→ cost control is the method of reducing business expenses by managing and analyzing financial data.

→ collecting costs in a consolidated format allows organizations to make more accurate and informed projections, know where they can minimize costs, and identify areas of overspending.

2) Cost Reduction:-

→ Cost reduction is the process of decreasing a company's expenses to maximize profits.

→ It involves identifying and removing expenditures that do not provide added value to customers while also optimizing processes to improve efficiency.

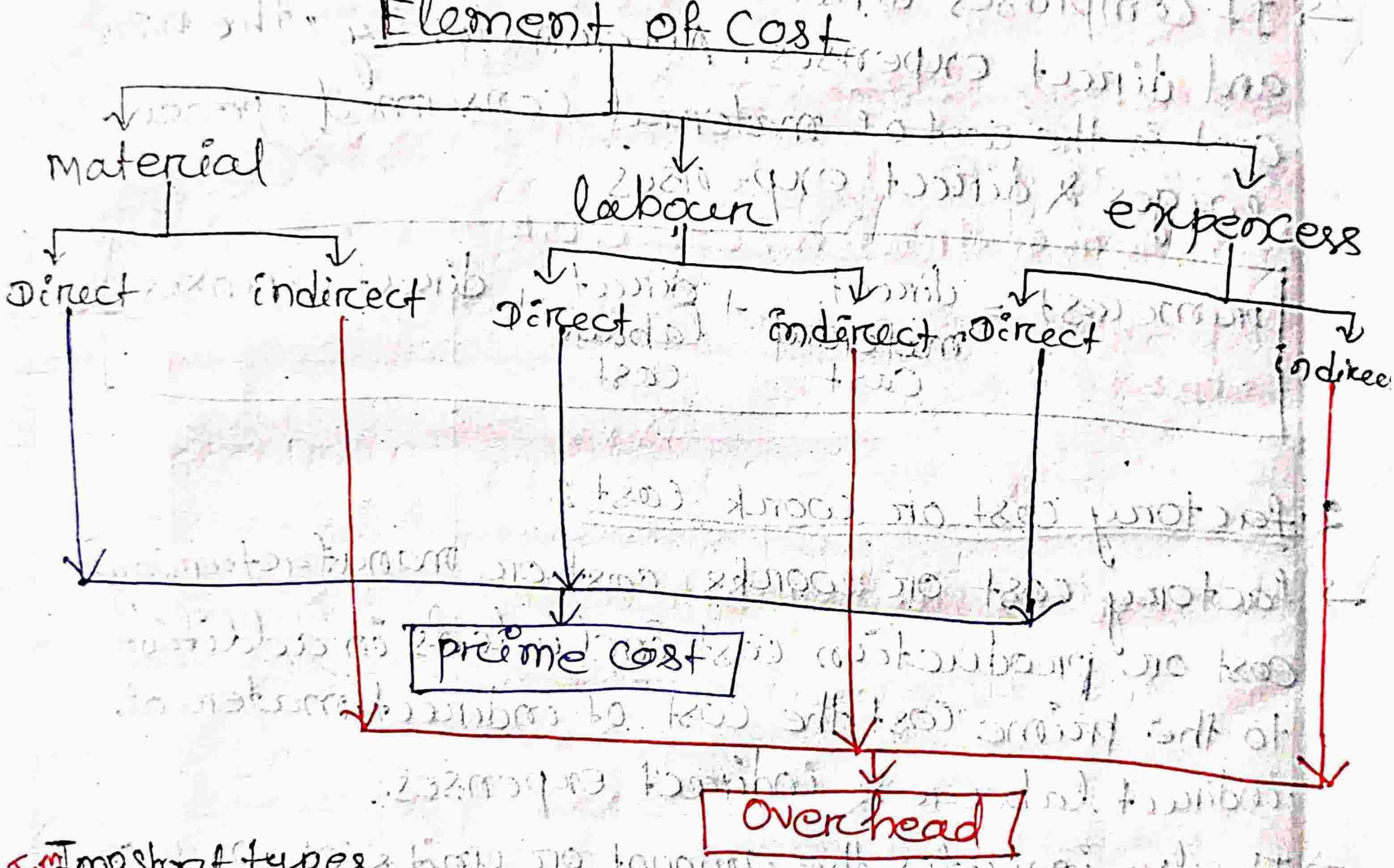
| Cost Control | Cost Reduction |
|---|---|
| 1. Cost control aims at maintaining the costs in accordance with the established standards. | → Cost reduction is concerned with reducing costs. It challenges all standards and endeavors to improve them continuously. |
| 2. Cost control seeks to attain lowest possible cost under existing conditions. | 2. Cost reduction recognises no condition as permanent since a change will result in lower cost. |
| 3. In cash of cost control, emphasis is on past and present. | 3. In case of cost reduction it is on present and future. |
| 4. Cost control is a preventive function. | 4. Cost reduction is a corrective function, it operates even when an efficient cost control system exists. |
| 5. Cost control ends when targets are achieved. | 5. Cost reduction has no visible end and is a continuous process. |

## Elements of cost :-

→ The following are the three elements of costs :
(1) Materials (2) Labour (3) Expenses.

These can be further sub-divided into direct or indirect as follows.

| Direct | Indirect |
| --- | --- |
| Materials | Materials |
| labour | labour |
| Expenses | Expenses. |




### Impshort types

(a) Prime cost :-

→ Aggregate of all direct items is called prime cost

(b) Overhead :-

→ aggregate of all indirect items is called overhead.

Overhead

factory / manufacturing Overhead

Office & Administative Overhead

Saling & distribution Overhead.

## Component Of Total Cost :-

→ Components of total cost are constituted mainly of prime cost, factory cost, office cost and cost of sales.

1. prime cost :-

→ It comprises direct material direct wages, and direct expenses. Alternatively, the prime cost is the cost of material consumed, productive wages & direct expenses.

$$\boxed{\text{prime cost} = \text{direct material cost} + \text{direct labour cost} + \text{direct expenses}}$$

2. factory cost or work cost :-

→ factory cost or works cost or manufacturing cost or production cost includeds in addition to the prime cost the cost of indirect material, indirect labour & indirect expenses.

→ It also includes the amount or units of WIP or incomplete units at the end of the period.

$$\boxed{\text{factory cost} = \text{prime cost} + \text{factory overhead}}$$

3. Cost of production or office cost :-

→ When office & administrative cost at the end of the period are added to the factory cost, we arrive at the cost of production or cost of goods sold.

→ Here, we make an adjustment for opening and closing finished goods.

| Office cost = factory cost + office & administrative overhead |
|---|

4. Total cost or cost of sales :-

→ Total cost or alternatively cost of sales is the cost of production plus selling and distribution overhead.

| Total cost = office cost + selling overhead |
|---|

* **Cost Sheet:-**

Statement of Cost

| perticulars | | total cost (₹) | cost/unit (₹) |
|---|---|---|---|
| direct material | xxx | | |
| direct labour | xxx | | |
| direct Expenses | xxx | | |
| prime cost | | xxx | |
| Add:- factory overhead | | | |
| ________ | xxx | | |
| ________ | xxx | | |
| ________ | xxx | | |
| | | xxx | |
| factory work cost | | | |
| Add:- Administrative/office O.H | | xxx | |
| ________ | xxx | | |
| ________ | xxx | | |
| ________ | xxx | | |
| cost of product | | xxx | |
| Add:- selling or distribution O.H | | xxx | |
| ________ | xxx | | |
| ________ | xxx | | |
| ________ | xxx | | |
| total cost/cost of sales | | xxx | |
| | | xxx | |
| Add:- profit/sales/selling price | | xxx | |
| | | xxx | |

## Overhead :-

1. factory / works overhead
2. Office / administrative overhead
3. selling & distribution overhead

## Cost sheet :-

→ It is a statement designed to show the output of perticulars accounting period along with break up of cost.

### Items / expenes excluded from cost :-

pov → 1. financial charges :-

Ex

Loss on sale of fixed asset.

loss on investement

Interest on loan

Interest on capital etc.

2. Appropriation of profits :-

→ Donation, charity, income tax, divident paid, transfer to resolve.

3. writting of intangible :-

→ Goodwill, copywrite, patent right, trademark.

4. Abnormal gain or losses :-

→ Abnormal wastage of material, abnormal gain on manufacturing, expenssive depriciation.

5. Purely financial income :-

→ Devident recieved, rent receivable, Discount, commission recieved.

Q Calculate prime cost, factory cost, cost of production, cost of sale, and profit from the following perticulars.

Material - 1lakh
wages - 20000
expenses - 10000
wages of foreman - 2500
electricity - 500
factory lighting - 1500
office lighting - 500
store keeper wages - 1000
oil & water - 500
factor rent - 2500
factor repairs - 3500
office rent - 2500
office primices repairs = 500
Depreciation on factory plant = 500
depriciation on office primices = 1215

consumable store = 2500
manager salary = 5000
Director fees = 1250
office stationary = 500
Telephone charge = 125
postage = 250
Sales man salary = 1250
travelling expenses = 500
Advertising = 1250
wire housing = 500
sale = 189500
Carriege outward = 375
discount on shares = 500
divident = 2000
Income tax = 1000

| Perticulars | total cost (₹) | Cost/Unit |
|---|---|---|
| Direct material 100000 | | |
| labour 20000 | | |
| expences 10000 | | |
| prime cost | 130000 | |
| Add:- factory overheads | | |
| factory lighting = 1500 | | |
| factory rent = 2500 | | |
| factory repairs = 3500 | | |
| Depriciation on fact. plant = 500 | | |
| Consumable store = 2500 | | |

| | |
|---|---|
| oil & water = 5000 | |
| wages of formen = 2500 | |
| electricity power = 500 | |
| store keeper wages = 1000 | |
| factory work cost | 17500 |
| | 1,47,500 |
| Add :- Administrative/office OH | |
| office lightening = 500 | |
| office rent = 2500 | |
| office premices repair = 500 | |
| depriciation of office premicies = 1250 | |
| managerial salary = 5000 | |
| Director fees = 1250 | |
| Telephone charges = 125 | |
| office stationary = 500 | |
| postage = 250 | |
| Cost of production | 1,63,250 |
| Add :- selling and distribution O.H. | 2,10,750 |
| travelling = 500 | |
| sales man = 1250 | |
| Advirtising = 1250 | |
| wire housing = 500 | |
| carraige outward = 375 | |
| total cost / cost of sales | 3875 |
| | 2,14,625 |

| | |
|---|---|
| Add:- profit & loss overhead | |
| discount on sales = 500 | |
| divident = 2800 | |
| Income tax = 10000 | |
| | 12500 |
| selling price | 2,25,125 |

prime cost = 1,30,000

factory cost = 1,30,000 + 17,500 = 1,47,500

office & administrative cost = 1,47,500 + 12,500

profit = sales - office overhead = 159625 = cost of prod

= 1,89,500 - 1,63,250 = 26,250

## Treatment of Stock :-

1. Raw material (opening & closing)
2. work in progress (opening & closing)
3. finished goods (opening & closing)

## Statement of cost

| perticulars | | total cost | cost per unit |
|---|---|---|---|
| opening stock of raw materials | | x x x | |
| Add:- purchase of Raw material | | x x x | |
| Less:- clossing stock of Raw mat. | | x x x | |
| Raw material consumed | | x x x | |
| | | x x x | |
| Add:- direct wages | x x x | | |
| Direct expences | x x x | | |
| prime cost | | x x x | |
| | | x x x | |

| | | |
|---|---|---|
| Add :- factory overhead | | |
| _____ | xxx | |
| _____ | xxx | |
| _____ | xxx | |
| factory cost increased | | xxx |
| Add :- Opening work in progress | | xxx |
| | | xxx |
| less :- closing work in progress | | xxx |
| factory cost | | xxx |
| Add :- office / administrative overhead | | |
| _____ | xxx | |
| _____ | xxx | |
| _____ | xxx | xxx |
| cost of production | | xxx |
| Add :- opening stock of finished good | | xxx |
| less :- close stock of finished good | | xxx |
| cost of goods sold | | xxx |
| Add :- selling / distribution overhead | | |
| _____ | xxx | |
| _____ | xxx | |
| _____ | xxx | xxx |
| total cost / cost of sales | | xxx |
| Add :- profit | | xxx |
| Sales / selling prices | | xxx |

Q following information has been obtained from the records of left center corporation. for the period from 1st Jan to 30th June 2011.

| | 2011 1st Jan | 2011 30th June |
|---|---|---|
| Raw material | 30,000 | 25,000 |
| work in progress | 12,000 | 15,000 |
| finished goods | 60,000 | 55,000 |

purchases of raw material = 4,50,000
wages = 2,30,000
factory overhead = 92,000
office overhead = 92,000
selling & distribution = 20,000
sales = 9,00,000.

| Perticulars | Total cost | cost/unit |
|---|---|---|
| Opening stock in raw matericals | 30,000 | |
| Add:- purchase of raw matericals | 4,50,000 | |
| | 4,80,000 | |
| less:- closing stock of raw materials | - 25,000 | |
| raw mater. consumed | 4,55,000 | |
| Add:- Direct wages | 2,30,000 | |
| prime cost | 6,85,000 | |
| Add:- factory overhead | 92,000 | |
| factory cost incurred | 7,77,000 | |
| Add :- opening work-in-progress | 12,000 | |
| | 7,89,000 | |
| less:- closing work-in-progress | 15,000 | |
| factory cost | 7,74,000 | |

| Perticulars | total cost | cost/unit |
| --- | --- | --- |
| factory cost | 7,74,000 | |
| Add :- office & administrative O.H | 30,000 | |
| Cost of production | 8,04,000 | |
| Add :- opening stock of finished goods | 60,000 | |
| | 8,64,000 | |
| less :- closing stock of finished good | 55,000 | |
| | 8,09,000 | |
| Add :- selling & distribution o.h | 20,0000 | |
| total cost | 8,29,000 | |

Q Mr. x furnished the following information relating to the manufacture of a standard product during the month of April 2011.

Raw material consumed = 15,000
Direct labour charges = 9000
machine hours work = 900hr
machine hour rent = 5
Administrative overhead = 20% on work cost
selling overhead = 50 paise/unit
unit produced = 17,000
unit sold = 16,000 at ₹ 4/unit
you required to prepair a cost sheet showing
1. cost of production per unit
2. profit per unit sold
3. profit for the period,

| particulars | | total cost | cost/unit |
|---|---|---|---|
| Direct material | 15000 | | |
| labour | 9000 | | |
| prime cost | | 24,000 | |
| Add :- factory overhead | | | |
| machine rent = 900 X 5 = 4500 | | 4,500 | |
| factory work cost | | 28,500 | |
| Add :- Administrative overhead (2% of 28,500) | | 5,700 | |
| Cost of production | | 34,200 | 2.00 |

Unit product = 17,100 unit
Unit sold = 16,000 unit
Cost of finished good = 1,100 unit
Cost of closing stock of F.G. = 1100 unit X RS 2/unit
= Rs 2200/-

| particulars | | total cost | cost/unit |
|---|---|---|---|
| less :- cost stock of closing stock of finished good | | 2,200 | |
| Cost of Goods sold | | 32,000 | |
| Add :- selling & distribution overhead (16000 unit X Rs. 50 paisa) | | 8,000 | |
| total cost | | 40,000 | |
| Add :- profit | | 24,000 | 1.50 |
| ~~sale = 16,000 X 4~~ | | | |
| sales / selling price | | 64,000 | |

| Q | 1st July | 31st dec |
|---|---|---|
| Raw material | 20,000 | 22,240 |
| work in progress | 4,800 | 16,000 |
| finished good | 16,000 (1000 tones) | 32,000 (2000 tones) |

purchase of raw mat. = 1,20,000
work overhead = 4.8,000
direct wages = 1,00,000
sales finished = 3,00,000
Carriage on purchase = 1,440
selling & distribution ₹ 1 per tons sold, 16 000 tones of commodity were produced during the period.

| perticulars | Unit /cost | total cost |
|---|---|---|
| Opening of raw material | 20,000 | |
| Add:- purchase of Raw material | 1,20,000 | |
| | 1,40,000 | |
| Add:- carries on purchase | 1,440 | |
| less:- closing stock raw material | 1,41,440 | |
| | 22,240 | |
| Raw material consumed | 1,19,200 | |
| Add:- direct wages | 1,00,200 | |
| prime cost | 2,19,200 | |
| Add:- factory overhead work overhead | 48,000 | |
| factory cost increase | 2,67,200 | |
| Add:- work in progress | 4,800 | |
| less:- work in progress | 2,72,000 | |
| | 16,000 | |
| | 2,56,000 | |

| | | |
|---|---|---|
| Add:- opening stock finished good | 16,000 | 2,56,000 |
| | 1,000 | 16,000 |
| | 17,000 | 2,72,000 |
| less:- closing stock finished good | 2,000 | 32,000 |
| cost of good sold | 15,000 | 2,40,000 |
| Add:- selling & distribution O.H (15000 tones x Rs.1) | | 15,000 |
| total cost | | 2,55,000 |
| Add:- profit | | 45,000 |
| Sales | | 3,00,000 |

## Classification of costs:-

### 1. Classification by nature:-

→ This is the analytical classification of costs. Basically there are three broad categories as this classification, namely labour, material costs & expenses.

→ They help ascertain the total cost and determine the cost of the work-in-progress.

**Material Costs:-**

→ Material costs are the costs of any materials we use in the production of goods.

→ we divide these costs further. e.g, let's divide material costs into raw material costs, spare costs & costs of packaging material etc.

**Labour costs:-**

→ Labour costs consists of the salary & wages paid to permanent & temporary employees in the persuit of the manufacturing of the goods.

Expenses:-

→ All other expenses associated with making and selling goods or services.

2. Classification by functions:-

→ This is the functional classification of costs, so the classification follows the pattern of basic managerial activities of the organization.

→ The grouping of costs is according to the broad divisions of functions such as production, administration, selling etc.

* Production costs:-

→ All costs concerned with actual manufacturing or constructions of the goods.

* Commercial costs:-

→ Total costs of the operation of an enterprise other than the manufacturing costs.

→ It includes the admin costs, selling and distribution costs etc.

3. Classification by traceability:-

→ This aspect is the most important classification of costs, into direct costs and indirect costs.

→ This classification is based on the degree of traceability to the final product of the firm.

(1) fixed costs:-

→ Fixed costs are costs that do not change when sales or production volumes increase or decrease

or

→ A cost that does not change if the level of production changes.

Ex Rent and depreciation.

→ Fixed costs remain constant in total no matter what the production level, but they vary on a per-unit basis.

→ The value of fixed cost determines the cost of the product and thus the profit and loss incurred by the business.

② Variable cost:-

→ Variable costs are costs that change as the volume changes.

or

→ A variable cost is a corporate expense that changes in proportion to how much a company produces or sells.

→ variable costs increase or decrease depending on a company's production or sales volume. they rise as production increases and fall as production decreases.

→ It is also known as cost of good sold.

Ex raw materials, delivery cost, piece rate labour credit card fees etc.

③ Semi-variable cost:-

→ A cost composed of a mixture of both fixed and variable components

or

→ It is a cost composed of a mixture of both fixed and variable components.

→ It is also known as semi-fixed cost or mixed cost

→ costs are fixed for a set level of production or consumption, and they become variable after this production level is exceeded.

Ex electricity. - The base rate for service is constant but production grows, power consumption & the company's electricity bills go up.

④ Step Cost :-

→ step costs are expenses that are constant for a given level of activity, but increase or decrease once a thresold is crossed.

→ step costs change disproportionately when production levels of a manufacturer, or activity levels of any enterprise, increases or decreases.

→ when depicted on a graph, these types of expenses will be represented by a stair - step pattern.

⑤ Production Cost :-

→ Production cost refers to the costs incurred to create a product.

→ These costs include direct labour, direct materials, consumable production supplies, and factory overhead.

→ Product cost can also be considered the cost of the labour required to deliver a service to a customer.

or

→ Product costs are those directly related to the production of a product or service intened for sale

→ The product cost could include the supplies purchased from a supplier and any other costs involved in bringing their goods to market.

→ In short, any costs incurred in the process of acquiring or manufacturing a product are considered product costs.

(6) Period cost:-

→ period costs are all costs not included in product costs.

→ period costs are not directly tied to the production process.

→ Overhead or sales, general and administrative (SG & A) cost are considered as period costs.

→ SG & A includes costs of the corporate office, selling, marketing and the overall administration of company business.

→ period costs are not assigned to one particular product or the cost of inventory like product costs Therefore, period costs are listed as an expense in the accounting period in which they occurred.

(7) Direct costs:-

→ A direct cost is a price that can be directly tied to the production of specific goods or services.

Ex direct labour and direct material.

Or

→ These are the costs which are easily identified with a specific cost unit or cost centers.

→ Some of the most basic example are the material used in the manufacturing of a product or the labour involved with the production process.

(8) Indirect costs :-

→ Indirect costs are costs that cannot be traced directly to a specific product or service.

→ Indirect costs may be both fixed and variable.

or

→ These are the costs incurred for many purposes, i.e. between many cost centers or units. So we can't easily identify them to one perticular cost center.

Ex The rent of the building or the salary of the manager. we will not be able to accurately determine how to ascertain such costs to a perticular cost unit.

(9) Relevant cost :-

→ 'Relevant costs' can be defined as any cost relevant to a decision. A matter is relevant if there is a change in cash flow that is caused by the decision.

or

→ Relevant cost is a term that explains costs that are incurred when making business decisions since they affected the future cash flows.

→ This rules here is to consider the costs that will have to be incurred as a result of proceeding with the decision.

→ The concept of relevant cost is used to eliminate unnecessary information that complicates the decision making process.

Ex

→ e.g; A furniture manufacturing company that plans to undertake a new order which will result in a net cash flow of Rs. 5,00,000 within a period of 6 months.

10. Irrelevant costs:-

→ Irrelevant costs are the costs that are not affected by making a business decision since they do not effect the future cash flows.

→ Irrespective of whether the decision is made or not, these costs will have to be incurred.

→ e.g → A company has to increase the salaries of employees that incurs a total cost of Rs. 15,200.

11. Shut down:-

→ There are unavoidable fixed costs which continue to be incurred.

→ when even a plant is temporarily shut down.

Ex Rent, insurance & depreciation of building, salaries

12. Sunk cost:-

→ A sunk cost sometimes called a retrospective cost, refers to an investment already incurred that can't be recovered.

eg:-

Sunk costs in business included marketing, research, new software installation or equipment, salaries and benifits, or facilities expenses.

13. Controllable costs:-

→ Controlable cost is a type of cost / expense that can be influenced by decisions of authority / person in an organization.

→ In simple term, the controllable cost can be regulated by managers.

→ Managers can increase or decrease such costs based on their decisions. Controllable cost are expenses of activities that mostly depend upon decisions of an individual such as a supervisor or senior manager.

Uncontrollable cost:-

→ An uncontrollable cost is an expense over which management has not control. Managem can't reduce the amount spent on such activities that classify as uncontrollable or fixed costs.

→ Such costs are mandatory to pay regularly and companies can be charged a penalty / fee for their delayed payment or underpayment.

→ fixed costs such as bills are known as uncontrolable costs because the free will of the management can't change them.

Avoidable cost:-

→ It is the cost incurred only if firm takes a decison related to production or investment is taken.

→ This kind of cost is variable and depends on level of output and by external inputs where firm can take choice depending in a cost of oppertunity of multiple decisions are incentives.

Unavoidable cost:-

→ It is the cost that still incurred for firm even if decision of producing is not taken.

→ Those costs are as result of risk the taken by firms in their industries for maintaining in the market and cover uncertainity of decisions of producti

→ The fixed cost are the main representations of unavoidable cost for firms.

<u>Imputed cost / hypothetical cost:-</u>

→ Imputed cost is otherwise called notional cost and hypothetical cost.

→ A cost that has not involve cash outflow from the bussiness organization.

→ It does not appear in the financial records but relevant to the decision making.

<u>Out of pocket costs:-</u>

→ These are those costs or expenses that require cash payment in the current period or during a project.

<u>Ex</u>

The wages of the person setting up a machine for a new production run are an out-of-pocket-cost.

<u>Opportunity cost:-</u>

→ When economists refers to the "opportunity cost" of a resource, they mean the value of the next-highest-valued alternative use of that resource.

→ <u>Ex:-</u>

If you spend that time at home reading a book, and you can't spend the money on something else.

## Expired cost and unexpired cost :-

→ Expired cost is the cost which has been already incurred, unexpired cost are those cost which has to be paid in future.

→ unexpired cost has been regarded as asset where as expired cost is an expense.

## Conversion costs :-

→ Conversion cost are those production costs required to convert raw materials into completed products.

→ The concept is used in cost accounting to derive the value of ending inventory, which is then reported in the balance sheet.

## Overhead :-

→ Indirect portion of total cost constitute the overhead cost which is the aggregate of indirect material, indirect labour and indirect expences.

### Classification Overhead :-

1. functional classification.
2. Behavioural classification.
3. Element wise classification.
4. Nature of expence classification

### 1. functional classification :-

→ When overhead expences are classified with reference to measure activity divisions of a concern is called functional classification overhead.

→ Here overheads are

(1) Manufacturing overhead
(2) Administrative overhead.
(3) Selling overhead.
(4) Distribution overhead.
(5) Research & development expences overhead

2. **Behavioural classification :-**

→ Under this overheads are classified with reference to their tendency to vary with production or sells volume & activity level.

→ Here overheads are :-

① fixed overhead

Ex manager salary

② variable overhead.

Ex personal spent money.

(3) semi variable overhead

Ex electricity bill.

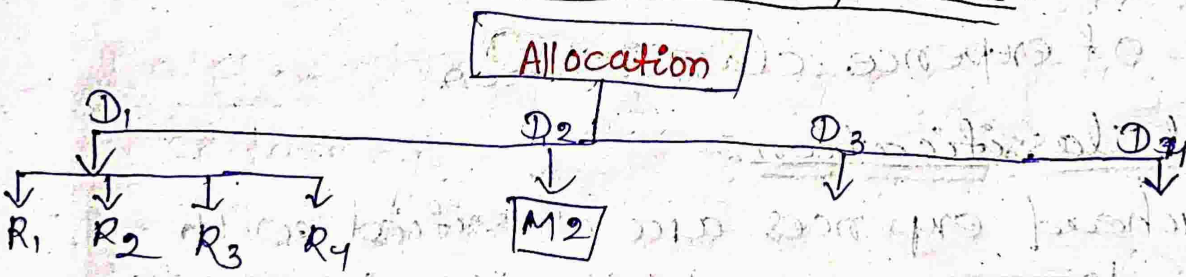
imp. short.

| | fixed | variable |
|---|---|---|
| total expences | fixed | varry |
| per unit | varry | fixed |

3. **Element wise classification :-**

→ Here overheads are classified according to element of cost that is indirect material, indirect labour and indirect expencess.

**Allocation of overhead expences :-**




**Allocation :-**

→ It is the process of identification of overheads with cost center and expencess which is directly identifiable with a specific cost center with allocate that center.

→ So, it is the allotment of whole item of cost to a cost center or cost unit or refer to charging of expences which can be indentify wholy with a perticular department.

Ex: The whole of over time wages paid to the worker relating to a perticular department should be charged to that department.

Ex: The cost of repair & maintainance of a perticular machine should be charged to that perticular department where machine is located.

Apportionment of overheads:-

→ It is defined as allotment of proportion of item to cost center or cost unit on an equitable basis.

→ Common item of overhead basis rent and rates depresiation, lighting, works manager salary, repairs and maintenance etc.

Difference between allocation and apportionment.

| Allocation | Apportionment |
|---|---|
| (1) Allocation is the process of requesting access to a data set. | (1) Apportionment is the process to divide and share out according to a plan. |
| (2) It deals with the whole item of cost. | (2) It deals with only proportion of items. |
| (3) Cost is directly allocated to any cost center or cost unit. | (3) It needs a suitable basic for sub division & cost by cost center or cost unit. |
| (4) No bases are required | (4) It needs various bases like area asset value, no. of workers etc. |

## Bases of Apportionment:-

1. Direct allocation:-

→ Overtime premium of workers, Jobbing repairs

2. Direct labour / machine hours:-

→ Under this basis the overhead expences distribu the various department in the ratio of total no. of labour hours and machine hours in each department.

3. Value of material purchases:-

→ It basis is adopted for expences associated with materials such as material handling expences

4. Direct wages:-

→ This base is adopted on workers insurance contribute to a provident fund & workers compensession.

5. No. of workers:-

→ This is adopted for expences like welfare expences, medical expences, time keeping, supervision etc.

6. floor area:-

→ This basis is adopted for expences like rent, rates, cashes, maintenance of building air conditioning.

7. Light point:-

→ This is used for lighting expences,

8. Capital value:-

→ This base is adopted for depreciation, repairs insurance charges of building.

9. kilowatt hours:-

→ This basis is used for apportionment of power expences.

Q The modern company is divided into 4 department $P_1$, $P_2$, $P_3$ are production department and $S_1$ is service department the actual cost of period are followed

① rent - 1000

repairs - 600

depreciation of plans 450

employers libility for insurance = 1500

supervision = 150

fire insurance = 500

power - 900

light - 120

further information is available for the 4 dept.

| | $P_1$ | $P_2$ | $P_3$ | $S_1$ |
|---|---|---|---|---|
| Area | 1500 | 1100 | 900 | 500 |
| no. of employees | 20 | 15 | 10 | 5 |
| total wages | 6000 | 4000 | 3000 | 2000 |
| value of plant | 2400 | 18000 | 12000 | 6000 |
| value of stock | 15000 | 9000 | 6000 | |
| H.P of plant | 24 | 18 | 12 | 6 |

Calculate

Area ⇒ 15 : 11 : 9 : 5 = 40

$P_1 = 1000 \times \frac{15}{40} = 375$ $P_3 = 1000 \times \frac{9}{40} = 225$

$P_2 = 1000 \times \frac{11}{40} = 275$ $S_1 = 1000 \times \frac{5}{40} = 125$

| → items | Bases | total | $P_1$ | $P_2$ | $P_3$ | $S_1$ |
|---|---|---|---|---|---|---|
| Rent | Area | 1000 | 375 | 275 | 225 | 125 |
| dept. of plant | value of plant | 450 | 180 | 135 | 90 | 45 |
| fire insurance | value of stock | 500 | 250 | 150 | 100 | 0 |
| light | area | 120 | 45 | 33 | 27 | 15 |
| power | H.p of plant | 900 | 360 | 270 | 180 | 90 |
| supervision | no. of emp | 150 | 600 | 450 | 300 | 150 |
| emp. liab. for insurance | no. of emp. | 150 | 60 | 40 | 30 | 15 |
| repairs | value of plant | 600 | 240 | 180 | 120 | 60 |
| | | | total = 2110 | tol = 1538 | 1027 | 500 |

Short type

## Absorption of overhead :-
(Recovery)

meaning

→ Absorption of O.H refers to distribution of overhead expencess to a perticular department over the unit produced in that department.

$$\text{Overhead absorption rate} = \frac{\text{total overhead expences}}{\text{total no. of unit produced}}$$

## Methods of Absorption overhead :-

(1) Direct material consumed :-

→ Under this method the overhead rate is determined by the following formula.

$$\text{Overhead rate} = \frac{\text{production O.H expencess}}{\text{Anticipated direct material cost}} \times 100$$

(2) Direct labour cost method:-

$$\boxed{\text{overhead rate} = \frac{\text{Production O.H expences}}{\text{direct labour cost}} \times 100}$$

3) prime cost method:-

$$\boxed{\text{O.H recovery rate} = \frac{\text{budgeted production expences}}{\text{Anticipated direct material \& labour cost}} \times 100}$$

(4) Direct labour hour method:-

$$\boxed{\text{Overhead rate} = \frac{\text{production O.H expences}}{\text{direct labour hour}}}$$

Q theory & problem calculate machine hr.

Jim

Machine hour rate method:-

→ Machine hour rate is the cost of running a machine per hour.

→ It is used in those industries & department where machine is predominant and there is little or practically no manual labour.

→ machine hour rate is obtained by dividing the total running expences of a machine during a perticular period by the no. of hours the machine is estimated to work during that period.

Calculation of machine hour rate:-

following steps are to be followed for the calculation

Step-1:-

→ Each machine or group of machine should be treated as a cost center so that, all overhead releating to that machine or machines may be identified.

Step-2

→ The overhead relating to a machine are to be divided into 2 parts.

(1) fixed or standing charges.

(2) variable or machine expenses

(1) fixed or standing charges :-

→ Standing charges are those expences which remain constant irrespective of the use and running of the machine.

Ex

rent, insurance, ligting & heating, supervising labour.

(2) variable or machine expenses:-

→ variable exp. are those which varry with the use of the machine.

Ex

power, fuel, repair, depriciation.

Step-3

→ Standing charges are estimated for every machine and amount show estimated is divided by total no of normal working hour of the machine to find out the hourly rate of standing charges.

Step-4

→ for machine expence an hourly rate is calculate for each item of expenses by deviding the expenses by a normal working hour.

→ while calculating normal working hours the hours which are required for maintainance or setting off or setting up.

## Calculation of machine hour

| Perticular | total | hour |
|---|---|---|
| standing charges :- | xxx | |
| Rent | xxx | |
| Rates | xxx | |
| insurance | xxx | |
| total standing charge | | |
| standing charges per hour (A) $\frac{xxx}{hrs}$ | | xxx |
| Machine Expenses :- | | |
| Repairs | | xxx |
| dep | | xxx |
| total machine exp (B) | | |
| total machine hr. rate (A+B) | | xxx |
| Add :- operater wages | | xxx |
| comprehensive machine hour rate | | xxx |

Q A machine purchased for cash at Rupees 9200 its working life 18000 hr. Scrap value (sold machine) 200. it is assumed from the Ist experienced that,

(i) The machine will work for 1800 hr annually.

(ii) The repair charges will be Rs/- 1080

(iii) Power consumption will be 5 unit for hr at 6 paise per unit.

(iv) Other standing charges were

(a) Rent (machine Occupies 1/5 th of total space) = 780/-

(b) light (12 points in the department & 2 points engaged in the machine) = 288/-

(c) foreman salary ($\frac{1}{4}$ of it's time occupied in the machine) = 6000/-

(d) insurance = 36

(C) Cotton waste = 60 Rs

Calculate machine hour rate.

$$\boxed{\text{Depriciation} = \frac{\text{Cost of the asset} - \text{Scrap value}}{\text{estimated life}}}$$

$$= \frac{9200 - 200}{18000} = 0.050$$

Calculate

| particulars | per Year | per hour |
|---|---|---|
| Standing charges:- | | |
| Rent ($780 \times \frac{1}{5}$) | 156 | |
| light ($\frac{288}{12} \times 2$) | 48 | |
| foreman salary ($6000 \times \frac{1}{4}$) | 1500 | |
| insurance | 36 | |
| Cotton waste | 60 | |
| total Standing Charges:- | 1800 | |
| Standing charges per hr (A) $= \frac{1800}{1800}$ hr | | 1.00 |
| machine Exp:- | | |
| dep | | 0.50 |
| power (5 unit @ Rs/-6 paise) | | 0.30 |
| Repairs ($\frac{1080}{18000}$ hr) | | 0.60 |
| total machine hr Rate | | 1.86 |

# Unit-2

100 units = Rs 1000
101 units = Rs 1010

1 unit ↑ = 10 ↑ → Marigginal cost / variable cost

## Marginal Cost :-

→ The increase in cost due to increase in one more unit of output is known as marginal cost

→ The ascertainment of marigginal cost & the effect of profit on change in volume or type of output by differenciating between fixed and variable cost is known as marginal costing.

## Features or characteristic of Marginal Costing :-

(1) It is a technique of control and decision making

(2) under this total cost is classified as fixed cost and variable cost

(3) fixed cost is treated as period cost & charge to profit & loss account.

(4) variable cost is treated as cost of the product.

(5) prices are determined on the bases of marigginal cost.

## Difference between marginal costing & absorption costing :-

| Marginal Costing | Absorption Costing |
| --- | --- |
| → The ascertainment of marginal cost & the effect of profit on change in volume or type of output by differenciating between fixed & variable cost is known as marigginal costing | → Absorption costing refers to a method of costing to account for all the costs of manufacturing. |

| | |
|---|---|
| → But in marignal Costing only fixed & variable costs are included | → In absorption costing adminstative, selling & distribution costs are included |
| → Where M.costing focus on selling & selling price. | → It is focused on production. |
| → But M.C suitable for short term. | → A.costing suitable for long term. |
| → In M.C stocks value at variable cost. | → In A.C stocks value at total cost. |

## Various key terms used in Marginal costing:

**Cost volume profit Analysis:-/C.V.P Analysis:-**

C.V.P { profit depend salles
sales depend cost
Cost depend volume of production.

→ It is a technique for studing the relationship between cost volume & profit.

→ The 3 factors of c.v.p analysis are inter connected & inter dependent on one another

Ex

profit depend upon sales
salling price depend upon cost
Costs depend upon volume upon production

→ In c.v.p analysis and attempt is made to analyse the relationship between variation in cost & variation in volume.

→ The C.V.P relationship is of immence (importance) utility to management as it help in profit planning, cost control & decision making.

Terms :- Imp

1. Contribution :- (short / Long)

→ It is difference between betn sales & variable cost.

$$\boxed{C = S - V}$$

contribution per unit = selling price per unit − variable cost unit.

$$\boxed{C = \text{fixed cost} \pm \text{profit}(+) / \text{loss}(-)}$$

$$C = F \pm P/L$$

$$\boxed{S - V = F \pm P/L}$$ (marginal cost equation)

2. Profit - volume ratio (P/V ratio) :-

$$\boxed{P/V \text{ Ratio} = \frac{C}{S}}$$

$$\boxed{P/V \text{ Ratio} = \frac{S - V}{S}}$$

$$\boxed{P/V \text{ ratio} = \frac{\text{fixed exp} \pm \text{profit/loss}}{\text{sales}}}$$

$$\boxed{P/V \text{ ratio} = \frac{\text{Change in profit}}{\text{change in sales}}}$$

3. Value of sales to earn a desired amount of profit :-

$$\boxed{\text{Sale} = \frac{\text{fixed cost} + \text{Desired profit}}{P/V \text{ Ratio}}}$$

## 4. Break Even point :-

→ A point where there is no profit, no loss is called as break even point

$$\boxed{\text{Break even point (units)} = \frac{\text{fixed cost}}{\text{contribution per unit}}}$$

$$\boxed{\text{Break even point (value)} = \frac{\text{fixed cost}}{\text{profit - volume ratio}}}$$

$$\boxed{\text{BEP (as a \% of capacity)} = \frac{\text{fixed cost}}{\text{total contribution}}}$$

Q. sales = 1 lakh
profit = 10,000
variable cost = 70%. Calculate p/v ratio, fixed cost, sales to earn profit of Rs/- 40,000.

$C = S - V$

$= 1,00,000 - 7,000$

$= 30,000$

$p.v = \frac{30,000}{10,0000} = 0.3$

$= 30\%$

$C = F + P$

$\Rightarrow 30,000 = F + 10,000$

$\Rightarrow F = 20,000$

$$\text{Sale} = \frac{\text{fixed cost} + \text{desired profit}}{\text{p/v ratio}}$$

$$= \frac{20,000 + 10,000}{0.3} = \frac{30,000}{0.3} = 1,00,000$$

Q fixed cost = 2,50,000
volume cost = 10
sale price = 15 per unit
output = 75000 unit . find out profit earn in the period.

→ output = 75,000
sales = 75,000 × 15 = 11,25,000
~~volume~~ variable cost = 75,000 × 10 = 7,50,000

$C = S - V.C$
$= 11,25,000 - 7,50,000$
$= 3,75,000$

$C = F + P$
$\Rightarrow C - F = P$
$\Rightarrow 3,75,000 - 2,50,000 = P$
$\Rightarrow P = 1,25,000$

Q

| Yr | Sales | Profit |
|---|---|---|
| 2010 | 1,40,000 | 15,000 |
| 2011 | 1,60,000 | 20,000 |

Calculate (1) P/V ratio (2) sales to earn a profit of 40,000 (3) profit when sales rupees 1,20,000

(i) P/V ratio = $\dfrac{20,000 - 15,000}{1,60,000 - 1,40,000}$

$= \dfrac{5000}{20,000} = \dfrac{5}{20} = \dfrac{1}{4}$

(ii) sales = $\frac{\text{fixed cost} + \text{desired profit}}{\text{P/V ratio.}}$

$\Rightarrow \frac{1,40,000}{4} = \frac{F + 15,000}{} \times 4$

$\Rightarrow 35,000 = F + 15,000$

$\Rightarrow F = 20,000$

$\rightarrow$ Sales $= \frac{20,000 + 40,000}{1/4}$

$= \frac{60,000}{1/4} = 1,25,000$

(iii)

$1,20,000 = \frac{20,000 + p}{1/4}$

$\Rightarrow \frac{1,20,000}{4} = 20,000 + p$

$\Rightarrow 30,000 - 20,000 = p$

$\Rightarrow p = 10,000$

① **Cash break even point :-**

Cash BEP (Units) = $\frac{\text{Cash fixed cost}}{\text{Cash contribution per unit}}$

② **Composite break even point :-**

Composite BEP (sales value) = $\frac{\text{total fixed cost}}{\text{Composite P/V ratio}}$

③ composite P/V ratio = $\frac{\text{total contribution}}{\text{total sales}} \times 100$

**Margin & safety:-**

→ The excess of Actual sales over break even sales.

→ It is the difference between actual sales &

sales at break even point.

margin & safety = Actual sales - sales at BEP

$$MS = \frac{\text{profit}}{\text{P/v ratio}}$$

profit = MS × P/V ratio.

Q salling price per unit = 40 rupees.
variable cost per unit = 30 reupees.
depreciation included in above per unit = 5 Rs
fixed cost = 1 lakh.
Depreciation included in fixed cost = 25,000
calculate cash break even point.

→ Cash BEP = $\frac{\text{fixed cost}}{\text{Contribution per unit}}$

$= \frac{1,00,000 - 25,000}{40-(30-5)}$

$= \frac{75000}{15} = 5000$ units

Cash (CBEP) = 5000 × 40 Rs = 20,50,500 Rs

Q

| product | sales Revenue | variable cost |
|---|---|---|
| X | 20,000 | 10,000 |
| Y | 40,000 | 14,000 |
| Z | 60,000 | 36,000 |

fixed cost = 50,000
calculate composite P/V Ratio & composite break even point.

Composite P/V ratio = $\frac{\text{total contribution}}{\text{Sales}} \times 100$

P/V ratio = $\frac{1,20,000 - 60,000}{1,20,000} \times 100$

$= \frac{60,000}{1,20,000} \times 100$

$= \frac{1}{2} \times 100^{50}$

$= 50\%$

Composite breakeven point = $\frac{\text{total fixed cost}}{\text{Composite P/V Ratio}}$

$= \frac{50,000}{50\%} = \frac{50,000}{1/2}$

$= 1,00,000$

Q X company limited has an overall P/V ratio 40% the marginal cost of product. A estimate Rupees 30. Determined the selling price of product A.

→ PV ratio = 40%

estimate/variable cost = Rs/- 30

P/V ratio = $\frac{C}{S}$

$40\% = \frac{S-V}{S}$

$40\% = \frac{S}{S} - \frac{V}{S} = 1 - \frac{V}{S}$

$\frac{V}{S} = 1 - 40\%$

$= 1 - \frac{40}{100} = \frac{100-40}{100} = \frac{60}{100}$

$\Rightarrow \frac{30}{S} = \frac{60}{100}$

$\Rightarrow S = \frac{30 \times 100}{60} = 50/-$

# Technique of Marginal costing:-

(1) Make or Buy Decision:-

→ Sometimes an organisation has to decide whether certain a product or component should be made in the factory itself or baught from outside from a form.

→ In taking such we make or buy decision is off remains help.

→ While deciding to make or buy a distinction must be made between fixed or variable cost.

→ If the variable cost of the product is lower than the purchase price is advisiable to make than to buy.

→ But if the purchase price is lower than the marginal cost it could be better to buy than to make itself.

Q A manufacture company finds that while the cost of making component in its own workshop in ruppees 8 is same in available in market at ruppes 6.5. Give your suggestion whether to make or buy.

→ Also give your views to suppliers to reduces your prices ruppees 6.5 to ruppees 5.5. The cost data is as follows.

(2) Key or limiting factor :-

→ A limiting factor is a factor which limits for a restrict production or sales and hence a prevent a concern for making unlimited profits

→ The limited factor may be any factor of production such as availability of raw material, labour, plant capacity and even sales.

→ In case an organisation has 2 or more product lines and there is a limiting factor a problem may arise as to which product should be produced more so as to utilize the limiting factor in the best possible manner as to maximize the profit.

→ Contribution per unit should be the criteria to access the profitability.

→ The product which gives highest contribution per unit should be prefer to the one which gives lower contribution per unit.

3. Selection of suitable product / sales mix :-

→ When an organization manufacture more than one product a problem upon arises as to be product mix or sales mix which will yield maximum profit.

→ In determining the optimum or profitable sales means the product which gives maximum contribution are to be retained their production should be increase.

→ The production of product which gives comparatively lesser contribution should be reduced or dropped.

4. exploring new market or explore order / bulk order

→ Exploring new market or additional order or export order may be accepted at a price ~~above the marginal cost because the fixed cost are to be incurred even otherwise~~. below the normal market price so as to utilize the idle capacity.

→ The order may be accepted at any price above the marginal cost because the fixed cost are to be incurred even ~~order~~ otherwise.

→ Any contribution resulting from additional sales would mean additional profit.

Q1

An order from a local merchant should n't be accepted below the normal market price because it will affect the relationship with other customer buying at a normal price but if it is a foreign order it may be accepted below the normal price keeping in view the additional cost of exporting.

5. Shutdown V/s continue:- Imp

→ A decision to shutdown means the firm is temporary suspending the production. It doesn't mean the firm is going out for the production. The demand of product may fall due to availability of new product in the market or increasing the no. of competitors or change in the fashion.

→ The firm may not have sufficient finance of its own nor further predict is available from bank or financial institutions due to government restriction.

→ Where the growth of technology is rapid and not possible to keep pace with the net result may be a loss of profit.

# : UNIT - 03 :

## Budget & Budgeting Control :-

→ meaning :-

→ Budget is the monitary or quantitative expression of business plans & policies to be ~~possible~~ pursued in the future period of time.

→ The term budgeting is used for preparing budgets and other procedure for planning, co-ordination & control of business enterprice.

## Budgetary Control :-

→ It is the process of determing various budgeted figures for the enterprice for future period & then comparing the budgeted figures with actual performance for calculating variences if any.

## Objectives of budgetary control :-

(i) To ensure planning for future by setting up various budgets.

(ii) To co-ordinate the activities of different department

(iii) elemination of waste & increase in profitability

(iv) To Anticipate capital expenditure for future.

(v) To centralise the control system.

(vi) Correction of deviations from the established standards.

## Advantages of budgetary Control :-

1. Maximization of profit :-

→ The budgetary Control aims at the maximisation of profits of the enterprise

→ To achieve this aim, a proper planning and co-ordination of different functions is undertaken

→ There is a proper control over various capital and revenue expenditures. The resources are put to the best possible use.

2. co-ordinations :-

→ The working of different departments are sectors is properly co-ordinated.

→ The budgets of different ~~function~~ departments have a bearing on one another.

→ The co-ordination of various executive & subordinates is necessary for achieving budgeted targets.

3. Specific Aims :-

→ The plans, policies and goals are decided by the top management.

→ All efforts are put together to reach the common goal of the organisation.

→ Every department is given a target to be achieved

→ The efforts are directed towards achieving some specific aims.

→ If there is no definite aim then the efforts will be wasted in pursuing different aims.

4. Tool for Measuring Performance :-

→ By providing targets to various department, budgetary Control provides a tool for measuring managerial performance.

→ The budgeted targets are compared to actual results and deviations are determined.
→ The performance of each department is reported to the top management.
→ this system enables the introduction of management by exception.

5. Economy:-
→ The planning of expenditure will be systematic and there will be economy in spending. The finances will be put to optimum use.
→ the benefits derived for the concern will ultimately extend to industry and then to national economy.
→ The national resources will be used economically and wastage will be eliminated.

6. Determining weaknesses:-
→ The deviations in budgeted and actual performance will enable the determination of weak spots.
→ Efforts are concentrated on those aspects where performance is less than the stipulated.

7. Corrective Actions-
→ The management will be able to take corrective measures whenever there is a discrepancy in performance.
→ The deviations will be regularly reported so that necessary action is taken at the earliest.
→ In the absence of a budgetary control system the deviations can be determined only at the end of the financial period.

8. Consciousness:-

→ It creates budget consciousness among the employees

→ By fixing targets for the employee, they are made conscious of their responsibility.

→ Everybody knows what he is expected to do and he continues with his work uninterrupted.

9. Reduces Costs:-

→ In the present day competitive world budgetary control has a significant role to play.

→ Every businessman tries to reduce the cost of production for increasing sales.

→ He tries to have those combinations of product where profitability is more.

10. Introduction of Incentive schemes:-

→ Budgetary control system also enables the introduction of incentive schemes of remuneration

→ The comparison of budgeted and actual performance will enable the use of such schemes.

Disadvantages/limitations of Budgetary Control:-

1. Uncertain futures-

→ The budgets are prepared for the future period.

→ Despite best estimates made for the future, the predictions may not always come true.

→ The future is always uncertain & the situation which is presumed to prevail in future may change.

→ The change in future conditions upsets the budgets which have to be prepared on the basis of certain assumptions.

→ The future uncertainties reduce the utility of budgetary control system.

2. Budgetary Revisions Required :-

→ Budgets are prepared on the assumptions that certain conditions will prevail.

→ Because of future uncertainties, assumed conditions may not prevail necessitating the revision of budgetary targets.

3. Discourages Efficient Persons :-

→ Under budgetary control system the targets are given to every person in the organisation. The common tendency of people is to achieve the targets only.

→ There may be some efficient persons who can exceed the targets but they will also feel contented by reaching the targets. So budgets may serve as constraints on managerial initiatives.

4. Problem of Co-ordination :-

→ The success of budgetary control depends upon the co-ordination among different departments.

→ The performance of one department affects the results of other departments.

→ To overcome the problem of co-ordination a budgetary officer is needed.

→ Every concern cannot afford to appoint a budgetary officer. The lack of co-ordination among different department's results in poor performance.

5. Conflict among Different Departments :-

→ Budgetary control may lead to conflicts among functional departments.

→ Every departmental head worries for his department goals without thinking of business goal.

→ Every department head, worries for his department goals without thinking of business goal.

→ Every department tries to get maximum allocations of funds and ~~their~~ this raise a conflict among different departments.

6. Depends upon Support of Top Management:-

→ Budgetary Control system depends upon the support of top management.

→ The management should be enthusiastic for the success of this system & should give full support for it.

→ If at any time there is a lack of support from top management then this system will collapse.

I.M. What is budgetary control? & describe advantage and disadvantages.

Types of budget or classification of budget:-

1. Acoding to time:-

(i) long term

(ii) short term

(iii) current term.

(i) long term budget:-

→ It is prepared for longer than one year, normally for a period of 5 to 10 years.

→ It is helpful in business forecasting & forward planning.

→ Ex:- capital budget, research & development budget, long term finances etc.

(ii) short-term budget:-

→ It is prepared for a period of one year or less.

→ It is divided into quarterly or monthly budgets.

→ Ex:- master budget, operational budget, cash budget.

(iii) Current term budget:-

→ A budget prepared for a short time is called a current budget.

→ A current or temporary budget is the amount of budget available to spend in the current fiscal year period, which is July 1 through June 30.

2. According to basis of functions:-

(i) operating budget:-

→ It is a forecast of the revenues and expenses expected for one or more future periods.

→ An operating budget is typically formulated by the management team just prior to the beginning of the year, and shows expected activity levels for the entire year.

(ii) financial budget:-

~~→ all budget combine or all individual budget that is financial budget~~.

→ financial budgeting is the process of planning company expenses and revenues for a time period.

→ Budgets set forth the plans of management in financial terms.

→ This includes allocating financial resources and identifying available cash flows for required spending.

iii) Master Budget:-

→ all budget combine on all individual budget is called master budget.

→ A master budget is a company's central financial planning document.

→ A master budget will show all the details of the details of the company's income-generating actions via the operating budget, with an overview of revenue and expenses.

→ It will also show cash inflows and outflows from the cash flow statement, and outflows ~~from the cash flow statement~~ and estimations of what will appear on the balance sheet at the end of the accounting period.

→ It typically covers a full fiscal year and includes "lower-level" budgets - like a sales budget and a labour budget - cash flow forecast financial statements, and a financial plan.

classification of basis of flexibility:-

1. fixed budget:-

→ A fixed budget is a budget that doesn't change due to any change in activity level or output level.

2. flexible budget:-

→ flexible budget consists of a series of budget for different layer of activity.

→ It there-fore varies with the level of activity attained.

→ A flexible budget is defined as a budget which by recognizing the difference between fixed, variable and semivariable cost is designed in relation to level of activity changes.

3 mark
# Difference between fixed and flexible budget.

| fixed budget | flexible budget |
| --- | --- |
| (1) fixed budget remains same irrespective of change the situation. | (1) A flexible budget is recast to suit the change the circumstances or situation. |
| (2) A fixed budget assumes that condition will be remain constant. | (2) This budget is change in level of activity varies. |
| (3) A fixed budget cost are not classified according to their nature. | (3) The cost as studied according to their nature. |
| (4) If level of activity changes then budgeted & actual result can't be compared. | (4) The budgets are redrafted as per the change volume & comparision between budgeted and actual figure will be possible. |
| (5) forecasting of actual result is difficult. | (5) It helps in making accurate forecast. |

Q The expences for the production of 5000 units in a factory are as follows.

| Perticulars | Amount (per unit) |
| --- | --- |
| material | 50 |
| labour | 20 |
| Variable O.H | 15 |

| perticulars | Amount (per unit) |
|---|---|
| fixed O.H (50,000 amount) | 10 |
| Adminstative expences (5% variable) | |
| selling expencess (20% fixed) | 6 |
| distribution expencess (10% fixed) | 5 |
| total cost of sales | 116 |

you are prepared budget for production of 7000 units:

Imp

flexible budget

| perticulars | 5000 units | | 7000 units | |
|---|---|---|---|---|
| | per unit | total cost | per unit | total cost |
| material | 50 | 2,50,000 | 50 | 3,50,000 |
| labour | 20 | 1,00,000 | 20 | 1,40,000 |
| prime cost | 70 | 3,50,000 | 70 | 4,90,000 |
| factory overhead:- | | | | |
| variable O.H | 15 | 7,50,100 | 15 | 10,5,000 |
| fixed O.H | 10 | 50,000 | 7.14 | 50,000 |
| | 95 | 4,75,000 | $\frac{50,000}{7000}$ | 6,45,000 |
| Admn. O.H:- | | | 92.14 | |
| Adm. expences | 10 | 50,000 | 7.28 | 51,000 |
| cost of production | 105 | 5,25,000 | 99.42 | 6,96,000 |
| selling & distribution:- | | | | |
| Selling expences | 6 | 30,000 | 5.65 | 39,600 |
| distribution expencess | 5 | 25,000 | 4.85 | 34,000 |
| | 126 | 5,80,000 | 109.92 | |
| | | | | 7,69,600 |

Adminstrative o.H

10 per unit (5% variable) 0.50

(95% fixed) 9.50

$50,000 \times \frac{5}{100} = 2500$ (variable)

$50,00 \times \frac{95}{100} = 47,500$ fixed

51,000

or

$5000 \times 0.50 = 2,500$ variable

$50,00 \times 9.50 = 47,500$ fixed

selling & distributions:-

(20% fixed) —— 1.20 - fixed

(80% fixed) —— 4.80 - fixed

$30,000 \times \frac{20}{100} = 6000$ fixed

$1,000 \times 4.50 = 33,600$ - variable

39,600

$5000 \times 1.25 = 6000$

$5000 \times 4.80 = 24000$

30,000

$7000 \times 1.20 = 6,000$

$7,000 \times 4.80 = 33,600$

39,600

distribution expences:-

(5 per unit) = 25,000

$25,000 \times \frac{10}{100} = 2500$ (fixed)

$5 \times \frac{10}{100} = 0.5$ (fixed)

$5 \times \frac{90}{100} = 4.5$ (variable) or $5 - 0.5 = 4.5$

$$7{,}000 \times 4.5 = \begin{array}{l} 2{,}500 \\ 3{,}500 \text{ (variable)} \end{array}$$

total cost = 34,000

## Cash budget :-

→ A cash budget is an estimation of cash receipt & disbursement during a period of time. (payment to creditor)

**Cash receipts :-** (source of collection)

→ cash receipts related to collection for sales bills receivable, collection from debtors, interest, dividend received etc.

**disbursement :-** (source of payment)

→ cash disbursement related to purchase of material, payment to creditors, wages paid, Rent paid etc.

Q) A company is respecting to have Rs. 32,000 cash in hand on 1st april 2011 and it request you to prepared cash budget for 3 month april to June 2011. the following information is supplied to you.

| month | Sales(₹) | purchases(₹) | wages(₹) | expenses |
|---|---|---|---|---|
| feb | 70,000 | 44,000 | 6,000 | 5000 |
| mar | 80,000 | 56,000 | 9000 | 6000 |
| Apr | 96,000 | 60,000 | 9000 | 7000 |
| may | 1,00,000 | 68,000 | 11000 | 9000 |
| june | 1,20,000 | 62,000 | 14000 | 9000 |

Additional informations:-

(1) period of credit allowed by supplies is 2 month.

(2) 25% of sales is for cash & credit period allowed to the customer for credit sales. 1 month.

(3) delay in payment of wages & expences 1 month.

(4) income tax for Rs, 28,000 to be paid in June 2011.

Imp

Cash budget

| particulars | April | may | June |
|---|---|---|---|
| Opening balance of cash | | | |
| Recipts(A):- | 32,000 | | |
| cash sales - (25% 96,000 for april & 80 on) | 24,000 | | |
| cash realised from debtor (75% of 80,000 for april & 80 on) | 60,000 | | |
| total Received(A) | 1,16,000 | | |

Rough

$80,000 \times \frac{75}{100}$ - 24,000
60,000
84,000
32,000
1,16,000

| Particulars | April | May | June |
|---|---|---|---|
| payment (B) :- | | | |
| Creditor for purchase (February) | 44,000 | | |
| payment for wages | 9,000 | | |
| payment for expenses | 6,000 | | |
| income tax paid | — | | |
| total payment (B) | 59,000 | | |
| closing balance of cash (A-B) | 57,000 | | |
| opening balance of cash | | 57,000 | |
| Receipt (A) :- | | | |
| cash sales :- (25% 1,00,000 for may and so on) | | 25,000 | |
| cash realised from debtor (75% of 96,000 for may so on) | | 72,000 | |
| total Received (A) | | 1,54,000 | |
| payment (B) :- | | | |
| creditor for purchases (march) | | 56,000 | |
| payment for wages (April) | | 9,000 | |
| Payment for expenses | | 7,000 | |
| income tax paid | — | — | |
| total payment (B) | | 72,000 | |
| closing balance of cash (A-B) | | 82,000 | |

| particulars | April | may | June |
| --- | --- | --- | --- |
| opening balance of cash | | | 82,000 |
| Receipt (A):- | | | |
| cash sales:- (25% of 1,20,000 for june and so on) | | | 30,000 |
| cash realised from debtors (75% of 1,00,000 for june & so on | | | 75,000 |
| total Receipts (A) → | | | 1,87,000 |
| payments (B):- | | | |
| creditors for purchases | | | 60,000 |
| payment for wages | | | 11,000 |
| payment for expences | | | 9,000 |
| income tax paid | | | — |
| total payment (B) | | | 80,000 |
| closing Balance of cash (A-B) | | | 1,07,000 |

2/3 mark

## Responsibility Accounting :-

→ Responsibility Accounting is a system of control where responsibility is assigned for the control of costs.

→ persons are made responsibile for controlling the cost proper, authority is given to the persons so that they are able to keep up their performance

### Steps for Responsibility Accounting :-

Step-1

(1) The organization is divided into various responsibility centers. Each center is put under the change of a responsibility manager.

→ The mangers are responsibile for the performance of their departments.

Step-2

→ The targets for each responsibility center are set in. The targets are set in consultation with the manager of the responsibility center. so that the may be able to give the full information about his department

Step-3

→ The actual performance of each Responsibility Center is recorded and communicated to the executive concern and actual performance is concern and the actual performance is compared with the goal set. and it helps in accessing. The work of the centers.

Step-4

→ IF Actual performance of a department is less than the standard sets the variances are conveyed to the top management.

step-5

→ Timely Action is taken to take necessary corrective measures. So that the work doesn't suffer in future. The direction of top level management are communicated to concern responsibility center. so that corrective measure are initiated at the year earliest.

Responsibility Centres-

→ A responsibility center is like an engine in that it has inputs which are physical quantity of material labour & variety of services.

→ It works with the resources usually working capital & fixed assets.

→ It produces outputs which are classified as goods or services.

Types of Responsibility Centre:-

1. Cost or expenses centre
2. profit centre.
3. investment centre.

1. Cost or expenses Centre:-

→ These are the segments in which mangers are responsible for cost incurred but have no revenue responsibility.

→ The performance of the cost centre is measured in the terms of quantity of inputs used in producing a given output.

2. profit centres:-

→ When a responsibility centre gets revenue from output. it will be called a profit centre.

→ The difference between revenue earned and cost incurred will be a profit.

3. Investment centre:-

→ An investment centre is an entity in which a manger can control not only reven and cost but also investment. The manger of responsibility centre is made responsible for properly utilizing the assets used in each centre.

Transfer Price:-

→ Transfer price is a price used to measure the price of goods or services furnished by a profit centre to other responsibility centre within a company.

→ The implication of transfer price is that for the transfering division it will be a source of revenue where as for the division to which transfer is made it will be an element of cost so their will be a need to determine a proper transfer price for the successful implementation of responsibility Accounting.

Divisional Performance :-

→ The way in which the central management of an organization measures the Performance of each individual division in a divisionalized structure is known as divisional performance.

Financial Measures of divisional Performance:

1. Return on investment (ROI):-

→ It is an performance measure used to invaluate the profitability of an investment or compare the efficiency of number different investment.

→ ROI tries to directly measure the amount of return on a particular investment R to investment cost.

$$ROI = \frac{\text{net income}}{\text{Capital employed}} \times 100$$

2. Residual Income (RI) :-

→ It determines where the division has created any excess income above management expections.

$$\boxed{RI = \text{Operating income} - \text{minimum acceptable income}}$$

3. Economic value Added (EVA) :-

→ It is the value created by the business in true sence. It is the excess of operating profit after ~~mettin~~ meeting with the cost to all the of finance.

EVA = net operating profit after tax − (

Unit-4

# Standard costing & variance Analysis :-

## standard :-

→ Standard means a bench mark or yard stick.

## standard cost :-

→ standard cost is a predetermine cost which determines in advance what is product or service under given & circumstances.

## Standard costing :-

→ The technique of using standard cost for the purpose of cost control is known as standard costing.

→ standard costing is a system of cost accounting which is design to find out how much should be a the cost of a product under the existing condition.

## Advantage of standard costing :-

1. Measuring efficiency :-

→ standard costs can be compared with actual costs.

→ when actual costs are equal to or less than standard costs, this reflects the organization's efficiency.

→ when standard costs are less than actual costs, this indicates a degree of inefficiency in the organization.

→ Therefore, standard costing enables a company's management team to learn about whether the company operates reliably or not.

2. Formulation of production and price policy:-

→ It is helpful in formulation of production policy

→ The standard are set by studing all existing conditions.

→ It becomes easy to formulate production plan by taking into account standard costs.

3. Determination of variances:-

→ By comparing actual costs with standard costs variances are determined.

→ Management is able to spot out the place of inefficiencies.

→ It can fix responsibility for deviation in performance.

4. Reduction of works:-

→ Standard costing reduces clerical work to a considerable extent and management is supplied with useful information

→ In this system only necessary information will be recorded and superfluous data are avoided.

5. Facilitates Cost Control:-

→ Every costing system aims at cost control and cost reduction.

→ Standard costing helps in achieving these aim.

→ The standards are being constantly analysed and an effort is made to improve efficiency.

6. Eliminating Inefficiencies:-

→ The setting of standard for different elements of cost requires a detailed study of different aspects.

→ The standards are differently set for manufacturing, administrative and selling

~~efficiency~~. expenses.

8. Helpful in taking important decisions:-

→ Standard costing provides useful information to the management in taking important decisions.

→ The problem created by inflation, rising prices etc. can be effectively tackled with the help of standard costing.

Imp ques
& Discussion merite and demerite of standard costing.

Limitation:-

→ Standard costing can't be used where non-standard product are produced.

→ The process of setting up standard is a difficult takes as it requires technical skills.

→ The system is expensive and small concern may not afford by beyond the cost.

→ There is not inset circumstances to be considered for fixed standard.

Variance Analysis:-

→ Variance analysis is the study of deviations of actual behaviour versus forecasted or planned behaviour in budgeting or management accounting.

→ There are 3 types (1) material variance
(2) Labour variance
(3) overhead variance.

(1) Material variance:-

(a) material cost variance (MCV):-

MCV = Standard cost for Actual output − Actual cost of material.

b. Standard cost of material for Actual output:

Stand. cost of mat. for actual output = Actual output × St. quantity of mat. per unit.

c. Actual cost of material:-

Actual cost of material = Actual quantity × Actual Rate

d. Material Price Variance (MPV):-

MPV = Actual quantity (Standard Rate − Actual Rate)

e. Material usage Variance (MUV):-

MUV = Standard Rate (St. Qty for Act. Output − Actual quantity)

Material usage variance (MUV)

① mat. mix variance

② material ~~mix~~ yield variance.

① Material mix variance:-

(i) When actual mix and standard mix don't differ (doesn't change) (same)

$$\boxed{MMV = \text{St. Cost of St. mix} - \text{St. Cost of Act. mix}}$$

(ii) If act. mix and St. mix are differ (different) (change)

$$\left(\frac{\text{total weight of act. mix}}{\text{total weight of St. mix}} \times \text{St. cost of St. mix}\right) - \text{St. Cost of act. mix}$$

b. material Yield Variance:-

(i) Standard & actual mix doesn't same.

yield Var = St. rate (act. yield − St. yield)

→ where std. rate = $\frac{\text{St. cost of standard mix}}{\text{net standard output}}$

→ Net std. output = gross o/p − st. loss.

(ii) If actual mix & standard mix are different

st. rate (actual yield − revise std. yield)

(give incr. or decr. give in quest)

F. $\boxed{MCV = MPV + MUV}$

g. $\boxed{MUV = MMV + MYV}$

Q. Standard cost of a chemical mixture is as under.

Standard :-

8 tons of mat. A @ Rs 40 per ton.

12 tons of mat. B @ Rs 60 per ton.

standard yield = 90% of input.

Actual :-

10 tons of mat. A @ Rs 30 per tons.

20 tons of mat. B @ Rs 68 per tons

Actual yield 26.5 tons.

Calculate all material variance.

costing Note

Revised std :-

Quantity

$A = \frac{\cancel{8}^{4}}{\cancel{20}} \times 3\cancel{0} = 12$

$B = \frac{\cancel{12}^{\times 3}}{\cancel{20}} \times 68 = 40.8$

$10.5$

## Working Note

| Mat | Standard Qty | Standard Rate | Standard Amount | Actual Qty | Actual Rate | Actual Amt | Revised Std Qty | Revised Std Rate | Revised Std Amt | Std. Cost of Actual (Std Rate x Act Qty) |
|---|---|---|---|---|---|---|---|---|---|---|
| A | 8 | 40 | 320 | 10 | 30 | 300 | 12 | 40 | 480 | 400 |
| B | 12 | 60 | 720 | 20 | 68 | 1360 | 18 | 60 | 1080 | 1200 |
| | 20 | | 1040 | 30 | | 1660 | 30 | | 1560 | 1600 |
| loss | 2 | | — | 3.5 | | — | 3 | | — | — |
| | 18 | | 1040 | 26.5 | | 1660 | 27 | | 1560 | 1600 |

(i) MCV $= \frac{1040}{18} \times 26.5 - 1660 = -128.88889$

$= 129(A)$ — means "–"

(ii) MPV =

$A = 10(40-30) = 100(F)$ — favorable means "+"

$B = 20(60-68) = 160(A)$ — means "–"

$60(A)$

(iii) MUV :-

$A = 40\left(\frac{8}{18} \times 26.5 - 10\right) = 71.12(F)$

$B = 60\left(\frac{12}{18} \times 26.5 - 20\right) = -140.4$

$= 140(A)$

$69(A)$

Check correct or not

$\boxed{129(A) = 60(A) + 69(A)}$

(iv) MMV :-

$MMV = 1560 - 1600 = 40(A)$

$MYV = \frac{1560}{27}(26.5 - 27) = 29(A)$

Check correct or not

$\boxed{69(A) = 40(A) + 29(A)}$

## labour Variance :-

1. labour Cost variance

= St. cost of labour for actual output − Actual Cost of labour

= (St. time for actual output × St. wage Rate) − (Act. time × Act. wage Rate)

2. labour Rate variance (LRV) = Actual time (St. Rate per hr − Act. Rate per hr)

3 labour Efficiency variance (LEV)

= St. Rate (St. time for Actual o/p − Act. time)

$$\boxed{LCV = LRV + LEV}$$

Q

| | Standard | Actual |
|---|---|---|
| output - | 1000 units | 1200 unit |
| Rate - | Rs 6 per unit | wages paid with bonus Rs 8000 |
| time - | 50 hrs | 40 hrs |

findout all labour variance.

1. labour C. V = (St. time for Actual o/p × St wage Rate) − (Act time × Act. wage Rate)

= 1200 × 6 − 8000 = 800 (A)

2. LRV :

St. Rate = $\frac{7200}{60 \text{ hrs}}$ = 120 per hr

St. rate per unit × Actual o/p

6 × 1200

$\frac{50}{1000} \times 1200 = 60 hr$

Actual Rate = $\frac{8000}{40} = 200$ per hr

LRV = 40(120 − 200)
= 40×80 = 3200(A)

LEV = 120(60 − 40)
= 120×20 = 2400(F)

$\boxed{LCV = LRV + LEV}$

800(A) = 3200(A) + 2400(F)

(4) Idle time variance

nothing to do but idle time benifited

ITV = Abnormal Idle time × St. Rate

Normal idle time
Ex- lunch time of labour

Ex Abnormal idle time
machine breack down
we also can avoidable

5. labour mix variances:-

(i) When St. and actual time of labour mix are same.

LMV = St. cost of St. labour mix − St. cost of act. labour mix

(ii) when St. & act. time of labour mix is different.

LMV = ~~total rate of~~ time of

= $\left(\frac{\text{total rate of act labour mix}}{\text{total time of St. labour mix}} \times \text{St. cost of St. labour mix}\right)$ − St. cost of act labour mix

6. labour Yield variance :-

$$LYV = \text{St. labour cost per unit of O/P}\left(\text{actual Yield} - \text{st. yield per act. time}\right)$$

Q. A gang of labour Actual consists of 10 men, 5 women & 5 boys in factory.

they are paid st. hourly rate of Rs 1.25, Rs. 0.80 & Rs 0.70 Respectively ~~at norm~~ in a normal working week of 40hrs. The gang is expected to produce 100 units of o/p.

→ In a sudden week the gand consisted 30 men, 4 women & 3 boys. actual wages paid. Rs 1.20, Rs 0.85 & Rs 0.65 Respectively.
2 hr per week we are lost due to abnormal idle time and 960 unit of o/p were produced
Calculate per labour variances.

| composition of worker | Standard hrs per 40 | Rate | total | Actual hrs per 40 | Rate | total | Std. per Act. o/p |
|---|---|---|---|---|---|---|---|
| men | 400 | 1.25 | 500 | 520 | 1.20 | 624 | $400 \times \frac{960}{1000} = 384$ |
| women | 200 | 0.80 | 160 | 160 | 0.85 | 136 | $200 \times \frac{960}{1000} = 192$ |
| Boys | 200 | 0.70 | 140 | 120 | 0.65 | 78 | $200 \times \frac{960}{1000} = 192$ |
| | 800 | | 800 | 800 | | 838 | |

$$1000 - 800$$
$$1 - \frac{800}{1000} \times 960$$

① $LCV = \left(\frac{800}{1000} \times 960\right) - 838$

$= 70(A)$

② LRV =

men $= 520(1.25 - 1.20) = 26\ (F)$

women $= 160(0.80 - 0.85) = 8\ (A)$

Boys $= 120(0.70 - 0.65) = 6\ (F)$

$24\ (F)$

③ LEV =

men $= 1.25(384 - 520) = 170\ (A)$

women $= 0.80(192 - 160) = 25.60\ (A)$

boys $= 0.70\ (192 - 120) = 50.40\ (F)$

$94\ (A)$

$$\boxed{70(A) = 24(F) + 94(A)}$$

$70(A) = 70(A)$

(4) I+V = abnormal idel.

men = (13×2) = 26 × 1.25 = 32.50 (A)

women = (4×2) = 8 × 0.80 = 6.40 (A)

Boys = (3×2) = 6 × 0.70 = 4.20 (A)

43.10 (A)

(allways) −ve bcz loss our time.

(5) ~~LMV~~ Revised st time (38hr)

men = 10 × 38 = 380

women = 5 × 38 = 190

Boys = 5 × 38 = 190

Actual. time

13 × 38 = 494

4 × 38 = 152

3 × 38 = 114

760

LMV =

men = 1.25 (380 − 494) = 142.5 (A)

women = 0.80 (190 − 152) = 30.4 (F)

Boys = 0.70 (190 − 114) = 53.2 (F)

58.9 (A)

(6) LYV = $\frac{800}{1000}$ per unit $\left(960 - \frac{1000}{800} \times 760\right)$

= 8 (F)

800 − 1000

1 − $\frac{1000}{800} \times 760$ Act. time

$\boxed{94(A) = 43.10(A) + 58.90(A) + 8(F)}$

= 102 (A) + 8 (F)

= 94 (A)

## Target Costing :-

→ Target costing is defined as a cost management tool for reducing the overall cost of a product over its entire life-cycle with the help of production, engineering, research and design.

### Features of target costing Process :-

→ It is an integral part of the design and introduction of new products.

→ A target selling price is determined using various sales forecasting techniques.

→ Establishment of target production volumes.

→ Determine cost reduction targets.

→ A fair degree of Judgement

→ A series of intense activities

→ A team based set-up to achive its objectives

### Objectives :

→ To lower the costs of new products so that the required profit level can be ensured.

→ It emphasizes understanding the market and competition.

→ To motivate all company employees to achieve the target profit.

### Advantages :-

→ proactive approach to cost management.

→ Orients organization toward customer.

→ Breaks down barriers between departments.

→ Reduces development cycle of a product.
→ Reduces cost of products.
→ It reinforces the commitment for INNOVATION.
→ It gives the consumers "MAX. SATISTACTION.

**Disadvantages:-**

→ Requires many meetings for co-ordination.
→ Development of process can be lengthened.
→ A large amount of cost cutting can result in finger pointing.
→ Sometimes difficult to reach a conclusion.

**Companies Using Target Costing:-**

→ Although it is a relatively new concept, it is being used heavily in most large companies especially automotive and aerospace industry.

Eg

① General Electric
(2) Motorola
(3) U.S auto companies GM
(4) Ford and Diamler chrysler.
Japan's auto companies Toyoto, Honda, Nissan, mitsubishi.
(5) Nasa
(6) U.S Military
(7) Sony.

## Quality Costing :-

→ Quality costs are the costs associated with preventing, detecting and remediating product issues related to quality.

→ Quality costs donot involve simply upgrading the perceived value of a product to a higher standard.

→ Instead, quality involves ~~the expectation of a~~ creating & delivering a product that meets the expectations of a customer.

### Types:-

(1) Prevention Costs :-

→ prevention costs are incurred to prevent or avoid quality problems.

→ These costs are maintenance of the quality management system.

→ They are planned and incurred before actual operation, and they could include:-

product or service requirements - establishment of specification for incoming materials, process finished products and services.

(a) Quality planning - creation of plans for quality reliability, operations, production and inspection.

(b) Quality assurance -

→ Creation and maintenance of the quality system

→ Training - development, preparation, and maintenance of programs.

2. Appraisal Costs:-

→ Appraisal costs are associated with measuring and monitoring activities related to quality.

→ These costs are associated with the supplier's and customers' evaluation of purchased materials, processes, products, and services to ensure that they conform to specifications. They could include: