INTRODUCTION TO COST ACCOUNTING

COST

As a noun: The amount of expenditure (actual or notional) incurred on or attributable to a specified article, product, or activity.

As a verb: To ascertain the cost of a specified thing or activity.

COSTING

Costing is defined as "the technique and process of ascertaining costs".

According to CIMA "an organisation's costing system is the foundation of the internal financial information system for managers. It provides the information that management needs to plan and control the organisation's activities and to make decisions about the future."

COST ACCOUNTING

Cost Accounting is defined as "the process of accounting for cost which begins with the recording of income and expenditure or the bases on which they are calculated and ends with the preparation of periodical statements and reports for ascertaining and controlling costs."

COST ACCOUNTANCY

Cost Accountancy has been defined as "the application of costing and cost accounting principles, methods and techniques to the science, art and practice of cost control and the ascertainment of profitability. It includes the presentation of information derived there from for the purpose of managerial decision making."

MANAGEMENT ACCOUNTING

As per CIMA Official Terminology "Management accounting is the application of the principles of accounting and financial management to create, protect, preserve and increase value for the stakeholders of for-profit and not-for-profit enterprises in the public and private sectors." Management accounting is an integral part of management. It assists management by provision of relevant information for planning, organising, controlling, decision making etc.

COST MANAGEMENT

It is an application of management accounting concepts, methods of collections, analysis and presentation of data to provide the information needed to plan, monitor and control costs.

OBJECTIVES OF COST ACCOUNTING

The following are the main objectives of Cost Accounting: -

(a) Ascertainment of cost

There are two methods of ascertaining costs, viz., Post Costing and Continuous Costing. Post Costing means, analysis of actual information as recorded in financial books. Continuous Costing aims at collecting information about cost as and when the activity takes place so that as soon as a job is completed the cost of completion would be known.

(b) Determination of selling price Business enterprises run on a profit-making basis. It is thus necessary that the revenue should be greater than the costs incurred. Cost accounting provides the information regarding the cost to make and sell the product or services produced.

(c) Cost control

It is a process to ensure that appropriate action is taken if costs exceed a pre-set allowance (as budgeted/ estimated) or actions to be taken if costs are expected to exceed the expected levels. To exercise cost control, the following steps should be observed:

1. Clearly determine the objective.
2. Measure the actual performance.
3. Investigate into the causes of failure to perform according to plan;
4. Institute corrective action.

(d) Cost Reduction

It may be defined "as the achievement of real and permanent reduction in the unit cost of goods manufactured or services rendered without impairing their suitability for the use intended or diminution in the quality of the product."

(e) Ascertaining the profit of each activity

The profit of any activity can be ascertained by matching cost with the revenue of that activity. The purpose under this step is to determine costing profit or loss of any activity on an objective basis.

(f) Assisting management in decision making

Decision making is defined as a process of selecting a course of action out of two or more alternative courses. For making a choice between different courses of action, it is necessary to make a comparison of the outcomes, which may be arrived under different alternatives.

SCOPE OF COST ACCOUNTANCY

The scope of Cost Accountancy is very wide and includes the following: -

(a) Cost Ascertainment: The main objective of Cost Accounting is to find out the Cost of product / services rendered with reasonable degree of accuracy.

(b) Cost Accounting: It is the process of Accounting for Cost which begins with recording of expenditure and ends with preparation of statistical data.

(c) Analysis of Cost: It is the process of locating the factors responsible for difference in actual cost from the budgeted costs and fixing up of responsibility for differences in cost. It provides better cost management and helps in taking strategic decisions.

(d) Cost Control: It is the process of regulating the action so as to keep the element of cost within the set parameters.

(e) Cost Reports: This is the ultimate function of Cost Accounting. These reports are primarily prepared for use by the management at different levels. Cost reports helps in planning and control, performance appraisal and managerial decision making.

(f) Cost Audit: Cost Audit is the verification of correctness of Cost Accounts and check on the adherence to the Cost Accounting plan. Its purpose is not only to ensure the arithmetic accuracy of cost records but also to see the principles and rules have been applied correctly.

ADVANTAGES OF COST ACCOUNTING

(i) A cost system reveals unprofitable activities, losses or inefficiencies occurring in any form such as

(a) Wastage of manpower, idle time and lost time.

(b) Wastage of material in the form of spoilage, excessive scrap etc., and

(c) Wastage of resources, e.g., inadequate utilization of plant, machinery and other facilities.

(ii) Cost Accounting locates the exact causes for decrease or increase in the profit or loss of the business. It identifies the unprofitable products or product lines so that these may be eliminated, or alternative measures may be taken.

(iii) Cost Accounts furnish suitable data and information to the management to serve as guides in making decisions involving financial considerations.

(iv) Cost Accounting is useful for price fixation purposes. Although sale price is generally related more to economic conditions prevailing in the market than to cost, the latter serves as a guide to test the adequacy of selling prices.

(v) With the application of Standard Costing and Budgetary Control methods, the optimum level of efficiency is set.

(vi) Cost comparison helps in cost control. Comparison may be period to period, of the figures in respect of the same unit or factory or of several units in an industry by employing Uniform Costs and Inter- Firm Comparison methods. Comparison may be made in respect of cost of jobs, process or cost centres.

(vii) A cost system provides ready figures for use by the Government, wage tribunals and boards, and labour and trade unions.

(viii) When a concern is not working to full capacity due to various reasons such as shortage of demands or bottlenecks in production, the cost of idle capacity can readily worked out and revealed to the management.

(ix) Introduction of a cost reduction programme combined with operations research and value analysis techniques leads to economy.

(x) Marginal Costing is employed for suggesting courses of action to be taken. It is a useful tool for the management for making decisions.

(xi) Determination of cost centres or responsibility centres to meet the needs of a Cost Accounting system, ensures that the organizational structure of the concern has been properly laid responsibility can be properly defined and fixed on individuals.

(xii) Perpetual inventory system which includes a procedure for continuous stock taking is an essential feature of a cost system.

(xiii) The operation of a system of cost audit in the organization prevents manipulation and fraud and assists in furnishing correct and reliable cost data to the management as well as to outside parties like shareholders, the consumers and the Government.

LIMITATIONS OF COST ACCOUNTING SYSTEM

(i) Classification of costs into its elements.

(ii) Materials issue pricing based on average or standard costs.

(iii) Apportionment of overhead expenses and their allocation to cost units/centres.

(iv) Arbitrary allocation of joint costs.

(v) Division of overheads into fixed and variable.

(vi) Maintenance of Cost Accounting system appears to be expensive since the cost analysis, allocation and absorption of overheads etc. require considerable amount of additional work causing additional expenditure.

(vii) Since the results shown by the financial accounts differ from those shown by the cost accounts, there is a need for preparing reconciliation statements for verification of accuracy.

INSTALLATION OF COST SYSTEM OR COST ACCOUNTING SYSTEM

(i) The nature, method and stages of production, the number of varieties and the quantity of each product and such other technical aspects should be examined. It is to be seen how complex or how simple the production methods are and what is the degree of control exercised over them.

(ii) The size, layout and organisation of the factory should be studied.

(iii) The methods of purchase, receipt, storage and issue of materials should be examined and modified wherever considered necessary.

(iv) The wage payment methods should be studied.

(v) The requirements of the management and the policy adopted by them towards cost control should be kept in view.

(vi) The cost of the system to be installed should be considered. It is needless to emphasize that the installation and operation of system should be economic.

(vii) The system should be simple and easy to operate.

(viii) The system can be effectively run if it is appropriate and properly suited to the organisation.

(ix) Forms and records of original entry should be so designed as to involve minimum clerical work and expenditure.

(x) The system should be so designed that cost control can be effectively exercised.

(xi) The system should incorporate suitable procedure for reporting to the various levels of management. This should be based on the principles of exception.

REQUISITES OF A GOOD COST ACCOUNTING SYSTEM

(i) The cost accounting system should be simple and practical. It should be able to meet the requirements of the organisation.

(ii) The data and information used by the cost accounting system should be authentic and accurate enough to present accurate reporting in order to facilitate the management for taking right decisions.

(iii) There is a need for uniformity and consistency in classifying, treating and reporting cost data and information so that it can facilitate comparability of the results of the system.

(iv) With a view to ensuring clarity of the results there should be integration of the cost accounting system with financial accounting, operation research, statistics, taxation etc.

(v) The cost accounting system should have enough flexibility in order to accommodate necessary amendments and modifications for the purpose of incorporating changes in technical, regulatory and other requirements.

(vi) The management should be satisfied with the implementation of cost accounting system that facilitates the management in taking strategic business decisions.

COST OBJECT

Cost object is the technical name for a product or a service, a project, a department or any activity to which a cost relates. At a broader level a cost object may be named as a Cost Centre, whereas at a lowermost level it may be called as a Cost Unit.

COST DRIVER

CIMA terminology defines a Cost Driver as "the factor influencing the level of cost, often used in the context of ABC to denote the factor which links activity resource consumption to produce outputs, for example, the number of purchase orders would be a Cost Driver for procurement cost".

COST CENTRE

CIMA defines a cost centre as "a location, a person, or an item of equipment (or a group of them) in or connected with an undertaking, in relation to which costs ascertained and used for the purpose of cost control". The manager of a cost centre is held responsible for control of cost of his cost centre.

(i) Production Cost Centre: These centres are engaged in production work i.e engaged in converting the raw material into finished product, for example Machine shop, welding shops...etc

(ii) Service Cost Centre: These centres are ancillary to and render service to production cost centres, for example Plant Maintenance, Administration...etc

RESPONSIBILITY CENTRE

A responsibility centre in Cost Accounting denotes a segment of a business organization for the activities of which responsibility is assigned to a specific person. Thus a factory

may be split into a number of centres and a supervisor is assigned with the responsibility of each centre. All costs relating to the centre are collected and the Manager responsible for such a cost centre judged by reference to the activity levels achieved in relation to costs. Even an individual machine may be treated as responsibility centre for cost control and cost reduction.

PROFIT CENTRE/INVESTMENT CENTRE

Profit centre is a segment of a business that is responsible for all the activities involved in the production and sales of products, systems and services. Thus a profit centre encompasses both costs that it incurs and revenue that it generates. In the concept of responsibility accounting, profit centres are sometimes also responsible for the investment made for the centre. The profit is related to the invested capital. Such a profit centre may also be termed as investment centre.

COST UNIT

Cost Unit is a device for the purpose of breaking up or separating costs into smaller sub divisions attributable to products or services. Cost unit can be defined as a 'Unit of product or service

COST ALLOCATION

When items of cost are identifiable directly with some products or departments such costs are charged to such cost centres. This process is known as cost allocation. Wages paid to workers of service department can be allocated to the particular department. Indirect materials used by a particular department can also be allocated to the department. Cost allocation calls for two basic factors - (i) Concerned department/product should have caused the cost to be incurred, and (ii) exact amount of cost should be computable.

COST APPORTIONMENT

When items of cost cannot be directly charged to or accurately identifiable with any cost centres, they are prorated or distributed amongst the cost centres on some predetermined basis. This method is known as cost apportionment. The basis ultimately adopted should ensure an equitable share of common expenses for the cost centres and the basis once adopted should be reviewed at periodic intervals to improve upon the accuracy of apportionment.

COST ABSORPTION

Ultimately the indirect costs or overhead as they are commonly known, will have to be distributed over the final products so that the charge is complete. This process is known as cost absorption, meaning thereby that the costs absorbed by the production during the period.

The basis should be selected after careful maximum accuracy of Cost Distribution to various production units. The basis should be reviewed periodically and corrective action whatever needed should be taken for improving upon the accuracy of the absorption.

CONVERSION COST

This term is defined as the sum of direct wages, direct expenses and overhead costs of converting raw material to the finished products or converting a material from one stage of production to another stage.

COST CONTROL

Cost Control is defined as the regulation by executive action of the costs of operating an undertaking, particularly where such action is guided by Cost Accounting. Cost control involves the following steps and covers the various facets of the management:

COST REDUCTION

cost reduction would mean maximization of profits by reducing cost through economics and savings in costs of manufacture, administration, selling and distribution.

CLASSIFICATION OF COST

As per Cost Accounting Standard 1 (CAS-1), the basis for cost classification is as follows:

(a) Nature of expense

(b) Relation to Object – Traceability

(c) Functions / Activities

(d) Behaviour – Fixed, Semi-variable or Variable

(e) Management decision making

(f) Production or Process

(g) Time Period

CLASSIFICATION BY NATURE OF EXPENSE

The elements of cost can be classified in the following three categories. 1. Material 2. Labour 3. Expenses

Material Cost: Material cost is the cost of material of any nature used for the purpose of production of a product or a service. It includes cost of materials, freight inwards, taxes & duties, insurance ...etc directly attributable to acquisition, but excluding the trade discounts, duty drawbacks and refunds on account of GST etc.

Labour Cost: Labour cost means the payment made to the employees, permanent or temporary for their services. Labour cost includes salaries and wages paid to permanent employees, temporary employees and also to the employees of the contractor. Here salaries and wages include all the benefits like provident fund, gratuity, ESI, overtime, incentives...etc

Expenses: Expenses are other than material cost or labour cost which are involved in an activity.

CLASSIFICATION BY RELATION TO COST CENTRE OR COST UNIT

If expenditure can be allocated to a cost centre or cost object in an economically feasible way then it is called direct otherwise the cost component will be termed as indirect.

Direct Material Cost: Cost of material which can be directly allocated to a cost centre or a cost object in an economically feasible way.

Direct labour Cost: Cost of wages of those workers who are readily identified or linked with a cost centre or cost object.

Direct Expenses: Expenses other than direct material and direct labour which can be identified or linked with cost centre or cost object.

Direct Material + Direct labour + Direct Expenses = Prime Cost

Indirect Material: Cost of material which cannot be directly allocable to a particular cost centre or cost object.

Indirect Labour: Cost of wages of employees which are not directly allocable to a particular cost centre.

Indirect expenses: Expenses other than of the nature of material or labour and cannot be directly allocable to a particular cost centre.

Indirect Material + Indirect Labour + Indirect Expenses = Overheads

CLASSIFICATION BY FUNCTIONS

(i) Production or Manufacturing Costs

(ii) Administration Costs

(iii) Selling & Distribution cost

(iv) Research & Development costs

(i) Production or Manufacturing Costs: Production cost is the cost of all items involved in the production of a product or service. These refer to the costs of operating the manufacturing division of an undertaking and include all costs incurred by the factory from the receipt of raw materials and supply of labour and services until production is completed and the finished product is packed with the primary packing.

(ii) Administration Costs: Administration costs are expenses incurred for general management of an organization. These are in the nature of indirect costs and are also termed as administrative overheads. For understanding administration cost, it is necessary to know the scope of administrative function.

Administrative function in any organization is primarily concerned with following activities: -

(1) Formulation of policy

(2) Directing the organization and

(3) Controlling the operations of an organization.

(iii) Selling & Distribution Costs: Selling costs are indirect costs related to selling of products or services and include all indirect costs in sales management for the organization. Distribution costs are the costs incurred in handling a product from the time it is completed in the works until it reaches the ultimate consumer.

(iv) Research & Development Costs: Research & development costs are the cost for undertaking research to improve quality of a present product or improve process of manufacture, develop a new product, market research...etc. and commercialization thereof.

Pre-Production Costs:

These are costs incurred when a new factory is in the process of establishment, a new project is undertaken, or a new product line or product is taken up but there is no established or formal production to which such costs may be charged. Preproduction costs are normally treated as deferred revenue expenditure and charged to the costs of future production.

CLASSIFICATION BASED ON BEHAVIOUR – FIXED, SEMI-VARIABLE OR VARIABLE

Fixed Cost: Fixed cost is the cost which does not vary with the change in the volume of activity in the short run. These costs are not affected by temporary fluctuation in activity of an enterprise. These are also known as **period costs**. Example: Rent, Depreciation...etc.

Variable Cost: Variable cost is the cost of elements which tends to directly vary with the volume of activity. Variable cost has two parts (i) Variable direct cost (ii) Variable indirect costs. Variable indirect costs are termed as variable overheads. Example: Direct labour, Outward Freight...etc.

Semi-Variable Costs: Semi variable costs contain both fixed and variable elements. They are partly affected by fluctuation in the level of activity. These are partly fixed and partly variable costs and vice versa. Example: Factory supervision, Maintenance...etc.

CLASSIFICATION BASED ON COSTS FOR MANAGEMENT DECISION MAKING

Marginal Costing: Marginal Cost is the aggregate of variable costs, i.e. prime cost plus variable overhead. Marginal cost per unit is the change in the amount at any given volume of output by which the aggregate cost changes if the volume of output is increased or decreased by one unit.

Differential Cost: Differential cost is the change in the cost due to change in activity from one level to another.

Opportunity Cost: Opportunity cost is the value of alternatives foregone by adopting a particular strategy or employing resources in specific manner.

Replacement Cost: Replacement cost is the cost of an asset in the current market for the purpose of replacement. For example, when replacement cost of material or an asset is being considered, it means that the cost that would be incurred if the material or the asset was to be purchased at the current market price and not the cost, at which it was actually purchased earlier, should be take into account.

Relevant Costs: Relevant costs are costs which are relevant for a specific purpose or situation. In the context of decision making, only those costs are relevant which are pertinent to the decision at hand. Since we are concerned with future costs only while making a decision, historical costs, unless they remain unchanged in the future period are irrelevant to the decision making process.

Imputed Costs: Imputed costs are hypothetical or notional costs, not involving cash outlay computed only for the purpose of decision making. In this respect, imputed costs are similar to opportunity costs. Interest on funds generated internally, payment for which is not actually made is an example of imputed cost.

Sunk Costs: Sunk costs are historical costs which are incurred i.e. sunk in the past and are not relevant to the particular decision making problem being considered.

Normal Cost & Abnormal Cost: Normal Cost is a cost that is normally incurred at a given level of output in the conditions in which that level of output is achieved. Abnormal Cost is an unusual and typical cost whose occurrence is usually irregular and unexpected and due to some abnormal situation of the production.

Avoidable Costs & Unavoidable Costs: Avoidable Costs are those which under given conditions of performance efficiency should not have been incurred. Unavoidable Costs which are inescapable costs, which are essentially to be incurred, within the limits or norms provided for. It is the cost that must be incurred under a programme of business restriction. It is fixed in nature and inescapable.

Uniform Costing: This is not a distinct system of costing. The term applies to the costing principles and procedures which are adopted in common by a number of undertakings which desire to have the benefits of a uniform system.

Engineered Cost: Engineered Cost relates to an item where the input has an explicit physical relationship with the output. For instance in the manufacture of a product, there is a definite relationship between the units of raw material and labour time consumed and the amount of variable manufacturing overhead on the one hand and units of the products produced on the other.

Out-of-Pocket Cost: This is the portion of the cost associated with an activity that involve cash payment to other parties, as opposed to costs which do not require any cash outlay, such as depreciation and certain allocated costs. Out-of-Pocket Costs are very much relevant in the consideration of price fixation during trade recession or when a make-or-buy decision is to be made.

Managed Cost: Managed (Programmed or Discretionary) Costs all opposed to engineering costs, relate to such items where no accurate relationship between the amount spent on input and the output can be established and sometimes it is difficult to measure the output. Examples are advertisement cost, research and development costs, etc.,

Common Costs: These are costs which are incurred collectively for a number of cost centres and are required to be suitably apportioned for determining the cost of individual cost centres. Examples are: Combined purchase cost of several materials in one consignment, and overhead expenses incurred for the factory as a whole.

Controllable and Non-Controllable Costs: Controllable Cost is that cost which is subject to direct control at some level of managerial supervision. Non-controllable Cost is the cost which is not subject to control at any level of managerial supervision.

CLASSIFICATION BY NATURE OF PRODUCTION OR PROCESS

Batch Costing: Batch Costing is the aggregate cost related to a cost unit which consists of a group of similar articles which maintains its identity throughout one or more stages of production. In this method, the cost of a group of products is ascertained.

Process Costing: When the production process is such that goods are produced from a sequence of continuous or repetitive operations or processes, the cost incurred during a period is considered as Process Cost.

Operation Cost: Operation Cost is the cost of a specific operation involved in a production process or business activity. The cost unit in this method is the operation, instead of process. When the manufacturing method consists of a number of distinct operations, operation costing is suitable.

Operating Cost: Operating cost is the cost incurred in conducting a business activity. Operating cost refer to the cost of undertakings which do not manufacture any product but which provide services. Industries and establishments like power house, transport and travel agencies, hospitals, and schools, which undertake services rather than the manufacture of products, ascertain operating costs.

Contract Costing: Contract cost is the cost of contract with some terms and conditions between contractee and contractor. This method is used in undertakings, carrying out, building or constructional contracts like constructional engineering concerns, civil engineering contractors.

Joint Costs: When a production process is such that from a set of same input two or more distinguishably different products are produced together, products of greater importance are termed as Joint Products and products of minor importance are termed as By-products and the costs incurred prior to the point of separation are called Joint Costs. For example in petroleum industry petrol, diesel, kerosene, naphtha, tar is produced jointly in the refinery process.

By-product Cost: By-product Cost is the cost assigned to by-products till the split-off point.

CLASSIFICATION BY TIME

Historical Costs: Historical Costs are the actual costs of acquiring assets or producing goods or services. They are post-mortem costs ascertained after they have been incurred and they represent the cost of actual operational performance.

Predetermined Costs: Pre-determined Costs for a product are computed in advance of production process, on the basis of a specification of all the factors affecting cost and cost data. Predetermined Costs may be either standard or estimated.

Standard Costs: A predetermined norm applies as a scale of reference for assessing actual cost, whether these are more or less. The Standard Cost serves as a basis of cost control and as a measure of productive efficiency, when ultimately posed with an actual cost. Standard Costs are used to compare the actual costs with the standard cost with a view to determine the variances, if any, and analyse the causes of variances and take proper measure to control them.

Estimated Costs: Estimated Costs of a product are prepared in advance prior to the performance of operations or even before the acceptance of sale orders. Estimated Cost is found with specific reference to product in question, and the activity levels of the plant. It has no link with actual and hence it is assumed to be less accurate than the Standard Cost.

Techniques of Costing

A. Marginal Costing

B. Standard Costing

C. Budgetary Control

D. Uniform Costing

Marginal costing

Marginal Costing is the ascertainment of marginal costs and of the effect on profit of changes in volume or type of output by differentiating between fixed costs and variable costs.

Standard Costing

Standard Costing is defined as the preparation and use of standard cost, their comparison with actual costs and the measurement and analysis of variances to their causes and points of incidence.

Budgetary Control

Budgetary Control may be defined as the process of continuous comparison of actual costs and performance with the pre-established budgets in relation to the responsibilities of the executives to the specific budgets for the achievement of a target in accordance with the policy of the organisation and to provide a basis for revision of budget.

Uniform Costing

Uniform Costing may be defined as the application and use of the same costing principles and procedures by different Organizations under the same management or on a common understanding between members of an association. It is thus not a separate technique or method.

ROLE OF COST ACCOUNTANTS IN ORGANISATIONS

The role of the cost accountants in the organisations can be enumerated as follows:

(i) to analyse various elements of cost of production/services such as material, labour, overhead expenses etc.

(ii) to introduce appropriate costing methods in the organisation so as to facilitate management with the knowledge of cost of production/services for managerial decision making

(iii) to determine the cost of the new product/service in order to facilitate management in arriving at the correct pricing decisions

(iv) to determine the feasibility and profitability of the various project proposals considered by the management

(v) to analyse variances against standard by reason to enable concerned department to initiate corrective action

(vi) collection, collation of extraneous information for management to compare the company's performance with that of peers and the industry for better appreciation and decision-making

COST REDUCTION VS COST CONTROL

Cost Control	Cost Reduction
Cost Control represents efforts made towards achieving target or goal.	Cost Reduction represents the achievement in reduction of cost.
The process of Cost Control is to set up a target, ascertain the actual performance and compare it with the target, investigate the variances, and take remedial measures.	Cost Reduction is not concern with maintenance of performance according to standard.
Cost Control assumes the existence of standards or norms which are not challenged.	Cost Reduction assumes the existence of concealed potential savings in standards or norms which are therefore subjected to a constant challenge with a view to improvement by bringing out savings.
Cost Control is a preventive function. Costs are optimized before they are incurred.	Cost Reduction is a corrective function. It operates even when an efficient cost control system exists. There is room for reduction in the achieved costs under controlled conditions.
Cost Control lacks dynamic approach.	Cost Reduction is a continuous process of analysis by various methods of all the

	factors affecting costs, efforts and functions in an organization. The main stress is upon the why of a thing and the aim is to have continual economy in costs.

FINANCIAL ACCOUNTING VS MANAGEMENT ACCOUNTING

Basis	Financial Accounting	Management Accounting
Objectives	The main objectives of financial accounting are to disclose the end results of the business, and the financial condition of the business on a particular date.	The main objective of managerial accounting is to help management by providing information that is used to plan, set goals and evaluate these goals.
Audience	Financial accounting produces information that is used by external parties, such as shareholders and lenders.	Managerial accounting produces information that is used within an organization, by managers and employees.
Optional?	It is legally required to prepare financial accounting reports and share them with investors.	Managerial accounting reports are not legally required.
Segment reporting	Pertains to the entire organization. Certain figures may be broken out for materially significant business units.	Pertains to individual departments in addition to the entire organization.
Focus	Financial accounting focuses on history; reports on the prior quarter or year.	Managerial accounting focuses on the present and forecasts for the future.
Format	Financial accounts are reported in a specific format, so that different organizations can be easily compared.	Format is informal and is on a per department/company basis as needed.
Rules	Rules in financial accounting are prescribed by standards such as GAAP or IFRS. There are legal requirements for	Managerial accounting reports are only used internally within the organization; so they

Basis	Financial Accounting	Management Accounting
	companies to follow financial accounting standards.	are not subject to the legal requirements that financial accounts are.
Reporting frequency and duration	Defined - annually, semi-annually, quarterly, yearly.	As needed - daily, weekly, monthly.
Information	Monetary, verifiable information.	Monetary and company goal driven information.

FINANCIAL ACCOUNTING VS COST ACCOUNTING

Basis	Financial Accounting	Cost Accounting
Meaning	Recoding of transactions is part of financial accounting. We make financial statements through these transactions. With the help of financial statements, we analyse the profitability and financial position of a company.	Cost accounting is used to calculate cost of the product and also helpful in controlling cost. In cost accounting, we study about variable costs, fixed costs, semi-fixed costs, overheads and capital cost.
Purpose	Purpose of the financial statement is to show correct financial position of the organization.	To calculate cost of each unit of product on the basis of which we can take accurate decisions.
Recording	Estimation in recording of financial transactions is not used. It is based on actual transactions only.	In cost accounting, we book actual transactions and compare it with the estimation. Hence costing is based on the estimation of cost as well as on the recording of actual transactions.
Controlling	Correctness of transaction is important without taking care of cost control.	Cost accounting done with the purpose of control over cost with the help of costing tools like standard costing and budgetary control.

Period	Period of reporting of financial accounting is at the end of financial year.	Reporting under cost accounting is done as per the requirement of management or as-and-when-required basis.
Reporting	In financial accounting, costs are recorded broadly.	In cost accounting, minute reporting of cost is done per-unit wise.
Fixation of Selling Price	Fixation of selling price is not an objective of financial accounting.	Cost accounting provides sufficient information, which is helpful in determining selling price.
Relative Efficiency	Relative efficiency of workers, plant, and machinery cannot be determined under it.	Valuable information about efficiency is provided by cost accountant.
Valuation of Inventory	Valuation basis is 'cost or market price whichever is less'	Cost accounting always considers the cost price of inventories.
Process	Journal entries, ledger accounts, trial balance, and financial statements	Cost of sale of product(s), addition of margin and determination of selling price of the product.

MATERIAL COSTING

BILL OF MATERIAL

Bill of Material is a complete schedule of parts and materials required for a particular order prepared by the Drawing Office and issued by it together with necessary blue prints of drawings. For standard products, printed copies of Bill of Material are kept with blank spaces for any special details of modification to be filled in for a particular job/order. The schedule details everything, even to bolts and nuts, sizes and weights.

MATERIAL REQUISITION NOTE

Material Requisition is a document issued by a department in charge requesting the Storekeeper to issue certain materials to a job or standing order number. It is an important document as it authorises issue of materials from stores and thereby should be authenticated by appropriate authority.

PURCHASE REQUISITION

Purchases Requisition is a request made to the Purchase Department to procure materials of given description and of the required quality and quantity within a specified period. It is a formal request and it authorizes the Purchase Department to issue a Purchase Order to secure materials intended for periodic requirements of a given material or materials to provide guidance to the Purchase Department to estimate the future requirements in order to secure maximum purchase benefits in the form of higher discount and better credit terms.

Purchase Requisition provides the three basic things :-

(a) What type of material is to be purchased?

(b) When to be purchased?

(c) How much is to be purchased?

PURCHASE ORDER

Purchase Order (PO) is a request made in writing to selected supplier to deliver goods of requisite quality, quantity, (as per the purchase requisition) at the prices, terms and conditions agreed upon. It is a commitment on the part of the purchaser to accept the delivery of goods contained in the Purchase Order if the terms included therein, are fulfilled.

BIN CARD

Bin Card is a quantitative record of receipts, issues and closing balance of items of stores. Separate bin cards are maintained for each item and are placed in shelves or bins. This card is debited with the quantity of stores received, credited with the quantity of stores issued and the balance of quantity of store is taken after every receipt or issue. The balance quantity of the item may be easily known at any time. To have an up to date balance of stores, the principle of 'before touching the item, bin card should be touched'. Bin card is also known as 'Bintag' or 'Stock card'

STORES LEDGER

Stores Ledger is maintained by the costing department to make record of all receipts, issues of materials with quantities, values (Sometimes unit rates also). Ledger resembles with bin cards except those receipts, issues and balances are shown along with their money value. The ledger contains an account for every item of stores in which receipts, issues and balances are recorded both in quantity and value

BIN CARD VS STORES LEDGER

BASIS FOR COMPARISON	BIN CARD	STORES LEDGER
Meaning	Bin Card implies a quantity record of the receipts, issue and balance of materials in stores.	Stores ledger alludes to a subsidiary ledger, that keeps track of each and every transaction relating to materials in the stores.
What is it?	It is a recording document.	It is an accounting record.
Responsibility	Storekeeper	Cost accounting department
Location	Kept inside the stock room.	Kept outside the stock room.
Details	Contains quantitative details only.	Contains both quantitative and monetary details.
Interdepartmental transfer	Are not shown in bin card.	Indicated in stores ledger.

BASIS FOR COMPARISON	BIN CARD	STORES LEDGER
Entries	Entries are posted when transaction takes place.	Entries are posted after transaction took place.
Recording	Transactions are recorded individually.	Summarized transactions are recorded.

PERPETUAL INVENTORY SYSTEM

It is a system of ascertaining balance after every receipt and issue of materials through stock records to facilitate regular checking and to avoid closing down the firm for stock taking. To ensure the accuracy of the perpetual inventory records (bin card and Stores ledger), physical verification of stores is made by a programme of continuous stock taking.

The operation of the perpetual inventory system may be as follows:-

(a) The stock records are maintained and up to date posting of transactions are made there in so that current balance may be known at any time.

(b) Different sections of the stores are taken up by rotation for physical checking. Every day some items are checked so that every item may be checked for a number of times during the year.

(c) Stores received but awaiting quality inspection are not mixed up with the regular stores at the time of physical verification, because entries relating to such stores have not yet been made in the stock records.

(d) The physical stock available in the store, after counting, weighing, measuring or listing as the case may be, is properly recorded in the bin cards / Inventory tags and stock verification sheets.

Perpetual inventory system should not be confused with continuous stock taking; Continuous stock taking is an essential feature of perpetual inventory system. Perpetual inventory means the system of stock records and continuous stock taking, whereas continuous stock taking means only the physical verification of the stock records with actual stocks.

ADVANTAGES OF PERPETUAL INVENTORY SYSTEM

(a) The system obviates the need for the physical checking of all items of stock and stores at the end of the year.

(b) It avoids the dislocation of the routine activities of the organisation including production and despatch.

(c) A reliable and detailed check on the stores is maintained.

(d) Errors, irregularities and loss of stock through other methods are quickly detached and through necessary action recurrence of such things in future is minimised.

(e) As the work is carried out systematically and without undue haste the figures are readily available.

(f) Actual stock can be compared with the authorised maximum and minimum levels, thus keeping the stocks within the prescribed limits. The disadvantages of excess stocks are avoided and capitalised up in stores materials cannot exceed the budget.

(g) The recorder level of various items of stores are readily available thus facilitating the work of procurement of stores.

(h) For monthly or quarterly financial statements like Profit and Loss Account and Balance Sheet the stock figures are readily available and it is not necessary to have physical verification of the balances.

PERIODICAL STOCK VERIFICATION

This system envisages physical stock verification at a fixed date/period during the year. Generally, under this system the activity takes place at the end of the accounting period or a date close to such date. Usually the system is opened in the following manner :-

(a) A period of 5/7 days, depending on the magnitude of the work is chosen during which all the items under stock are verified physically and such period is known as 'cut-off' period. During this period there are no movements of stock items and neither 'receipts' nor are 'issues permitted.

(b) The items are physically counted/measured depending on their nature and are noted down in records which are signed by the auditors if they are present in stock verification.

(c) The bin cards balances are also checked and initiated. Generally the physical balances and bin card balances of various items should be same unless shortage/excesses are there or the recording/ balancing in the cards are incorrect.

(d) After the physical verification is completed work sheets are countersigned by the godown supervisors and the stock verified.

(e) Thereafter reconciliation statement is prepared item wise where the physical balances and bin card balances are different.

(f) Then the balance as per bin cards and as per stores ledger is also compared and necessary adjustments are made to show the correct position of stock at the year end.

(g) Finally the shortages/excess statement is prepared by the concerned departments and are placed before the higher management for their approval for adjustments.

ABC ANALYSIS

The "ABC Analysis" is an analytical method of stock control which aims at concentrating efforts on those items where attention is needed most. It is based on the concept that a small number of the items in inventory may typically represent the bulk money value of the total materials used in production process, while a relatively large number of items may present a small portion of the money value of stores used resulting in a small number of items be subjected to greater degree of continuous control. Under this system, the materials stocked may be classified into a number of categories according to their importance, i.e., their value and frequency of replenishment during a period. The first category (we may call it group 'A' items) may consist of only a small percentage of total items handled but combined value may be a large portion of the total stock value. The second category, naming it as group 'B' items, may be relatively less important. In the third category, consisting of group 'C' items, all the remaining items of stock may be included which are quite large in number but their value is not high.

This concept may be clear by the following example:

Category	No. of items	% of total no. of items	Value Amount	% of the total value item	Average value Amount
A	75	6	70000	70	933
B	375	30	20000	20	53
C	800	64	10000	10	12
	1250	100	100000	100	998

Category 'A' items represent 70% of the total investment but as little as only 6% of the number of items. Maximum control must be exercised on these items. Category 'B' is of secondary importance and normal control procedures may be followed. Category 'C' comprising of 64% in quantity but only 10% in value, needs a simpler, less elaborate and economic system of control.

THE ADVANTAGES OF ABC ANALYSIS ARE

(a) Closer and stricter control of those items which represent a major portion of total stock value is maintained.

(b) Investment in inventory can be regulated and funds can be utilised in the best possible manner. 'A' class items are ordered as and when need arises, so that the working capital can be utilised in a best possible way.

(c) With greater control over the inventories, savings in material cost will be realised.

(d) It helps in maintaining enough safety stock for 'C' category of items.

(e) Scientific and selective control helps in the maintenance of high stock turnover ratio.

VED ANALYSIS

VED stands for Vital, Essential and Desirable- analysis is used primarily for control of spare parts. The spare parts can be classified in to three categories i.e Vital, Essential and Desirable- keeping in view the criticality to production.

Vital: The spares, stock-out of which even for a short time will stop the production for quite some time, and where in the stock-out cost is very high are known as Vital spares. For a car Assembly Company, Engine is a vital part, without the engine the assembly activity will not be started.

Essential: The spares or material absence of which cannot be tolerated for more than few hours or a day and the cost of lost production is high and which is essential for production to continue are known as Essential items. For a car assembly company 'Tyres' is an essential item, without fixing the tyres the assembly of car will not be completed.

Desirable: The Desirable spares are those parts which are needed, but their absence for even a week or more also will not lead to stoppage of production. For example, CD player, for a car assembly company.

Some spares though small in value, may be vital for production, requires constant attention. Such spares may not pay attention if the organization adopts ABC analysis.

FSN ANALYSIS

FSN analysis is the process of classifying the materials based on their movement from inventory for a specified period. All the items are classified in to F-Fast moving, S- Slow moving and N-Non-moving Items based on consumption and average stay in the inventory. Higher the stay of item in the inventory, the slower would be the movement of the material. This analysis helps the store keeper / purchase department to keep the fast moving items always available & take necessary steps to dispose off the non-moving inventory.

JUST-IN-TIME

Just in time (JIT) is a production strategy that strives to improve a business return on investment by reducing in-process inventory and associated carrying costs. Inventory is seen as incurring costs, or waste, instead of adding and storing value, contrary to traditional accounting. In short, the Just-in-Time inventory system focuses on "the right

material, at the right time, at the right place, and in the exact amount" without the safety net of inventory. The advantages of Just-in-Time system are as follows :-

(a) Increased emphasis on supplier relationships. A company without inventory does not want a supply system problem that creates a part shortage. This makes supplier relationships extremely important.

(b) Supplies come in at regular intervals throughout the production day. Supply is synchronized with production demand and the optimal amount of inventory is on hand at any time. When parts move directly from the truck to the point of assembly, the need for storage facilities is reduced.

(c) Reduces the working capital requirements, as very little inventory is maintained.

(d) Minimizes storage space.

(e) Reduces the chance of inventory obsolescence or damage.

INVENTORY TURNOVER RATIO

Inventory Turnover signifies a ratio of the value of materials consumed during a given period to the average level of inventory held during that period. The ratio is worked out on the basis of the following

formula:

$$\text{Inventory Turnover Ratio} = \frac{\text{Value of average stock held during the period}}{\text{Value of material consumed during the period}}$$

The purpose of the above ratio is to ascertain the speed of movement of a particular item. A high ratio indicates that the item is moving fast with a minimum investment involved at any point of time. On the other hand a low ratio indicates the slow moving item. Thus Inventory Turnover Ratio may indicate slow moving dormant and obsolete stock highlighting the need for appropriate managerial actions.

METHODS OF STORES LEDGER KEEPING

COST PRICE METHOD

FIRST IN – FIRST OUT METHOD

It is a method of pricing the issue of materials in the order in which they are purchased. In other words the materials are issued in the order in which they arrive in the store. This method is considered suitable in times of falling price because the material cost

charged to production will be high while the replacement cost of materials will be low. In case of rising prices this method is not suitable.

Advantages of FIFO

(a) It is simple and easy to operate.

(b) In case of falling prices, this method gives better results.

(c) Closing stocks represents the market prices.

Disadvantages

(a) If the prices fluctuate frequently, this method may lead to clerical errors.

(b) In case of rising prices this method is not advisable.

(c) The material costs charged to same job are likely to show different rates.

LAST-IN-FIRST OUT METHOD

Under this method the prices of last received batch (lot) are used for pricing the issues, until it is exhausted and so on. During the inflationary period or period of rising prices, the use of LIFO would help to ensure the cost of production determined approximately on the above basis is approximately the current one. Under LIFO stocks would be valued at old prices, but not represent the current prices.

Advantages

(a) The cost of materials issued will be either nearer to and/or will reflect the current market price.

(b) In case of falling prices profit tends to rise due to lower material cost

Disadvantages

(a) The computations become complicated if too many receipts are there.

(b) Companies having JIT system will face this problem more.

BASE STOCK METHOD

A minimum quantity of stock under this method is always held at a fixed price as reserve in the stock, to meet a state of emergency, if arises. This minimum stock is known as Base Stock and is valued at a price at which the first lot of materials is received and remains unaffected by subsequent price fluctuations.

The quantity in excess of the base stock may be valued either on the LIFO basis or FIFO basis. This method is not an independent method as it uses FIFO or LIFO. Its advantages and disadvantages therefore will depend upon the use of the other method.

SPECIFIC PRICE METHOD

This method is useful, especially when the materials are purchased for a specific job or work order, and as such these materials are issued subsequently to that specific job or work order at the price at which they were purchased. The cost of materials issued for production purposes to specific jobs represent actual and correct costs. This method is specific for non-standard products. This method is difficult to operate, especially when purchases and issues are numerous.

SIMPLE AVERAGE PRICE METHOD

Under this method materials issued are valued at average price, which is computed by dividing the total of all units rate by the number of units. Material Issue Price = Total of unit prices of each purchase / Total No of Units This method is useful, when the materials are received in uniform lots of similar quantity and prices do not fluctuate considerably.

WEIGHTED AVERAGE PRICE METHOD

This method removes the limitation of Simple Average Method in that it also takes into account the quantities which are used as weights in order to find the issue price. This method uses total cost of material available for issue divided by the quantity available for issue.

Issue Price = Total Cost of Materials in stock / Total Quantity of Materials in stock

MOVING SIMPLE AVERAGE PRICE METHOD

Under this method the rate for material issue is determined by dividing the total of the periodic simple average prices of a given number of periods by the number of periods. For determining the moving simple average price, it is necessary to fix up first period to be taken for determining the average. Suppose a three monthly period is decided upon and moving average rate for the month of April is to be computed. Under such situation, we have to make a simple list of the simple average price from January to March, add them up, and divide the total by three. To compute the moving average for May, we have to omit simple average rate pertains to January and add the rate relating to the April and divide the total by three.

MOVING WEIGHTED AVERAGE PRICE METHOD

Under this method, the issue, rate is computed by dividing the total of the periodic weighted average price of a given number of periods by the number of periods.

REPLACEMENT METHOD

Replacement price is defined as the price at which it is possible to purchase an item, identical to that which is being replaced or revalued. Under this method, materials issued are valued at replacement cost of the items. Advantage of this method is issue cost reflects the current market price. But the difficult involved under this method is determination of market price of material before each issue.

REALISABLE PRICE METHOD

Realisable price means a price at which the material to be issued can be sold in the market. This price may be more or less than the cost price, at which it was originally purchased.

STANDARD PRICE METHOD

Under this method, materials are priced at some predetermined rate of standard price irrespective of the actual purchase cost of the materials. Standard cost is usually fixed after taking into consideration the current price, anticipated market trends. This method facilitates the control of material cost and task of judging the efficiency of purchase department. But it is very difficult to fix the standard price when the prices fluctuates frequently.

INFLATED PRICE METHOD

In case of materials that suffers loss in weight due to natural or climatic factors ex: evaporation...etc the issue price of the materials is inflated to cover up the losses.

DEFECTIVE

Defectives refer to those units or portions of production, which do not meet the prescribed specifications. Such units can be reworked or re-conditioned by the use of additional material, labour and /or processing and brought to the point of either standard or sub-standard units.

The possible way of treating defectives in Cost Accounts are as below:

1. When defectives are normal and it is not beneficial to identity them job-wise, then the following methods may be used.

   a. Charged to good products: The cost of rectification of normal defectives is charged to good units. This method is used when defectives rectified are normal.

   b. Charged to general overheads. If the department responsible for defectives

cannot be identified, the rework costs are charged to general overheads.

c. Charged to departmental overheads: If the department responsible for defectives can be correctly identified, the rectification costs should be charged to that department.

2. When normal defectives are easily identifiable with specific job the rework costs are debited to the identified job.

3. When defectives are abnormal and are due to causes within the control of the organization, the rework cost should be charged to the Costing Profit and Loss Account.

HIGH COST, MEDIUM COST, LOW COST (HML) INVENTORY

Under this system, inventory is classified on the basis of the cost of an individual item, unlike ABC analysis where inventories are classified on the basis of overall value of inventory. A range of cost is used to classify the inventory items into the three categories. High Cost inventories are given more priority for control, whereas Medium cost and Low cost items are comparatively given lesser priority.

SPOILAGE VS DEFECTIVES

Normal spoilage cost (which is inherent in the operation) are included in cost either by charging the loss due to spoilage to the production order or charging it to production overhead so that it is spread over all products. Any value realized from the sale of spoilage is credited to production order or production overhead account, as the case may be.

The cost of abnormal spoilage (i.e. spoilage arising out of causes not inherent in manufacturing process) is charged to the Costing Profit and Loss Account. When spoiled work is due to rigid specifications, the cost of spoiled work is absorbed by good production, while the cost of disposal is charged to production overheads.

The problem of accounting for defective work is the problem of accounting of the costs of rectification or rework. The possible ways of treatment are as below:

1. Defectives that are considered inherent in the process and are identified as normal can be recovered by using the following methods.

a. Charged to good products

b. Charged to general overheads

c. Charged to department overheads

d. Charged to identifiable job.

2. If defectives are abnormal and are due to causes beyond the control of organisation, the rework, cost should be charged to Costing Profit and Loss Account.

LABOUR COSTING

ACCOUNTING TREATMENT OF IDLE TIME WAGES & OVERTIME WAGES IN COST ACCOUNTS

Normal idle time is treated as a part of the cost of production. Thus, in the case of direct workers, an allowance for normal idle time is built into the labour cost rates. In the case of indirect workers, normal idle time is spread over all the products or jobs through the process of absorption of factory overheads.

Under Cost Accounting, the overtime premium is treated as follows

1. If overtime is resorted to at the desire of the customer, then the overtime premium may be charged to the job directly.

2. If overtime is required to cope with general production program or for meeting urgent orders, the overtime premium should be treated as overhead cost of department or cost centre which works overtime.

3. Overtime worked on account of abnormal conditions should be charged to costing Profit & Loss Account.

4. If overtime is worked in a department due to the fault of another department the overtime premium should be charged to the latter department.

INVENTORY TURNOVER

It is a ratio of the value of materials consumed during a period to the average value of inventory held during the period. A high inventory turnover indicates fast movement of stock.

LABOUR TURNOVER

It is defined as an index denoting change in the labour force for an organization during a specified period. Labour turnover in excess of normal rate is termed as high and below it as low turnover.

TWO TYPES OF COSTS WHICH ARE ASSOCIATED WITH LABOUR TURNOVER ARE

1. **Preventive costs:** This includes costs incurred to keep the labour turnover at a low level i.e., cost of medical schemes. If a company incurs high preventive costs, the rate of labour turnover is usually low.

2. **Replacement costs:** These are the costs which arise due to high labour turnover. If men leave soon after they acquire the necessary training and experience of work, additional costs will have to be incurred on new workers, i.e., cost of advertising, recruitment, selection, training and induction, extra cost also incurred due to abnormal

breakage of tools and machines, defectives, low output, accidents etc., caused due to the inefficiency and inexperienced new workers.

STEPS WHICH ARE USEFUL FOR MINIMIZING LABOUR TURNOVER

(a) Exit interview: An interview to be arranged with each outgoing employee to ascertain the reasons of his leaving the organization.

(b) Job analysis and evaluation: to ascertain the requirement of each job. Organization should make use of a scientific system of recruitment, placement and promotion for employees.

(c) Organization should create healthy atmosphere, providing education, medical and housing facilities for workers.

(d) Committee for settling workers grievances.

EFFECTS OF HIGH INVENTORY TURNOVER AND LOW LABOUR TURNOVER

High inventory turnover reduces the investment of funds in inventory and thus accounts for the effective use of the concern's financial resources. It also accounts for the increase of profitability of a business concern. As against high labour turnover the low labour turnover is preferred because high labour turnover causes-decrease in production targets; increase in the chances of break-down of machines at the shop floor level; increase in the number of accidents; loss of customers and their brand loyalty due to either non-supply of the finished goods or due to sub-standard production of finished goods; increase in the cost of selection, recruitment and training; increase in the material wastage and tools breakage.

IDLE TIME OF LABOURS

Idle time refers to the labour time paid for but not utilized on production. It, in fact, represents the time for which wages are paid, but during which no output is given out by the workers. This is the period during which workers remain idle.

Reasons for idle time

According to reasons, idle time can be classified into normal idle time and abnormal idle time. Normal idle time is the time which cannot be avoided or reduced in the normal course of business.

The main reasons for the occurrence of normal idle time are as follows:

1. Time taken by workers to travel the distance between the main gate of factory and the place of their work.

2. Time lost between the finish of one job and starting of next job.

3. Time spent to overcome fatigue.

4. Time spent to meet their personal needs like taking lunch, tea etc.

The main reasons for the occurrence of abnormal idle time are

1. Due to machine break downs, power failure, non-availability of raw materials, tools or waiting for jobs due to defective planning.

2. Due to conscious management policy decision to stop work for some time.

3. In the case of seasonal goods producing units, it may not be possible for them to produce evenly throughout the year. Such a factor too results in the generation of abnormal idle time.

Treatment in Cost Accounting

Normal idle time: It is inherent in any job situation and thus it cannot be eliminated or reduced. For example: time gap between the finishing of one job and the starting of another; time lost due to fatigue etc. The cost of normal idle time should be charged to the cost of production. This may be done by inflating the labour rate. It may be transferred to factory overheads for absorption, by adopting a factory overhead absorption rate.

Abnormal idle time: It is defined as the idle time which arises on account of abnormal causes; e.g. strikes; lockouts; floods; major breakdown of machinery; fire etc. Such an idle time is uncontrollable. The cost of abnormal idle time due to any reason should be charged to Costing Profit & Loss Account.

TIME BOOKING

In time keeping we have seen that the basic objective of time keeping is to mark the attendance time, i.e. time in and time out. Time keeping aims at keeping a check on the number of hours spent by a worker in the factory. However, it does not record the productive time of the workers. In view of this there is a need to have a system, which will tell about the productive time spent by the workers in the factory. The method, which supplies this information, is known as 'Time Booking Methods' and the recording the time spent by a worker in each job, process or operation is known as 'Time Booking'. The objects of time booking are as follows: -

(i) To determine the productive time spent by the worker on the job or operation. This helps in finding out the idle time and controls the same

(ii) To determine the quantity and value of work done

(iii) To determine earnings like wages and bonus

(iv) To determine the efficiency of workers

TIME BOOKING METHODS

(1) Daily Time Sheet: In this method, each worker records the time spent by him on the work during the day, for which a sheet is provided to each worker. The time is recorded daily and hence accuracy is maintained. However, the main limitation of this method is lot of paper work is involved as daily sheets are maintained on daily basis by each worker.

(2) Weekly Time Sheets: The only difference between the daily time sheet and weekly time sheet is that these time sheets are maintained on weekly basis. This means that each worker prepares these sheets weekly rather than daily. This helps in reducing the paperwork to a great extent. The only care to be taken is that since the information is filled up on daily basis, there may be inaccuracies and hence filling the information should be done on daily basis only.

(3) Job Ticket: Job tickets are given to all workers where time for commencing the job is recorded as well as the time when the job is completed. The job tickets are given for each job and the recording of the time as mentioned above helps to ascertain the time taken for each job. After completing one job, the worker is given another job.

(4) Labour Cost Card: This card is meant for a job, which involves several operations or stages of completion. Instead of giving one card to each worker, only one card is passed on to all workers and time taken on the job is recorded by each one of them. This card shows the aggregate labour cost of the job or the product.

(5) Time and Job Card: This card is a combined record, which shows both, the time taken for completion of the job as well as the attendance time. Therefore there is no need to keep separate record of both, time taken and attendance time

TIME AND MOTION STUDY

The study of time and motion is essential for designing an incentive system. Time Study determines the time to be spent on the job. Standard time is the time that should be taken for completing a particular job under standard or normal working conditions.

For fixation of standard time, Motion Study is necessary. Thus, the Motion Study precedes the Time Study.

Motion Study means dividing the job into fundamental elements or basic operations of the job or process and studying them in detail to eliminate the unnecessary elements or motions.

DIFFERENCE BETWEEN JOB EVALUATION AND MERIT RATING

Job Evaluation: It can be defined as the process of analysis and assessment of jobs to ascertain reliably their relative worth and to provide management with a reasonably sound basis for determining the basic internal wage and salary structure for the various job positions.

Merit Rating: It is a systematic evaluation of the personality and performance of each employee by his supervisor or some other qualified persons.

Thus, the main points of distinction between job evaluation and merit rating are as follows:

1. Job evaluation is the assessment of the relative worth of jobs within a company and merit rating is the assessment of the relative worth of the man behind a job. In other words job evaluation rate, the jobs while merit rating rate employees on their jobs.

2. Job evaluation and its accomplishment are means to set up a rational wage and salary structure whereas merit rating provides scientific basis for determining fair wages for each worker based on his ability and performance.

3. Job evaluation simplifies wage administration by bringing uniformity in wage rates. On the other hand merit rating is used to determine fair rate of pay for different workers on the basis of their performance.

OVERHEADS

FIXED AND VARIABLE OVERHEADS

Fixed overheads do not vary with the volume of production within certain limits. In other words, the amount of fixed overhead tends to remain constant for volumes of production within the installed capacity of plant. For example, rent of office, salary of works manger, etc. Variable overhead varies in direct proportion to the volume of production. It increases or decreases in direct relation to any increase or decrease in output.

SINGLE OVERHEAD RATE

It is one single overhead absorption rate for the whole factory. It may be computed as follows:

$$\text{Single overhead rate} = \frac{\text{Overhead costs for the entire factory}}{\text{Total quantity of the base selected}}$$

The base can be total output, total labour hours, total machine hours, etc.

The single overhead rate may be applied in factories which produces only one major product on a continuous basis. It may also be used in factories where the work performed in each department is fairly uniform and standardized.

MULTIPLE OVERHEAD RATE

It involves computation of separate rates for each production department, service department, cost centre and each product for both fixed and variable overheads. It may be computed as follows:

Multiple overhead rate = Overhead allocated/ apportioned to each department/ cost centre or product Corresponding base

Under multiple overheads rate, jobs or products are charged with varying amount of factory overheads depending on the type and number of departments through which they pass.

However, the number of overheads rate which a firm may compute would depend upon two opposing factors viz. the degree of accuracy desired and the clerical cost involved.

BLANKET OVERHEAD RATE

It is one single overhead absorption rate for the whole factory. It may be computed by using the following formula:

$$\text{Blanket overhead rate} = \frac{\text{Overhead costs for the whole factory}}{\text{Total units of the selected base}}$$

The selected base can be the total output; total labour hours; machine hours etc.

Situation for using blanket rate:

The use of blanket rate may be considered appropriate for factories which produce only one major product on a continuous basis. It may also be used in those units in which all products utilise same amount of time in each department. If such conditions do not exist, the use of blanket rate will give misleading results in the determination of the production cost, specially when such a cost ascertainment is carried out for giving quotations for tenders.

TREATMENT OF IDLE CAPACITY COST IN COST ACCOUNTS

Idle capacity costs are treated in the following ways in Cost Accounts.

1. If the idle capacity cost is due to unavoidable reasons - a supplementary overhead rate may be used to recover the idle capacity cost. In this case, the costs are charged to the production capacity utilised.

2. If the idle capacity cost is due to avoidable reasons - such as faulty planning, etc. The cost should be charged to Costing Profit and Loss Account.

3. If the idle capacity cost is due to trade depression, etc., - being abnormal in nature the cost should also be charged to the Costing Profit and Loss Account.

INDICATE THE BASE OR BASES THAT YOU WOULD RECOMMEND APPORTIONING OVERHEAD COSTS TO PRODUCTION DEPARTMENT

1. Supplies: Actual supplies made to different departments

2. Repair: Direct labour hours; Machine hours; Direct labour wages; Plant value.

3. Maintenance of building: Floor area occupied by each department

4. Executive salaries: Actual basis; Number of workers.

5. Rent: Floor area

6. Power and light: K W hours or H P (power) Number of light points; Floor space; Meter readings (light)

7. Fire insurance: Capital cost of plant and building; Value of stock

8. Indirect labour: Direct labour cost.

CHARGEABLE EXPENSES

All expenses, other than direct materials and direct labour cost which are specifically and solely incurred on production, process or job are treated as chargeable or direct expenses. These expenses in cost accounting are treated as part of prime cost,

Examples of chargeable expenses include - Rental of a machine or plant hired for specific job, royalty, and cost of making a specific pattern, design, drawing or making tools for a job.

SITUATION WHERE SUPPLEMENTARY RATE IS USED

When the amount of under absorbed and over absorbed overhead is significant or large, because of differences due to wrong estimation, then the cost of product needs to be adjusted by using supplementary rates (under and over absorption/ actual overhead) to avoid misleading impression.

TREATMENT OF OVER AND UNDER ABSORPTION OF OVERHEADS

(i) Writing off to costing P&L A/c: Small difference between the actual and absorbed amount should simply be transferred to costing P&L A/c, if difference is large then investigate the causes and after that abnormal loss shall be transferred to costing P&L A/c.

(ii) Use of supplementary Rate: Under this method the balance of under and over absorbed overheads may be charged to cost of W.I.P., finished stock and cost of sales proportionately with the help of supplementary rate of overhead.

(iii) Carry Forward to Subsequent Year: Difference should be carried forward in the expectation that next year the position will be automatically corrected. This would really mean that costing data of two years would be wrong.

BUDGETARY COSTING

FLEXIBLE BUDGET

A flexible budget is defined as "a budget which, by recognizing the difference between fixed, semi-variable and variable cost is designed to change in relation to the level of activity attained". In flexibility budgetary control system, a series of budgets are prepared one for the each of a number of alternative production levels or volumes. Flexible budgets represent the amount of expense that is reasonably necessary to achieve each level of output specified. In other words, the allowances given under flexibility budgetary control system serve as standards of what costs should be at each level of output.

COMPONENTS OF BUDGETARY CONTROL SYSTEM

The policy of a business for a defined period is represented by the master budget the details of which are given in a number of individual budgets called functional budgets. The functional budgets are broadly grouped under the following heads:

1. Physical Budgets – Sales Quantity, Product Quantity., Inventory, Manpower budget.
2. Cost Budgets – Manufacturing Cost, Administration Cost, Sales & Distribution cost, R & D Cost.
3. Profit Budget.

THE VARIOUS COMMONLY USED FUNCTIONAL BUDGETS

1. Sales Budget
2. Production Budget
3. Plant Utilisation Budget
4. Direct Material Usage Budget
5. Direct Material Purchase Budget
6. Direct Labour (Personnel) Budget
7. Factory Overhead Budget
8. Production Cost Budget.

ESSENTIALS OF BUDGET

1. It is prepared in advance and is based on a future plan of actions.

2. It relates to a future period and is based on objectives to be attained.

3. It is a statement expressed in monetary and/ or physical units prepared for the implementation of policy formulated by management.

STEPS INVOLVED IN THE BUDGETARY CONTROL TECHNIQUE

1. Definition of objectives:

A budget being a plan for the achievement of certain operational objectives, it is desirable that the same are defined precisely. The objectives should be written out; the areas of control demarcated; and items of revenue and expenditure to be covered by the budget stated.

2. Location of the key (or budget) factor:

There is usually one factor (sometimes there may be more than one) which sets a limit to the total activity. Such a factor is known as key factor. For proper budgeting, it must be located and estimated properly.

3. Appointment of controller:

Formulation of a budget usually required whole time services of a senior executive known as budget controller; he must be assisted in this work by a Budget Committee, consisting of all the heads of department along with the Managing Director as the Chairman.

4. Budget Manual:

Effective budgetary planning relies on the provision of adequate information which are contained in the budget manual. A budget manual is a collection of documents that contains key information for those involved in the planning process.

5. Budget period:

The period covered by a budget is known as budget period. The Budget Committee determines the length of the budget period suitable for the business. It may be months or quarters or such periods as coincide with period of trading activity.

6. Standard of activity or output:

For preparing budgets for the future, past statistics cannot be completely relied upon, for the past usually represents a combination of good and bad factors. Therefore, though results of the past should be studied but these should only be applied when there is a likelihood of similar conditions repeating in the future.

SALIENT FEATURES OF BUDGET MANUAL

1. Budget manual contains many information which are required for effective budgetary planning.

2. A budget manual is a collection of documents that contains key information for those involved in the planning process.

3. An introductory explanation of the budgetary planning and control process, including a statement of the budgetary objective and desired results is included in Budget Manual

4. Budget Manual contains a form of organisation chart to show who is responsible for the preparation of each functional budget and the way in which the budgets are interrelated.

5. In contains a timetable for the preparation of each budget.

6. Copies of all forms to be completed by those responsible for preparing budgets, with explanations concerning their completion is included in Budget Manual.

CONTRACT COSTING

NOTIONAL PROFIT

It represents the difference between the value of work certified and cost of work certified.

Notional Profit = Value of work certified – (Cost of works to date – Cost of work not yet certified)

ESCALATION CLAUSE

This clause is usually provided in the contracts as a safeguard against any likely changes in the price or utilization of material and labour. If during the period of execution of a contract, the prices of materials or labour rise beyond a certain limit, the contract price will be increased by an agreed amount. Inclusion of such a term in a contract deed is known as an 'escalation clause'.

An escalation clause usually relates to change in price of inputs, it may also be extended to increased consumption or utilization of quantities of materials, labour etc (where it is beyond the control of the contractor). In such a situation the contractor has to satisfy the contractee that the increased utilization is not due to his inefficiency.

COST PLUS CONTRACT

These contracts provide for the payment by the contractee of the actual cost of construction plus a stipulated profit, mutually decided between the two parties.

The main features of these contracts are as follows:

1. The practice of cost-plus contracts is adopted in the case of those contracts where the probable cost of the contracts cannot be ascertained in advance with a reasonable accuracy.

2. These contracts are preferred when the cost of material and labour is not steady and the contract completion may take number of years.

3. The different costs to be included in the execution of the contract are mutually agreed, so that no dispute may arise in future in this respect. Under such type of contracts, contractee is allowed to check or scrutinize the concerned books, documents and accounts.

4. Such a contract offers a fair price to the contractee and also a reasonable profit to the contractor. The contract price here is ascertained by adding a fixed and mutually pre-decided component of profit to the total cost of the work.

ADVANTAGES OF COST PLUS CONTRACT

1. The contractor is assured of a fixed percentage of profit. There is no risk of incurring any loss on the contract.

2. It is useful specially when the work to be done is not definitely fixed at the time of making the estimate.

3. Contractee can ensure himself about the 'cost of contract' as he is empowered to examine the books and documents of the contractor to ascertain the veracity of the cost of contract.

RETENTION MONEY

A contractor does not receive the full payment of the work certified by the surveyor. Contractee retains some amount to be paid after some time, when it is ensured that there is no default in the work done by the contractor. If any deficiency or defect is noticed, it is to be rectified by the contractor before the release of the retention money. Thus, the retention money provides a safeguard against the default risk in the contracts.

PROCESS COSTING

VALUATION OF WORK IN PROCESS

Valuation of Work-in process: The valuation of work-in-process can be made in the following three ways, depending upon the assumptions made regarding the flow of costs.

1. FIFO method:

According to this method the units first entering the process are completed first. Thus the units completed during a period would consist partly of the units which were incomplete at the beginning of the period and partly of the units introduced during the period. The cost of completed units is affected by the value of the opening inventory, which is based on the cost of the previous period. The closing inventory of work-in-process is valued at its current cost.

2. LIFO method:

According to this method units last entering the process are to be completed first. The completed units will be shown at their current cost and the closing-work in process will continue to appear at the cost of the opening inventory of work-in-progress along with current cost of work in progress if any.

3. Average cost method:

According to this method opening inventory of work-in-process and its costs are merged with the production and cost of the current period, respectively. An average cost per unit is determined by dividing the total cost by the total equivalent units, to ascertain the value of the units completed and units in process.

EQUIVALENT PRODUCTION UNITS

When opening and closing stocks of work-in-process exist, unit costs cannot be computed by simply dividing the total cost by total number of units still in process. We can convert the work-in-process units into finished units called equivalent units so that the unit cost of these units can be obtained.

Equivalent Completed Units = Actual number of units in the process of manufacture ×

Percentage of work completed

It consists of balance of work done on opening work-in-process, current production done fully and part of work done on closing WIP with regard to different elements of costs viz., material, labour and overhead.

INTER-PROCESS PROFIT - ITS ADVANTAGES AND DISADVANTAGES.

In some process industries the output of one process is transferred to the next process not at cost but at market value or cost plus a percentage of profit. The difference between cost and the transfer price is known as inter-process profits.

The advantages and disadvantages of using inter-process profit, in the case of process type industries are as follows:

Advantages:

1. Comparison between the cost of output and its market price at the stage of completion is facilitated.

2. Each process is made to stand by itself as to the profitability.

Disadvantages:

1. The use of inter-process profits involves complication.

2. The system shows profits which are not realised because of stock not sold out

JOINT PRODUCTS AND BY-PRODUCTS

Joint Products are defined as the products which are produced simultaneously from same basic raw materials by a common process or processes but none of the products is relatively of more importance or value as compared with the other. For example spirit, kerosene oil, fuel oil, lubricating oil, wax, tar and asphalt are the examples of joint products.

By products, on the other hand, are the products of minor importance jointly produced with other products of relatively more importance or value by the common process and using the same basic materials. These products remain inseparable upto the point of split off. For example in Dairy industries, batter or cheese is the main product, but butter milk is the by-product.

Points of Distinction:

1. Joint products are the products of equal economic importance, while the by-products are of lesser importance.

2. Joint products are produced in the same process, whereas by-products are produced from the scrap or the discarded materials of the main product.

3. Joint products are not produced incidentally, but by-products emerge incidentally also.

TREATMENT OF BY-PRODUCT COST IN COST ACCOUNTING

1. When they are of small total value, the amount realized from their sale may be dealt as follows:

a. Sales value of the by-product may be credited to Costing Profit & Loss Account and no credit be given in Cost Accounting. The credit to Costing Profit & Loss Account here is treated either as a miscellaneous income or as additional sales revenue.

b. The sale proceeds of the by-product may be treated as deduction from the total costs. The sales proceeds should be deducted either from production cost or cost of sales.

2. When they require further processing:

In this case, the net realizable value of the by-product at the split-off point may be arrived at by subtracting the further processing cost from realizable value of by-products. If the value is small, it may be treated as discussed in (i) above.

STANDARD COSTING

THE STEPS OF STANDARD COSTING IS AS BELOW

1. Setting of Standards: The first step is to set standards which are to be achieved.

2. Ascertainment of actual costs: Actual cost for each component of cost is ascertained. Actual costs are ascertained from books of account, material invoices, wage sheet, charge slip etc.

3. Comparison of actual cost and standard cost: Actual costs are compared with the standards costs and variances are determined.

4. Investigation of variances: Variances arises are investigated for further action. Based on this performance is evaluated and appropriate actions are taken.

5. Disposition of variances: Variances arise are disposed off by transferring it the relevant accounts (costing profit and loss account) as per the accounting method (plan) adopted

MARGINAL COSTING

PRACTICAL APPLICATIONS OF MARGINAL COSTING

1. Pricing Policy:

Since marginal cost per unit is constant from period to period, firm decisions on pricing policy can be taken particularly in short term.

2. Decision Making:

Marginal costing helps the management in taking a number of business decisions like make or buy, discontinuance of a particular product, replacement of machines, etc.

3. Ascertaining Realistic Profit: Under the marginal costing technique, the stock of finished goods and work-in-progress are carried on marginal cost basis and the fixed expenses are written off to profit and loss account as period cost. This shows the true profit of the period.

4. Determination of production level: Marginal costing helps in the preparation of break-even analysis which shows the effect of increasing or decreasing production activity on the profitability of the company.

ANGLE OF INCIDENCE

This angle is formed by the intersection of sales line and total cost line at the break-even point. This angle shows the rate at which profits are being earned once the break-even point has been reached. The wider the angle the greater is the rate of earning profits. A large angle of incidence with a high margin of safety indicates extremely favourable position.

ASSUMPTIONS OF CVP ANALYSIS

1. Changes in the levels of revenues and costs arise only because of changes in the number of products (or service) units produced and sold.

2. Total cost can be separated into two components: Fixed and variable

3. Graphically, the behaviour of total revenues and total cost are linear in relation to output level within a relevant range.

4. Selling price, variable cost per unit and total fixed costs are known and constant.

5. All revenues and costs can be added, sub traded and compared without taking into account the time value of money.

OPERATING/SERVICE COSTING

OPERATING COSTING

It is method of ascertaining costs of providing or operating a service. This method of costing is applied by those undertakings which provide services rather than production of commodities. This method of costing is used by transport companies, gas and water works departments, electricity supply companies, canteens, hospitals, theatres, schools etc.

Composite units may be computed in two ways:

1. Absolute (weighted average) tones- km., quintal- km. etc.

2. Commercial (simple average) tonnes- km., quintal-km. etc.

Absolute tonnes-km. are the sum total of tonnes-km. arrived at by multiplying various distances by respective load quantities carried.

Commercial tonnes-km. are arrived at by multiplying total distance km., by average load quantity.

OPERATING COSTING VS OPERATION COSTING

Operating Costing: It is a method of costing applied by undertakings which provide service rather than production of commodities. Like unit costing and process costing, operating costing is thus a form of operation costing.

The emphasis under operating costing is on the ascertainment of cost of rendering services rather than on the cost of manufacturing a product. It is applied by transport companies, gas and water works, electricity supply companies, canteens, hospitals, theatres, school etc. Within an organisation itself certain departments too are known as service departments which provide ancillary services to the production departments. For example, maintenance department; power house, boiler house, canteen, hospital, internal transport etc.

Operation Costing: It represents a refinement of process costing. In this each operation instead of each process of stage of production is separately costed. This may offer better scope for control. At the end of each operation, the unit operation cost may be computed by dividing the total operation cost by total output.

INTEGRAL AND NON INTEGRAL ACCOUNTING SYSTEMS

ESSENTIAL PRE-REQUISITES OF INTEGRATED ACCOUNTING SYSTEM

1. The management's decision about the extent of integration of the two sets of books. Some concerns find it useful to integrate upto the stage of primary cost or factory cost while other prefer full integration of the entire accounting records.

2. A suitable coding system must be made available so as to serve the accounting purposes of financial and cost accounts.

3. An agreed routine, with regard to the treatment of provision for accruals, prepaid expenses, other adjustment necessary for preparation of interim accounts.

4. Perfect coordination should exist between the staff responsible for the financial and cost aspects of the accounts and an efficient processing of accounting documents should be ensured.

Under this system there is no need for a separate cost ledger. Of course, there will be a number of subsidiary ledgers; in addition to the useful Customers Ledger and the Bought Ledger, there will be: (a)

Stores Ledger; (b) Finished Stock Ledger and (c) W-I-P Ledger.

ADVANTAGES OF INTEGRATED ACCOUNTING ARE AS FOLLOWS

1. Since there is one set of accounts, thus there is one figure of profit. Hence the question of reconciliation of costing profit and financial profit does not arise.

2. There is no duplication of recording of entries and efforts to maintain separate set of books.

3. Costing data are available from books of original entry and hence no delay is caused in obtaining information.

4. The operation of the system is facilitated with the use of mechanized accounting.

5. Centralization of accounting function results in economy.

WHEN WE NEED TO DO RECONCILIATION?

When the cost and financial accounts are kept separately, It is imperative that these should be reconciled, otherwise the cost accounts would not be reliable. The reconciliation of two set of accounts can be made, if both the sets contain sufficient detail as would enable the causes of differences to be located. It is therefore, important

that in the financial accounts, the expenses should be analysed in the same way as in cost accounts. It is important to know the causes which generally give rise to differences in the costs & financial accounts.

WHEN WE DON'T NEED TO DO RECONCILIATION?

When the Cost and Financial Accounts are integrated, there is no need to have a separate reconciliation statement between the two sets of accounts. Integration means that the same set of accounts fulfil the requirement of both i.e., Cost and Financial Accounts.