Chapter-1
BASIC CONCEPTS OF COST ACCOUNTING

Basic Definations and Terms

(1) Costing: Costing is defined as "the technique and process of ascertaining costs". It provides the information that management needs to plan and control the organisation's activities and to make decisions about the future.

(2) Cost Accounting: Cost Accounting may be defined as "Accounting for costs classification and analysis of expenditure as will enable the total cost of any particular unit of production to be ascertained with reasonable degree of accuracy and at the same time to disclose exactly how such total cost is constituted". Thus Cost Accounting is classifying, recording and appropriate allocation of expenditure for the determination of the costs of products or services, and for the presentation of suitably arranged data for the purposes of control and guidance of management.

(3) Cost Accountancy: Cost Accountancy is 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 purposes of managerial decision making. Thus, Cost Accountancy is the science, art and practice of a Cost Accountant.

(a) It is **science** because it is a systematic body of knowledge having certain principles which a cost accountant should possess for proper discharge of his responsibilities.

(b) It is an **art** as it requires the ability and the skills with which a cost accountant is able to apply the principles of cost accountancy to various managerial problems.

(c) **Practice** includes the continuous efforts of a cost accountant in the field of cost accountancy. Such efforts of a cost accountant also include the presentation of information for the purpose of managerial decision making and keeping statistical records.

(4) Management Accounting: Management accounting is the application of the principles of accounting and financial management to create, protect, preserve and increase value for the stakeholders. Management accounting is an integral part of management. It assists management by provision of relevant information for planning, organising, controlling, decision making etc.

(5) 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.

(6) Cost Object : Cost object is anything for which a separate measurement of cost is required. Cost object may be a product, a service, a project, a customer, a brand category, an activity, a department or a programme etc. Few examples of cost objects are given below:

(a) Product : Laptop, Mobile Phone, Television, Book etc.

(b) Service : An airline flight, Utility bill payment facility etc.

(c) Project : Metro Rail project, Road projects etc.

(d) Activity : Quality inspection of materials, Placing of orders etc.

(e) Process : Refinement of crudes in oil refineries, melting of ingots in steel indurstry etc.

(f) Department : Production department, Finance & Accounts etc.

(7) Cost Driver : A Cost driver is a factor or variable which effect level of cost. Generally, it is an activity which is responsible for cost incurrence. Level of activity or volume of production is the example of a cost driver. An activity may be an event, task, or unit of work etc. Examples of cost drivers are number of purchase orders, number of machines setting ups, hours spent on product inspection, number of tests performed etc.

(8) Cost Unit: The term cost unit is defined as a unit of quantity of product, service or time (or a combination of these) in relation to which costs may be ascertained or expressed. It can be for a job, batch, or product group. Some examples of cost unit and methods of costing are given below :

S.N.	Industry	Method of costing	Unit of cost
(i)	Nursing Home	Operating / Service	Per Bed per week or per day
(ii)	Road transport	Operating / Service	Per Tonne Kilometer
(iii)	Steel	Process	Per Tonne
(iv)	Coal	Single	Per Tonne
(v)	Bicycles	Multiple	Each unit
(vi)	Bridge construction	Contract	Each contract
(vii)	Interior Decoration	Job	Each Job
(viii)	Advertising	Job	Each Job

(9) Conversion cost: It is the cost incurred to convert raw materials into finished goods. It is the sum of direct wages, direct expenses and manufacturing overheads.

(10) Sunk cost: Historical costs or the costs incurred in the past are known as sunk cost. They play no role in the current decision making process and are termed as irrelevant costs. For example, in the case of a decision relating to the replacement of a machine, the orignal value of the existing machine is a sunk cost, and therefore, not considered.

(11) Opportunity cost: It refers to the value of sacrifice made or benefit of opportunity foregone in accepting an alternative course of action. For example, a firm financing its expansion plan by withdrawing money from its bank deposits. In such a case the loss of interest on the bank deposit is the opportunity cost for carrying out the expansion plan.

(12) Explicit costs: These costs are also known as out of pocket costs. They refer to those costs which involves immediate payment of cash. Salaries, wages, postage and telegram, interest on loan etc. are some examples of explicit costs because they involve immediate cash payment. These payments are recorded in the books of account and can be easily measured.

(13) Implicit costs: These costs do not involve any immediate cash payment. Implicit costs are not recorded in the books of account but yet, they are important for certain types of managerial decisions such as equipment replacement and relative profitability of two alternative courses of action. It includes opportunity cost of funds and notional rent etc.

(14) Responsibility Centres : With the growth of an organisation, its functions, organisational structure and other related functions also grows in terms of volume and complexity. To have a better control over the organisation, management delegates its responsibility and authority to various departments or persons. These departments or persons are known as responsibility centres and are held responsible for performance in terms of expenditure, revenue, profitability and return on investment. Performance of these responsibility centres are measured against some set standards (eg. budgets) and evaluated against organisational goal and performance targets. There are four types of responsibility centres:

(i) Cost Centre: It is defined as a location, person or an item of equipment or a group of these for which costs are ascertained and used for cost control. Cost centres are of two types viz, impersonal and personal. A cost centre which consists of a location or an item of equipment or a group of these is called an impersonal cost centre. A cost centre which consists of a person or a group of person is known as a personal cost centre. Further in a manufacturing concern there are two type of cost centres viz., production and service. Production cost centres are those where production activity is actually carried out whereas service cost centres are those sections which are ancillary and render service to production cost centres.

(ii) Revenue Centres: The responsibility centres which are accountable for generation of revenue for the entity. Sales Department for example, is responsible for achievement of sales target and revenue generation. Though, revenue centres does not have control on expenditures it incurs but some time expenditures related with selling activities like commission to sales person etc. are incurred by revenue centres.

(iii) Profit Centre: It is defined as an activity centre of a business organisation. Chief of such a centre is fully responsible for all costs, revenues and profitability of its operation. The main objective of profit centre is to maximise the centre's profit. Creation of profit centres facilitates management control and implementation of the objectives of responsibility accounting. A profit centre may have a number of cost centres.

(iv) Investment Centres: These are the responsibility centres which are not only responsible for profitability but also has the authority to make capital investment decisions. The performance of these responsibility centres are measured on the basis of Return on Investment (ROI) besides profit.

Classification of Cost

(1) Cost classification based on variability: There are three broad elements of costs:

Fixed cost – These are costs, which do not change in total despite changes of a cost driver. A fixed cost is fixed only in relation to a given relevant range of the cost driver and a given time span. Rent, insurance, depreciation of factory building and equipment are examples of fixed costs where the final product produced is the cost object.

Variable costs – These are costs which change in total in proportion to changes of cost driver. Direct material, direct labour are examples of variable costs, in cases where the final product produced is the cost object.

Semi-variable costs – These are partly fixed and partly variable in relation to output e.g. telephone and electricity bill.

(2) Cost classification based on controllability: There are two broad elements of costs:

Controllable costs – Costs which can be influenced by the action of a specified person in an organisation are known as controllable costs. In a business organisation heads of each responsibility centre are responsible to control costs. It includes material, labour and direct expenses.

Uncontrollable costs – Costs which remains unaffected by the action of such person are termed as uncontrollable. These costs are not influenced by the action of the responsibility center manager. It includes mostly fixed costs and all allocated costs.

It may be noted that controllable and uncontrollable cost concepts are related to the authority of a person in the organisation. An expenditure which may be uncontrollable by one person may be controllable by another .e.g. expenditure incurred by the tool room are controllable by the foreman in charge of that section, but the share of tool room expenditure which are apportioned to the machine shop are not controllable by machine shop foreman. Moreover, in the long run all costs might be controllable.

(3) Cost classification based on Nature or Elements: There are three broad elements of costs:

(i) Material: The substance from which the product is made is known as material. It can be direct as well as indirect.

Direct material: It refers to those materials which become a major part of the finished product and can be easily traceable to the units. Direct materials include:

(i) All materials specifically purchased for a particular job/process.

(ii) Components purchased

(iii) Material passing from one process to another.

Indirect material: All material which is used for purposes ancillary to production and which can not be conveniently assigned to specific physical units of output is termed as indirect materials. Examples, oil, grease, consumable stores, printing and stationary material etc.

(ii) Labour: Labour cost can be classified into direct labour and indirect labour.

Direct labour: It is defined as the wages paid to workers who are engaged in the production process whose time can be conveniently and economically traceable to units of products. For example, wages paid to compositors in a printing press, to workers in the foundry in cast iron works etc.

Indirect labour: Labour employed for the purpose of carrying tasks incidental to goods or services provided, is indirect labour. It cannot be practically traced to specific units of output. Examples, wages of store-keepers, foreman, time-keepers, supervisors, inspectors etc.

(iii) Expenses: Expenses may be direct or indirect.

Direct expenses: These expenses are incurred on a specific cost unit and identifiable with the cost unit. Examples are cost of special layout, design or drawings, hiring of a particular tool or equipment for a job; fees paid to consultants in connection with a job etc.

Indirect expenses: These are expenses which cannot be directly, conveniently and wholly allocated to cost centre or cost units. Examples are rent, rates and taxes, insurance, power, lighting and heating, depreciation etc.

(4) Cost classification based on Traceability to the Products: There are two broad elements of costs:

(i) Direct Costs: The direct costs are those which can be easily traceable to a product or costing unit or cost center or some specific activity, e.g. cost of wood for making furniture. It is also called traceable cost.

(ii) Indirect Costs : The indirect costs are difficult to trace to a single product or it is uneconomic to do so. They are common to several products, e.g. salary of a factory manager. It is also called common costs. Costs may be direct or indirect with respect to a particular division or department. For example, all the costs incurred in the Power House are indirect as far as the main product is concerned but as regards the Power House itself, the fuel cost or supervisory salaries are direct. It is necessary to know the purpose for which cost is being ascertained and whether it is being associated with a product, department or some activity.

Direct cost can be allocated directly to costing unit or cost center. Whereas Indirect costs have to be apportioned to different products, if appropriate measurement techniques are not available. These may involve some formula or base which may not be totally correct or exact.

(5) Cost classification based on Association with the Product: There are two broad elements of costs:

(i) Product Costs: Product costs are those which are traceable to the product and included in inventory values. In a manufacturing concern it comprises the cost of direct materials, direct labour and manufacturing overheads. Product cost is a full factory cost. Product costs are used for valuing inventories which are shown in the balance sheet as asset till they are sold. The product cost of goods sold is transferred to the cost of goods sold account.

(ii) Period Costs: Period costs are incurred on the basis of time such as rent, salaries, etc., include many selling and administrative costs essential to keep the business running. Though they are necessary to generate revenue, they are not associated with production, therefore, they cannot be assigned to a product. They are charged to the period in which they are incurred and are treated as expenses. Selling and administrative costs are mostly treated as period costs for the following reasons:

(a) Most of these expenses are fixed in nature.

(b) It is difficult to apportion these costs to products equitably.

(c) It is difficult to determine the relationship between such cost and the product.

(d) The benefits accruing from these expenses cannot be easily established.

The net income of a concern is influenced by both product and period costs. Product costs are included in the cost of the product and do not affect income till the product is sold. Period costs are charged to the period in which they are incurred.

Methods of Costing alongwith their applicability to concerned Industry

1. Job Costing: The objective under this method of costing is to ascertain the cost of each job order. A job card is prepared for each job to accumulate costs. The cost of the job is determined by adding all costs against the job it is incurred. This method of costing is used in printing press, foundries and general engineering workshops, advertising etc.

2. Batch Costing: This system of costing is used where small components/parts of the same kind are required to be manufactured in large quantities. Here batch of similar products is treated as a job and cost of such a job is ascertained as discussed under 1, above. If in a cycle manufacturing unit, rims are produced in batches of 2,500 units each, then the cost will be determined in relation to a batch of 2,500 units.

3. Contract Costing: If a job is very big and takes a long time for its completion, then method used for costing is known as Contract Costing. Here the cost of each contract is ascertained separately. It is suitable for firms engaged in the construction of bridges, roads, buildings etc.

4. Operating Costing: The method of Costing used in service rendering undertakings is known as operating costing. This method of costing is used in undertakings like transport, supply of water, telephone services, hospitals, nursing homes etc.

5. Single or Output Costing: In this method the cost of a product is ascertained, the product being the only one produce like bricks, coals, etc.

6. Process Costing: In this method the cost of completing each stage of work is ascertained, like cost of making pulp and cost of making paper from pulp. In mechanical operations, the cost of each operation may be ascertained separately; the name given is operation costing.

7. Multiple Costing: It is a combination of two or more methods of costing outlined above. Suppose a firm manufactures bicycles including its components; the parts will be costed by the system of job or batch costing but the cost of assembling the bicycle will be computed by the Single or output costing method. The whole system of costing is known as multiple costing.

Objectives of Cost Accounting

The following are the main objectives of Cost Accounting:

(i) **Ascertainment of Cost**: The main objective of cost accounting is accumulation and ascertainment of cost. Costs are accumulated, assigned and ascertained foreach cost object.

(ii) **Determination of Selling Price and Profitability**: The cost accounting system helps in determination of selling price and thus profitability of a cost object. Though in a competitive business environment, selling prices are determined by

external factors but cost accounting system provides a basis for price fixation and rate negotiation.

(iii) **Cost Control**: Maintaining discipline in expenditure is one of the main objective of a good cost accounting system. It ensures that expenditures are in consonance with predetermined set standard and any variation from these set standards is noted and reported on continuous basis.

(iv) **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." Cost reduction is an approach of management where cost of an object is believed to be further reducible. No cost is termed as lowest and every possibility of cost reduction is explored.

(v) **Assisting management in decision making**: Cost and Management accounting by providing relevant information, assists management in planning, implementing, measuring, controlling and evaluation of various activities.

Factors affecting installation of costing system

The following factors must be considered before installing a Costing System :

(a) Nature of business: The system of costing to be introduced should suit the general nature of business.

(b) Layout aspects: The size and layout of the organisation should be studied by the system designers.

(c) Methods and procedures in vogue: The system designers should also study various methods and procedures for the purchase, receipts, storage and issue of material. They should also study the methods of wage payment.

(d) Management's expectations and policies: The system of costing should be designed after a careful analysis of the organisational operations, management's expectation and the policies of the concern.

(e) Technical aspects: The technical aspects of the business should be studied thoroughly by the designers. They should also make an attempt to seek the assistance and support of the supervisory staff and workers of the concern for the system.

(f) Simplicity of the system: The system of costing to be installed should be easy to understand and simple to operate. The procedures laid down for operating the system should be easily understood by operating system.

(g) Forms standardisation: Various forms to be used by the costing system for various data/information collection and dissemination should be standardised as far as possible.

(h) Accuracy of data: The degree of accuracy of data to be supplied by the system should be determined.

Essentials of an effective costing system

The essential features that an effective costing system should possess are as follows:

(a) Costing system should be tailor made, practical, simple and capable of meeting the requirements of a business concern.

(b) The method of costing should be suitable to the industry.

(c) Necessary co-operation and participation of executives from various departments of the concern is essential for developing good cost accounting system.

(d) The cost of installing and operating the system should justify the results.

(e) The system of costing should not sacrifice the utility by introducing meticulous and unnecessary details.

Various types of reports that may be provided by the Cost Accounting Department

Various types of reports that may be provided by the Cost Accounting Department for the use of its executives are as under:

(i) Cost Sheets
(ii) Statements of material consumption
(iii) Statements of labour utilisation
(iv) Overheads incurred compared with budgets
(v) Sales effected compared with budgets
(vi) Reconciliation of actual profit with estimated profit
(vii) The total cost of inventory carried
(viii) The total cost of abnormally spoiled work in factory and abnormal losses in stores
(ix) Labour turnover statements
(x) Expenses incurred on research and development compared with budgeted amounts.

Difficulties in installing Cost Accounting Syste

The practical difficulties with which a Cost Accountant is usually confronted with while installing a costing system in a manufacturing company are as follows:

(i) Lack of top management support: Installation of a costing system do not receive the support of top management. They consider it as an interference in their work. They believe that such, a system will involve additional paperwork. They also have a misconcept in their minds that the system is meant for keeping a check on their activities.

(ii) Resistance from cost accounting departmental staff: The staff resists because of fear of loosing their jobs and importance after the implementation of the new system.

(iii) Non cooperation from user departments: The foremen, supervisor and other staff members may not cooperate in providing requisite data, as this would not only add to their responsibilities but will also increase paper work of the entire team as well.

(iv) Shortage of trained staff: Since cost accounting system's installation involves specialised work, there may be a shortage of trained staff.

Users of Cost and Management Accounting : Cost and management accounting information which are generated or collected are used by different stakeholders. The users of the information can be broadly categorised into internal and external to the entity.

Internal Users: Internal users, which use the cost and management accounting information may include the followings:

(a) Managers- The managers use the information

(i) to know the cost of a cost object and a cost centre

(ii) to price for the product or service

(iii) to measure and evaluate performance of responsibility centres

(iv) to know the profitability- product-wise, department-wise, customer-wise etc.

(v) to evaluate the strategic options and to make decisions

(b) Operational level staffs- The operational level staffs like supervisors, foreman, team leaders are requiring information

(i) to know the objectives and performance goals for them

(ii) to know product and service specifications like volume, quality and process etc.

(ii) to know the performance parameters against which their performance is measured and evaluated.

(iii) to know divisional (responsibility centre) profitability etc.

(c) Employees- Employees are concerned with the information related with time and attendance, incentives for work, performance standards etc.

External Users

External users, which use the cost and management accounting information may include the followings:

(a) **Regulatory Authorities**- Regulatory Authorities are concerned with cost accounting data and information for different purpose which includes tariff determination, providing subsidies, rate fixation etc. To do this the regulatory bodies require information on the basis of some standards and format in this regard.

(b) **Auditors**- The auditors while conducting audit of financial accounts or for some other special purpose audit like cost audit etc., requires information related with costing and reports reviewed by management etc.

(c) **Shareholders**- Shareholders are concerned with information that effect their investment in the entity. Management communicate the shareholders through periodic communique, annual reports etc. regarding new orders received, product expansion, market share for products etc.

(d) **Creditors and Lenders**- Creditor and lenders are concerned with data and information which affects an entity's ability to serve lenders or creditors. For example, any financial institutions which provides loan to an entity against book debts and stocks are more concerned with regular reporting on net debt position and stock balances.

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