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Advanced Accounting and Auditing Paper – 1

Unit 1: Introduction (Theory)

UNIT 1: Nature and Scope of Cost Accounting

CONTENTS

- Objectives
- Introduction
- 1.1 Meaning and Objectives of Cost Accounting
 - 1.1.1 Meaning of Cost Accounting
 - 1.1.2 Objectives of Cost Accounting
- 1.2 Nature and Importance of Cost Accounting
 - 1.2.1 Nature of Cost Accounting
 - 1.2.2 Importance of Cost Accounting
- 1.3 Functions of Cost Accounting
- 1.4 Limitations of Cost Accounting
- 1.5 Costing-An Aid to Management
- 1.6 Relationship and Differences between Financial Accounting and Cost Accounting
- 1.7 Costing System
- 1.8 Installation of Cost Accounting

Objectives

After studying this unit, you will be able to:

- Know the introduction to cost accounting;
- Learn the objective and nature of cost accounting;
- Identify the functions of cost accounting;
- Identify the limitations of cost accounting;

- Explain the costing - An aid to management;
- Describe the difference between financial accounting and cost accounting;
- Understand the costing system.

Introduction

Cost accounting is a branch of accounting and has been developed due to limitations of financial accounting. The financial accounting is primarily concerned with record keeping directed towards the preparation of gross profit account, profit and loss account and balance sheet. It provides information regarding the gross profit, profit and loss that the business or enterprise is making and also its financial position on a particular period. The information concerning the business or enterprise is helpful to the management to control on business.

The management of every business enterprise is interested to know much more than the usual information supplied to outsiders. In order to carry out its functions of planning, decision-making and control, it requires additional cost data. The financial accounts fail, to some extent, to provide required cost data to management and hence a new system of accounting which could provide internal report to management was conceived of.

1.1 Meaning and Objectives of Cost Accounting

1.1.1 Meaning of Cost Accounting

Cost accounting is a very wide term. It embraces many subjects within its folds. In general usage, it is the application of costing and cost accounting principles, methods and techniques to the science, art and practice of cost control and ascertainment of profitability of business. The Institute of Cost and Management Accountants, England has defined cost accounting as:

"the application of costing and cost accounting principles, methods and techniques to the science, art and practice of cost control. It includes the presentation of information derived there from for the purpose of managerial decision-making."

Thus, cost accounting is the science, art and practice of a cost accountant. It is a science because it consists of organized body of knowledge, which a cost accountant must possess for proper discharge of his responsibilities.

Cost accounting involves the application of costing principle, methods and techniques for ascertaining costs and their control by comparing actual costs with the budget or standard. Cost accounting is an art also, because it includes the ability and skill with which a cost accountant has to apply his basic knowledge to particular circumstances. It involves the use of various

costing techniques and methods such as marginal costing, standard costing, budgetary control etc. The applications of these techniques help him in dealing with various problems such as cost reduction, cost control, ascertainment of profitability, etc.

Cost accounting is also the practice of a cost accountant because he has to make constant efforts in the field of cost accounting. Such efforts include the information presentation to the top management for the purpose of managerial decision-making and keeping various records of business.

Caution: The cost accounting system is not independent of the financial accounts. It merely represents an elaboration of the basic financial accounting system.

Cost accounting is an important development in the field of accounting. It is the process of accounting for costs. It embraces the accounting procedures relating to recording of all income and expenditure and the preparation of various statements and reports with the object of ascertaining and controlling costs. On analysis of the above meaning and definitions, the following features of cost accounting become evident:

1. Cost accounting is used in the very wide sense when compared to cost accountancy and costing. This is so because cost accounting is concerned with the formulation of principles, methods and techniques to be applied for ascertaining cost and profit.
2. Having ascertained cost and profit, cost accounting is concerned with presentation of information to management. To enable management to carry out its functions, reports must be promptly made available at the right time, to the right person and in a proper form.
3. The information so provided is to serve the purpose of managerial decision-making such as introducing a new line of product, replacement of manual labour by machines, make or buy decisions, etc.

"Cost accounting is the provision of such analysis and classifications 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".

— *Walter W. Bigg*

1.1.2 Objectives of Cost Accounting

The objectives of cost accounting are ascertainment of cost, fixation of selling price of product, proper recording and presentation of cost data to the management for measuring efficiency and for cost control. Following are the main objectives of cost accounting:

- **Ascertainment of Cost:** Ascertainment of cost is primary objective of cost accounting in the initial stages of its development. However, in modern times this has assumed the secondary objective of cost accounting. Cost ascertainment involves the collection and classification of expenditures at the first instance. Those items of expenditures or expenses which are capable of charging directly to the products manufactured are allocated. Then the other expenses which are not capable of direct allocation are apportioned on some suitable basis. Thus the cost of production of goods manufactured is ascertained. In this process, cost accounting involves maintenance of different type of books to record various cost elements. Cost of production is ascertained by using any of the costing technique and method such as historical costing, standard costing, marginal costing, job costing, unit costing, etc.
- **Fixation of Selling Price:** Every business enterprise aims at maximising profit. The total cost of production constitutes the basis on which selling price is fixed by adding a part of profit. Cost accounting furnishes both the total cost of production as well as cost incurred at each and every stage of production. No doubt other factors are taken into consideration before fixing of selling price such as market conditions, the area of distribution, volume of sales, etc. But cost plays the dominating role in the price fixation.
- **Cost Control:** At one time cost control was considered as secondary objective of cost accounting. But in modern business it constitutes the primary objective. Cost control is exercised at different stages in an industry, viz., acquisition of materials, recruiting of labour, during the production process and so on. As such, we have material cost control, labour cost control, production cost control, quality control and so on. However, control over cost is exercised through the techniques of budgetary control, historical costing and standard costing. The control techniques enable the management in knowing the operating efficiency of a business organisation.
- **Provide Various Policies:** Cost data to a great extent helps in formulating the various policies of a business or industry and in decision-making. As every alternative decision involves investment of capital outlay, costs play an important role in decision-making of organisation. Therefore, availability of cost data is a must for all levels of management.

Did u know? The management of every business or organisation constantly relies upon the reports on cost data in order to know the level of efficiency relating to purchase, production, sales and operating positions. Financial accounts provide various information only at the end of the year because closing stock value is available only at the end of the year. But cost accounts provide the value of closing stock time to time by a system of continuous stock verification. Using the value of closing stock, it is possible to prepare final accounts and know the operating results of the business or industry.

1.2 Nature and Importance of Cost Accounting

1.2.1 Nature of Cost Accounting

Cost accounting is a special branch of knowledge. Though considered as a branch of financial accounts, cost accounting is one of the important special branches of knowledge, i.e., a discipline by itself. It is an organised body of knowledge consisting of its own concepts, principles and conventions.

1. Cost accounting is an art in the sense it requires the ability and skill on the part of cost accountant in applying the concepts, principles, methods and techniques of cost accountancy to various management decisions. These decisions include the ascertainment of products and services, control of costs, ascertainment of profitability, etc.
2. Cost accounting is a science as it is a body of systematic knowledge relating to not only cost accounting but relating to a wide variety of courses such as law, office practice and procedure, data processing and presentation, production and control, etc. It is necessary for a cost accountant to have intimate special knowledge of all these fields of study in order to carry on his day-to-day business or organisation activities.
3. Cost accounting determines the cost of incomplete work or job in case if the work remains uncompleted. It also provides measures for control and guidance for various levels of management i.e., top, middle and lower management.
4. Cost accounting is a profession. In recent years cost accounting has become one of the important professions which have become more challenging. This view is evident from two facts: First, the setting up of various professional bodies. Secondly, a large number of students have enrolled in various institutes to obtain costing degrees and memberships for earning their livelihood.

1.2.2 Importance of Cost Accounting

The importance of any subject refers to the various areas of study included in that subject. As regards, the scope of cost accounting is very wide and includes the following:

- **Technique and Process of Costing:** The technique of costing involves two distinct steps, namely, (a) classification of costs according to various elements and (b) allocation and apportionment of the expenses which cannot be directly charged to production. As a process, costing is concerned with the routine ascertainment of cost with a formal and selected procedure.

- **Cost Control:** Cost control is the guidance and regulation by executive action of the costs of operating and undertaking. This guidance and regulation is done by the executive who is responsible for causing the deviation. This process will become clear by enumerating the steps involved in any technique of cost control. Cost control is exercised through a variety of techniques such as inventory control, product control, quality control, budgetary control, standard costing, etc.
- **Ascertainment of Cost:** It deals with the collection and analysis of expenses, the measurement of production at different stages and linking up of production with the expenses. To achieve the first step, costing has developed different systems such as Historical or Actual Cost, Estimated Cost and Standard Cost. For achieving the second step, costing has developed different methods such as single or output costing, job costing, contract costing, etc. Finally, for achieving the last step costing has developed important techniques such as, Marginal Costing, Standard Costing, Budgetary Control, Total Absorption Costing and Uniform Costing.
- **Cost Audit:** The terminology of ICMA, London, defines cost audit as "the verification of the correctness of cost accounts and of the adherence to the cost accounting plan". Cost audit has a much wider role to play in an industry or organisation than people could imagine. The aim of cost audit is to highlight the shortcomings inherent in the cost accounting system.
- **Budgetary Control:** According to Heiser, budgetary control can be defined as "an overall blueprint of a comprehensive plan of operations and actions expressed in financial terms". According to him, budgeting process involves the preparation of a budget, comparison of budgeted and actual expenditure and income, planning and coordinating for control, etc.

1.3 Functions of Cost Accounting

According to Weltemer and Blocker, cost accounting is to serve management in the execution of various policies and in comparison, of actual and estimated results in order that the value of each policy may be appraised and changed to meet the future conditions. Following are the main functions of cost accounting:

1. Establish various cost centers in the business or industry.
2. Provide necessary data to the management for fixing the selling price.
3. Prepare various reports on wastages, loss of labour, idle capacity of machines so as to improve profitability of business or industry.

4. Ascertain the cost of every product, job or process both in terms of total cost and per unit cost of product.
5. Implement various cost control techniques such as budgetary control, historical costing and standard costing.
6. Design suitable system for defining responsibilities and controlling cost.
7. Prepare cost schedules to assist management in decision-making.
8. Prepare cost statements and profit and loss account for giving advice to management.
9. Assist management in the valuation of closing stock of raw materials and work-in-progress so that too much of capital is not locked up in unnecessary inventories.
10. Help in supervising the working of punched card accounting or data processing through computers.
11. Organise cost reduction programmes with the help of departmental managers.
12. Organise the internal audit systems to ensure effective working of different departments.
13. Undertake cost audit programmes as per the directives issued by the central government and the provisions of Indian Companies Act.
14. Design suitable forms for organising an effective cost system of reporting.

1.4 Limitations of Cost Accounting

Cost accounting like other branches of accountancy is not an exact science but is an art which has developed through various theories and accounting practices based on reasoning and common sense. Many theories can be proved or disproved in the light of conventions and basic principles of cost accounting. The following are the main limitations of cost accounting:

- **System is more Complex:** As the cost accounting system involves number of steps in ascertaining of cost such as collection and classification of overheads, allocation and apportionment of overheads, it is considered to be complicated system of accounts. Moreover the system makes use of several documents and forms in preparing the reports. This will tend to delay in the preparation of accounts.
- **Lack of Accuracy:** The accuracy of cost accounting gets distorted owing to the use of various costs such as standard cost, marginal cost, estimated cost, etc.
- **It is Expensive:** The system of cost accounting involves additional expenditure to be incurred in installing and maintaining it. However, before installing it, care must be taken

to ensure that the benefits derived are more than the investment made on this system of accounting.

- **It lacks Social Accounting:** Cost accounting fails to take into account the social obligation of the business or organisation. In other words, social accounting is outside the purview of cost accounting.
- **Not Suitable for Small Units:** A cost accounting system is applicable only to a large business enterprise but not to a small scale one. Hence, there is limitation to its application to all types of business enterprises.
- **Implementation of Same Costing Method and Technique:** All business enterprises cannot make use of a single method and technique of costing. It all depends upon the nature of business and type of product manufactured by it. If a wrong method and technique is used, it misleads the results of business.

1.5 Costing - An Aid to Management

A good costing system serves the needs of large sections of people.

1. **Helps in the Preparation of Final Accounts:** By the process of continuous stock taking it enables to know the value of closing stock of materials at any time. This facilitates preparation of final accounts wherever desired.
2. **Fixation of Selling Price:** By providing cost data it helps management to fix the selling price of product in advance. Hence, quotations can be supplied to prospective customers to secure orders.
3. **Fixation of Responsibility:** Whenever a cost centre is established, it implies establishing a kind of relationship between superior and subordinates. Thus, responsibilities are fixed on every individual who is concerned with cost of product or unit.
4. **Reconciliation with Financial Accounting:** A well maintained cost accounting system militates reconciliation with financial accounting to check the arithmetical accuracy of both the systems.
5. **Helps in Minimising Wastages and Losses:** Cost accounting system enables to locate the losses and wastages relating to materials, idle time and under utilisation of plant and machinery.
6. **Help in Decision-making:** It helps top management in suitable decisions such as new products, replacement of labour, machines, etc.

7. **Help in Performance of Business:** By applying cost control techniques such as marginal costing, budgetary control and standard costing it helps in assisting the performance of business or industry.
8. **Help in Future Production Policy:** Cost data help management in determining future production policy. Any expansion or contraction of production for the future is based on previous cost data and information.
9. **Helpful to Employees:** Cost accounting system enables employees to earn better wages through overtime and incentive systems of wage payment. By providing better facilities it ensures job security to employees. Employees benefit by merit rating techniques which is conducted by scientific process of management.
10. **Helpful to the Government:** It helps government in formulating various policies regarding import-export, taxation, price control measures, wage fixation, etc. It helps in assessing excise duty, sales tax and income tax of the business.
11. **Helpful in Increasing Profitability:** Costing reports provide information about profitable or unprofitable areas of operation. The management can discontinue that product line or that department which are responsible for incurring losses.
12. **Helpful to Creditors:** It increases the confidence of creditors in the capital employed in the business. The frequent preparation of reports and statements help in knowing solvency position of the business.

1.6 Relationship and Differences between Financial Accounting and Cost Accounting

The main relationships between financial accounting and cost accounting are given as under:

1. The fundamental principles of double entry system are applicable in financial accounting as well as cost accounting.
2. The results of business or organisation are revealed by both the systems of accounts.
3. The determination of future business activities and policy is guided by both accounting systems.
4. A basis for comparison of expenditures is being provided by both the accounting systems.
5. The invoices and vouchers constitute the common basis for recording transactions under both the systems of accounting.
6. The causes for losses and wastages of a business or industry are provided by financial and cost accounting.

Table 1.1: Differences between Financial Accounting and Cost Accounting

Basis of Difference	Financial Accounting	Cost Accounting
Purpose and Objective	The purpose and objective of financial accounting is external reporting mainly to owners, creditors, tax authorities, government and investors.	The purpose and objectives of cost accounting is internal reporting to management.
Maintenance of Accounts	This is to be maintained compulsorily by forms of business organizations. The preparation of accounts must be in accordance with the statutory provisions of Companies Act and Income Tax Act.	Cost accounting is maintained voluntarily. In some cases government has directed some companies to maintain cost accounts to improve efficiency of business or industry.
Profit Analysis	Financial accounting discloses profit for the entire business as a whole.	Cost accounting shows the profit for each product, process or operation.
Recording	It classifies, records and analyses the transactions in a subjective manner, i.e., according to the nature of expenses.	Cost accounting records the expenditure in an objective manner, i.e., according to purpose for which costs are incurred.
Use of Control Techniques	It does not make use of any type of control techniques.	It makes use of some important control techniques such as Marginal Costing, Historical Costing, Budgetary Control, Standard Costing, etc., in order to control cost.

Basis of Difference	Financial Accounting	Cost Accounting
Stock Valuation	Stock is valued at cost or market price whichever is less.	Stock is always valued at cost price.
Pricing Policy	It fails to guide the formulation of pricing policy.	It provides adequate data for formulating of pricing policy.
Facts and Figures	Financial accounting deals mainly with actual facts and figures.	Cost accounting deals partly with facts and figures and partly with estimates.
Duration of Information Reporting	Generally, financial accounting provides financial information once a year.	Cost accounting furnishes cost data at frequent intervals i.e., reports are daily, weekly and monthly.
Evaluation of Efficiency	The information provided by financial accounting is not sufficient to evaluate the efficiency of the business activities.	The cost data helps in evaluating the efficiency of the business activities.

1.7 Costing System

An ideal system of costing is that which achieves the objectives of a costing system and brings all advantages of costing to the business. The following are the main essentials of an ideal cost accounting system:

- **Simplicity:** The system of costing should be simple and plain so that it may be easily understood even by a person of average intelligence. Cost accounting system involves detailed analysis of cost. To avoid complications in the procedure of cost ascertainment an elaborate system of costing should be avoided and every care must be taken to keep it as simple as possible.

- **Suitability to the Business:** The cost accounting system should be capable of adopting itself to the changing situations of business. It must be capable of expansion or contraction depending upon the needs of the business.
- **Accuracy:** The system of cost accounting must provide for accuracy in terms of both ascertainment of cost and presentation of cost data. Otherwise it will prove to be misleading.
- **Comparability:** The records to be maintained must facilitate comparison over a period of time. The past records must serve as a basis to guide the future.
- **Economical:** The costs of production costing system must be less. It must result in increased benefit when compared to the expenses incurred in installing it.
- **Uniformity:** The various forms and documents used under costing system must be uniform in size and quality of paper. Printed forms must be used to avoid delay in the preparation of various reports. This also reduces the unnecessary burden of clerical staff. Forms of different colours can be used in different documents or reports.
- **Reconciliation of Cost and Financial Accounts:** If possible the cost and financial accounts should be interlocked into one internal accounting scheme. The system of cost accounts must be capable of reconciling with financial accounts so as to check accuracy of both the system of accounts.
- **Promptness:** An ideal costing system is one which provides cost data in an analytical form to the management. So all the departments of an industry must analyse and record the relevant items of cost promptly in order to furnish cost information on a regular basis to various levels of management. This helps in checking up the progress of the business activities on a regular basis.
- **Equity:** The basis of apportioning overheads to products, departments or jobs must be fair and equitable.
- **Duties and Responsibilities of the Cost Accountant:** Under a good system of cost accounting the duties and responsibilities of the cost accountant should be clearly defined. The cost accountant should have access to all works and departments.

1.8 Installation of Cost Accounting

At the outset it is to be understood that a common cost accounting system cannot be installed for all types of business enterprises. The cost accounting system depends upon the nature of business or industry and the product. Before a suitable system of cost accounting is installed it is necessary to undertake a preliminary investigation so as to know the feasibility of installing cost

accounting system to such business activities. While introducing a system of cost accounting it should be borne in mind that cost accounting system must suit the business. This means the system must be simple and it must lead to savings through the control of cost, i.e., materials, labour and overheads.

For the successful functioning of the costing system, the following conditions are essential:

1. The duties and responsibilities of cost accountant must be clear.
2. There must be an efficient system of material control in business or industry.
3. A sound and well designed method of wage payment must be set up in business or industry.
4. Printed forms must be used for quick compilation of various types of cost reports.
5. The existence of sound basis for collection of overheads and a basis for its apportionment to various production departments.

Main factors to be considered before installing a cost accounting system:

- **Nature of Business:** The nature of a business implies the duration of its existence, position in the industry or factory, the rate of growth and policy of management and the like. The nature of business serves as the basis for designing the cost accounts in respect of simplicity, necessity and investment involved in installing cost accounting system.
- **Organisational Factors:** The problem of installing cost accounting is somewhat difficult in case of an existing business organisation when compared to new business. However, the existing set up of the business organisation should be least disturbed should the need arise. In order to fix up responsibility to the executives, it may be necessary to group the departments. The organisational factors to be considered are: size and type of organisation, the levels of management, delegation and responsibility, centralisation and decentralisation, departmentalisation, availability of modern office equipments, and number of supervisory or managerial staff.
- **Accounting Aspects:** The factors to be considered in respect of accounting are: number of financial records, existing forms, registers used in business and number of copies required in business activities.
- **Area of Control:** The areas where cost control is to be exercised are to be identified so that each manager may take action relevant to his business activities. If material and labour control occupies significant area of control, it must be given topmost priority for exercising control over materials and labour.

- **Product Price:** The price or range of products manufactured and sold also determine the method of costing to be selected. Accordingly price or range of products must be analysed in terms of size, models, fashions, market area, competitors and whether the products are made to customer's specification or for stocking and selling.
- **Reporting:** The cost accounting system to be installed must ensure frequency and promptitude in reporting cost data to the management. It must also be pointed out that duplication of reporting is to be avoided. Further, only that information which is relevant for the management in a particular context alone should be reported.
- **Selling and Distribution:** The chief factors to be considered with regard to distribution process are the warehousing facilities, internal and external transport, market survey and other relevant measures, terms and conditions of sale and procurement of orders from customers.
- **Use of Electronic Data Processing:** In modern times, it has become a common practice to use electronic data processing equipments and computers. In this situation, it is essential to ensure that the equipment meets the needs of the system but not the other way round.
- **Technical Considerations:** Technical considerations that influence the installation of cost accounts are size of factory, flow of production, existence of departments and laboratories, capacity of machines and equipments, cost control techniques, internal transport, etc.
- **Uniformity:** The practice of adopting uniform costing facilitates interfirm comparison among various firms belonging to the same industry or factory. Further, it also has the benefit of adopting common costing practice if a holding company has a number of subsidiaries.

Steps involved in installation of accounting system:

1. **Understanding of the process flow:** In any type of organisation whether it is manufacturing or service, understanding of product or service process flow will be important to install the costing system. This process involves studying the entire flow of the product or process from input stage to output stage of the product or service. This starts from order receiving from the customer and how the same will be processed inside the organisation, what and all activities involved in the process and how it will be delivered to the customer. Understanding of process flow is the first step to install the costing system in any organisation.

2. **Understanding of the costing methods:** Each industry has got different costing methods involving in the operations. Costing methods are process costing, job costing, batch costing, service costing, contract costing, etc. Manufacturing industries mostly apply process costing, job & batch costing system. Service costing and contract costing will apply for the service industries. So to study and understand the applicable method of costing is the next step to install the costing system.
3. **Identifying the cost of each activity:** Based on the study of process flow, we need to examine and identify the cost of each activity. This method is also called Activity Based Costing system (ABC). Each and every activity needs to be linked with the output product and service and also needs to be examined for the value addition of that activity to the end product and process. It will help to install the costing system effectively towards helping to control the cost.
4. **Understanding of the prime cost structure:** In any costing system we can have the prime cost which is directly related to the activity of the operations. Prime cost includes the Material, labour and other direct expenses which are related to the manufacturing or operations. This is very basic understanding to install any costing system.
5. **Understanding the nature of cost & overhead cost behavior:** After identifying the cost of activities and prime cost structure, we need to examine and understand the nature of cost like fixed cost, variable cost, semi-fixed or semi-variable. Each cost has different nature with its related activity; nature is purely based on the activity related. Based on this, cost can be categorized as variable, fixed or semi-fixed or semi-variable. So carefully examine the activities and decide the nature of cost. This is a very important step for all further costing and management related analysis about the cost and profitability of the product or service.
6. **Setting of proper allocation and apportionment methods:** It may not be possible to identify all costs with a specific activity. For some costs we are unable to identify the specific sector, like shared services department costs we are unable to identify the specific activity, so while setting up a costing system we need to decide the correct cost allocation and apportionment method in the organisation.
7. **Creating cost awareness:** Costing is not only the function of the cost department, costing is the collective function of all the departments. Also, a costing system is not only for identifying the cost of the product or process, it also covers cost control and cost optimization. So the costing team alone will not do this job; all departments should be involved in this process. For example, the design team should be aware of the cost of

designing the product, then only the cost control or optimization can be done. So installation of a costing system should create cost awareness to all in the organisation.

Difficulties at the time of installation of cost accounting system:

1. **Resistance by existing accounting staff:** Very often the existing accounting staff resists the installation of the cost accounting system on two grounds. Firstly, they feel that the new system of accounting might lead to excess work. Secondly, they are afraid of their job security. But this difficulty may be overcome by encouraging them about the usefulness of cost accounting as a supplement to financial accounts and the generation of more employment opportunities from the installation of cost accounting system.
2. **Non-cooperation from middle and bottom level management:** At times the middle and bottom level managers such as foremen, supervisors and inspectors also fail to extend their wholehearted cooperation fearing additional work which may be entrusted to them. This problem may be overcome by suggesting to them the simplicity of the system and the existence of a separate cost accounting department to look after costing matters. However, they may be required to provide necessary reports concerning their area of activity so as to enable functioning of the cost accounting department efficiently.
3. **Lack of support from management:** Wherever a costing system is installed, it is essential to seek the support of various departmental managers. Very often the managers show a hostile attitude towards the costing system. They feel that this system will interfere in their routine work and probably act as a means of checking their efficiency. Under such circumstances it is better to convince them about the utility of the costing system for the business as a whole.
4. **Heavy expenses in installing and maintaining the system:** The setting up of a separate costing department with staff often poses a problem. In addition to installation, the operating expenses in the form of printing and stationery, heating and lighting, depreciation and insurance, rent and rates are to be incurred. However, as was mentioned earlier, the system of cost accounting must be a useful investment, i.e., benefits derived from it must be more than the investment made on it. If this is not possible, for the time being the system must be discarded.
5. **Lack of trained staff:** This was no doubt a problem in olden days. Today this problem is overcome, thanks to the establishment of the institute of cost and works accountants of India in our country which offers professional courses in costing and also offers training facilities through various companies to the candidates undergoing the course. In spite of this facility, it is somewhat difficult to get competent and experienced staff at the time of

installation. This problem can be overcome by paying attractive salaries to the cost accountants.

Measures to overcome difficulties:

1. **Simplicity:** Cost accounting system involves detailed analysis of cost. To avoid complications in the procedure of cost ascertainment, an elaborate system of costing should be avoided and every care must be taken to keep it as simple as possible.
2. **Comparability:** The records to be maintained must facilitate comparison over a period of time. The past records must serve as a basis to guide the future.
3. **Reconciliation with financial accounts:** The system of cost accounts must be capable of reconciling with financial accounts so as to check the accuracy of both systems of accounts.
4. **Accuracy:** The system of cost accounting must provide for accuracy in terms of both cost ascertainment and presentation. Otherwise it will prove to be misleading.

The role of cost accountant:

1. **Traditional way:** The traditional functions comprise the routine functions of a cost accountant. Such functions are needed to:
 - (a) Establish various cost centers in the organisation.
 - (b) Prepare cost schedules to assist management in making decisions and in formulating policies.
 - (c) Prepare reports on wastages of material, loss of labour time, idle capacity of machines so as to improve profitability of business.
 - (d) Ascertain the cost of every product, job or process both in terms of total and per unit of product.
 - (e) Provide necessary data to enable management in fixing the price.
 - (f) Design suitable system for defining responsibilities and controlling cost.
 - (g) Prepare periodical cost statements and profit and loss account.
 - (h) Assist management in the valuation of closing stock of raw materials and work-in-progress so that too much of capital is not locked up unnecessarily.
2. **Modern way:**

- (a) To work in close co-ordination with various departmental managers so as to implement cost reduction programmes and methods of improvement.
- (b) To undertake cost audit programmes as per the directives issued by the government and the provisions of the Indian Companies Act.
- (c) Supervising the functions of mechanised accounting.
- (d) Organization of internal audit in the field of accounting.

Activity-based Costing Systems

Costs in most manufacturing operations can be divided into three categories: materials, labor, and overhead. Materials, sometimes referred to as direct materials, are the major raw inputs that go into producing a product or service for sale. For example, Mhlume's main raw material is sugar cane. Labor, sometimes referred to as direct labor, represents the salaries/wages and related costs of employing the workers directly involved with physical production. In Mhlume's case, the wages paid to the workers who harvest the cane is an example of a direct labor cost. Through time-and-motion studies and related physical measures of a firm's overall operation, it is a relatively simple matter to link direct materials and direct labor costs to the final product.

The third category of cost, factory overhead, is more problematic. Factory overhead, sometimes referred to as factory burden, comprises all the related costs of producing a product or service. For example, Mhlume would incur the following overhead costs in its operation: equipment depreciation, processing chemicals, water, power for the factory, and supervisor salaries. Unlike direct materials and direct labor costs, which can be linked to the product by direct attribution, overhead costs must be linked through a process of allocation. Naturally, that allocation must be done in some consistent, rational, logical manner. Activity-based costing is one way to allocate overhead to a product or service. Activity-based costing begins with establishing cost pools. Cost pools are groups of related costs in a production operation. Some of the cost pools employed at Mhlume include: land preparation, fertilizing, weed control, and irrigating.

Costs are assigned to a cost pool on the basis of a common cost driver. In activity-based costing, a cost driver is anything which causes (drives) a cost in the production operation. For example, in a typical company purchasing costs might be a cost pool, with the number of purchase orders processed being the cost driver. Once the cost pools and cost drivers are established, accountants can determine the amount of cost absorbed by each unit of the cost driver. For example, if the total cost of a purchasing department during a period was \$10,000, and the department processed 5,000 purchase orders, the cost per purchase order would be \$2. To tie

purchasing costs to the product or service, then, accountants (working with production staff) must determine how many purchase orders were processed to move a certain group of goods through the factory. If a given lot of goods required five purchase orders, the accounting system would allocate purchasing costs to that order. A similar process would be performed for each cost pool, thus building up the overhead costs associated with a given group of goods.

Accounting Issues at Mhlume

Mhlume's operation raises at least three accounting issues: (1) the application of activity-based costing, (2) product pricing and cost control, and (3) transfer pricing.

Activity-based Costing

In general, companies establish activity-based costing systems to gain a more accurate perception of their product's cost. Knowing a product's cost, naturally, is key to setting its price in the market. However, in Mhlume's case, the motivation for establishing an ABC system was different. As previously noted, cultivating, harvesting and processing sugar is a labor-intensive operation. In other words, most of Mhlume's costs are labor costs. Prior to the introduction of activity-based costing in the harvesting operation, all of Mhlume's harvesting labor costs were aggregated in a single general ledger account. Thus, managers had a difficult time determining which parts of the cultivating operation were more expensive and which were relatively less expensive. Mhlume introduced ABC to help managers of the cultivating operation control their costs more effectively and efficiently. (Note, however, that activity-based costing has only been applied to cultivating the sugar cane. The harvesting and milling operations have not adopted ABC, nor have they asked for it to be introduced.)

For external accounting purposes, salaries and wages are still reported as a single line item on the profit and loss statement. However, for internal accounting purposes, salary and wage costs from cultivating the sugar cane are allocated to one of several cost pools: land preparation, planting, post-harvest management, fertilizing, weed control, pest & disease control, ripening, irrigating, canal construction, drainage sub-surface, or drainage maintenance. Those cost pools are reported clearly on Mhlume's internal profit and loss statements, allowing managers to see clearly how much cost was incurred in each area. Costs are allocated to the pools on the basis of labor hours.

Product Pricing and Cost Control

As mentioned previously, Mhlume introduced ABC to give managers better control over their costs. Cost control is critical in Mhlume's operation, as they have very little control over product pricing in their markets. Sugar is traded on the world commodity markets, much like soybeans

and pork bellies. The world market, then, determines the price based on supply and demand factors. Any individual company, therefore, cannot influence the world price of sugar in any significant way. Mhlume operates in the Kingdom of Swaziland. Situated in south-eastern Africa, Swaziland is surrounded on three sides by South Africa; it also shares a border with Mozambique. As a developing nation, Swaziland receives a special concession when it sells sugar to external markets. Specifically, Swazi sugar is sold on the world market at three times the established world price for sugar; that is, if sugar is sold on the world market at \$5 per ton, Swazi sugar is sold for \$15 per ton.

One of the main factors influencing the world price for sugar is its supply in the world market. Each sugar producing company in Swaziland receives a quota (allowance) for sugar production each year. For production up to the quota, Mhlume receives a fixed price. For production over the quota, Mhlume receives a price which is always less than the "quota" price. The two types of revenue are reported separately on Mhlume's internal profit and loss statement as "unsegregated" (amounts up to the quota) and "segregated" (amounts over the quota).

UNIT 2: Cost Elements and Classification

CONTENTS

- Objectives
- Introduction
- 2.1 Cost Unit
- 2.2 Elements of Cost
- 2.3 Classification of Costs
 - 2.3.1 General Classification
 - 2.3.2 Technical Classification

Objectives

After studying this unit, you will be able to:

- Understand the meaning of cost unit;
- Learn the elements of cost;
- Describe the classification of cost.

Introduction

Cost can be defined as the value attributed to a resource. There are three resources of a cost, i.e., material, labour and services for a manufacturing organisation. Cost is the amount of expenditure incurred on a given thing. The committee on cost concepts and standards of American Accounting Association has defined "cost is foregoing measured in monetary terms incurred or potentially to be incurred to achieve a specific objective". In this way, cost indicates

a foregoing of something of value in consideration of obtaining some sort of benefit. The term 'cost' connotes different meanings to different people. But in cost accounting it is used in a special sense.

According to Crowning shield cost represents, "an expenditure made to secure an economic benefit, generally resources that promise to produce revenue. The resources may have tangible substance (material) or they may take the form of labour and services".

Cost has been defined in terminology given by the Institute of Cost and Management Accountants as "the amount of expenditure incurred or attributed on a given thing". More simply, it can be defined as that cost which is given or sacrificed to obtain something. Thus, the cost of an article is its purchase or manufacturing price, i.e., it would consist of its direct material cost, direct labour cost, direct and indirect expenses allocated or apportioned to it.

The term cost is denoted by "expenses" when the cost is incurred after deriving the benefit. The AICPA Committee on terminology defined expenses as "all expired cost which is deductible from revenue". In a narrow sense, expense refers to such items as production, administrative and selling expenses.

2.1 Cost Unit

Cost unit is defined by the ICMA as "a quantitative unit of product or service in relation to which costs are ascertained". A cost unit is a device used for the purpose of splitting total cost into smaller sub-divisions attributable to products or service. A cost unit simply stated is a unit of finished product, service of these in relation to which cost is ascertained and expressed. The following are some of the examples of cost units selected from different industries or organisations:

Table 2.1: Cost Units Selected from Different Industries

Name of the Industry or Organisation	Product	Cost Unit
Brick Industry	Bricks	Per 1,000 bricks
Power Industry	Electricity	Per kilo-watt hour
Cement Industry	Cement	Per tonne
Pharmaceutical Industry	Tablets	Per 1,000 tablets

Name of the Industry or Organisation	Product	Cost Unit
Sugar Industry	Sugar	Per tonne
Furniture Industry	Table	Per table
Hardware Industry	Bolts and nuts	Per 1,000 pieces
Cotton Textile Industry	Yarn	Per Kg
Construction Company	House	Per contract
Transport Companies	Service	Per passenger mile
Hospital	Service	Per bed-day
Canteen	Service	Per meal

Cost Centre

A cost centre refers to a part of a factory for which costs are accumulated separately. In order to facilitate charging of costs to cost units, it is necessary to divide the factory or industry into various parts which can be used to accumulate costs for subsequent distribution. Each such part of a factory or industry is known as a cost centre.

Did u know? What is responsibility centre? Cost centre facilitates fixation of responsibility for every officer-in-charge of part of a department or section. Hence cost centre is also known as a responsibility centre.

Cost centre has been defined by ICMA as "a location, person or item of equipment or group of these in respect of which costs may be ascertained and related to cost units".

The main kinds of cost centres are:

1. Operation and process cost centre,
2. Production and service cost centre, and

3. Personal and impersonal cost centre

- **(i) Operation and Process Cost Centre:** Operation cost centre consists of those machines which carry out the same operation. A process cost centre is a cost centre in which a specific process or a continuous process of operation is carried out.
- **(ii) Production and Service Cost Centre:** A production cost centre is one where the actual production process is carried out. The manufacturing and non-manufacturing costs are charged to the production cost centre. A service cost centre is one which provides services to other cost centres. Only non-manufacturing costs are charged to the service cost centre.
- **(iii) Personal and Impersonal Cost Centre:** Personal cost centre consists of a person or group of persons. Personal cost centre follows the organisational structure of a factory or organisation. Under this type of cost centre, costs are analysed and accumulated according to, say, factory manager, sales manager, storekeeper, etc. Impersonal cost centre consists of a location or equipment. A cost centre relating to location may represent an area of sales or warehouse. Cost centre relating to an item of equipment could be a machine or group of machines.

Whatever may be the kinds of cost centre, it is determined by taking into consideration the following factors:

- Responsibilities and accountabilities to be identified,
- Volume of work to be performed,
- Uses of cost centres, and
- Cost control activities exercised.

2.2 Elements of Cost

The correct interpretation of the term 'cost' may also be understood by having knowledge about the basic elements of cost.

- **(i) Direct Material:** Direct material is material that can be directly identified with each unit of the product. Direct material can be conveniently measured and directly charged to the product. *Example:* Raw cotton in textile manufactures, sugarcane in sugar industry and leather for shoe-making industry.
 - The cost of direct material includes: All types of raw materials issued from the store; raw materials specifically purchased for the specific job or project; raw

materials transferred from one cost centre to another; primary packing material, like cartons, cardboard boxes etc.

- **(ii) Indirect Material:** They are those materials which do not normally form a part of the finished product. It has been defined as "materials which cannot be allocated but which can be apportioned to or absorbed by cost centres or cost units". These are: Stores used in maintenance of machinery, buildings, etc., like lubricants, cotton waste, bricks and cements; stores used by the service departments i.e., non-productive departments like Power house, Boiler house and Canteen, etc.; materials which due to their cost being small, are not considered worthwhile to be treated as direct materials.
- **(iii) Direct Labour:** Direct labour is labour that can be identified directly with a unit of finished product. All the labour charges expended in altering the construction, composition, confirmation or condition of the product are included in it. It includes the payment of direct wages made to: Direct labour engaged on the actual production of the product; direct labour engaged in aiding this manufacture by way of supervision, maintenance and tool setting, etc.; inspectors, analysts, etc. specially required for such production.
- **(iv) Indirect Labour:** The wages of that labour which cannot be allocated but which can be apportioned to or absorbed by, cost centres or cost units is known as indirect labour. In other words, wages paid to labour which are employed other than on production constitute indirect labour costs. Examples of indirect labour are: charge hands and supervisors, maintenance workers, labour employed in service departments, material handling and internal transport, apprentices, trainees and instructors, factory clerical staff and labour employed in time and security office, etc.
- **(v) Direct or Chargeable Expenses:** They include all expenditures other than direct material and direct labour that are specifically incurred for a particular product or job. Such expenses are charged directly to the particular cost account concerned as part of the prime cost. Examples of direct expenses are: excise duty, royalty, surveyor's fees, cost of rectifying defective work, travelling expenses to the job, experimental expenses of projects, expenses of designing or drawings, repairs and maintenance of plant obtained on hire and hire of special equipment obtained for a contract.
- **(vi) Indirect Expenses:** Indirect expenses are expenses which cannot be allocated but which can be apportioned to or absorbed by cost centres or cost units such as rent, insurance, municipal taxes, salary of manager, canteen and welfare expenses, power and fuel, cost of training for new employees, lighting and heating, telephone expenses, etc.

- **(vii) Overheads:** Overheads may be defined as the cost of indirect materials, indirect labour and such other expenses including services as cannot conveniently be charged direct to specific cost units. Thus, overheads are all expenses other than direct expenses. Overheads may be divided into the following categories:
 - **Factory or works overheads** cover all indirect expenditure incurred by the undertaking from the receipt of the order until its completion is ready for dispatch either to the customer or to the finished goods store. The overheads also include: depreciation on plant and machinery, buildings and equipments, insurance charges on fixed assets, repairs and maintenance of fixed assets, electricity charges, coal and other fuel charges, rent, rates and taxes of works, etc.
 - **Office and administrative overhead** consists of all expenses incurred in the direction, control and administration of a factory. Examples are the expenses in running the general office e.g., office rent, light, heat, salaries, salary to secretaries and accountants, general managers, directors, executives, investigations and experiments and miscellaneous fixed charges.
 - **Selling overheads** comprise the cost of products or distributors of soliciting and recurring orders for the articles of commodities dealt in and of efforts to find and retain customers. It includes sales office expenses, salesmen's salaries and commission, showroom expenses, advertisement charges, fancy packing, samples and free gifts, after sales service expenses and demonstration and technical advice to potential customers.
 - **Distribution overheads** comprise all expenditure incurred from the time the product is completed in the work until it reaches its destination. It includes warehouse rent, warehouse staff salaries, insurance, expenses on delivery vans and trucks, expenses on special packing for bulk transport, losses in warehouse stocks and finished goods damaged in transit and cost of repairing, etc.

Cost Analysis and Concepts

- **Cost Driver:** A cost driver is any activity that causes a cost to be incurred. Cost driver is a cost accounting term. A business engages in many different activities. The cost driver for an activity is the factor that influences the amount of the resources that will be consumed by a particular activity. A cost driver is designed to allocate the activity cost pool (or related costs) to the cost objects.

1. The activity is the work that is done.
 2. The resource is what the activity uses to do the work, i.e., people, equipment, services.
 3. Resources cost money - The cost of the activity depends on the quantity of resources used to accomplish the activity.
 4. The cost object is whatever it is you wish to cost. It could be a product, service, process, job or customer.
 - *Example:* One part of Ace Trucking's business operation involves making deliveries by truck. The activity is delivering goods. The costs of this activity include the truck drivers' wages, fuel, depreciation of the truck, insurance, etc. The quantity of the resources that will be consumed by this activity are influenced by the number of deliveries made per year. Hence the cost driver could be the number of deliveries.
- **Out of Stock Cost:** Economic consequences of not being able to meet an internal or external demand from the current inventory. Such costs consist of internal costs (delays, labor time wastage, lost production, etc.) and external costs (loss of profit from lost sales, and loss of future profit due to loss of goodwill). Also called shortages costs.
 - **Replacement cost policy:** Type of homeowners insurance policy that covers the cost to replace or repair the building and/or personal possessions (up to the policy's limit) which is more than the value covered by an actual cash value policy or a market value policy.
 - **Idle facilities cost:** Costs of idle facilities or idle capacity means costs such as maintenance, repair, housing, rent, and other related costs; e.g., property taxes, insurance, and depreciation.
 - **Actual Cost and Opportunity Cost:** Actual costs are those costs which a firm incurs while producing or acquiring a good or service like raw materials, labour, rent, etc. Suppose we pay ₹150 per day to a worker whom we employ for 10 days, then the cost of labour is ₹1500. The economists called this cost as accounting costs because traditionally accountants have been primarily connected with collection of historical data (that is the costs actually incurred) in reporting a firm's financial position and in calculating its taxes. Sometimes actual costs are also called acquisition costs or outlay costs. On the other hand, opportunity cost is defined as the value of a resource in its next best use. For example, Mr. Ram is currently working with a firm and earning ₹5 lakh per year. He decides to quit his job and start his own small business. Although the accounting cost of

Mr. Ram's labour to his own business is 0, the opportunity cost is ₹5 lakh per year. Therefore, the opportunity cost is the earnings he foregoes by working for his own firm.

- Foregone rent is an opportunity cost of utilizing office space and should be included as part of the cost of doing business. Sometimes these opportunity costs are called alternative costs.
- **Explicit and Implicit Cost:** Explicit costs are those costs that involve an actual payment to other parties. Therefore, an explicit cost is the monetary payment made by a firm for use of an input owned or controlled by others. Explicit costs are also referred to as accounting costs. Other types of explicit costs include purchase of raw materials, renting a building, amount spent on advertising etc. On the other hand, implicit costs represent the value of foregone opportunities but do not involve an actual cash payment. Implicit costs are just as important as explicit costs but are sometimes neglected because they are not as obvious. Therefore, an implicit cost is the opportunity cost of using resources that are owned or controlled by the owners of the firm.
- **Accounting and Economic Cost:** Accountants tend to take a retrospective look at firms' finances because they keep trace of assets and liabilities and evaluate past performance. The accounting costs are useful for managing taxation needs as well as to calculate profit or loss of the firm. On the other hand, economists take a forward-looking view of the firm. They are concerned with what cost is expected to be in the future and how the firm might be able to rearrange its resources to lower its costs and improve its profitability. They must therefore be concerned with opportunity cost. Since the only costs that matter for business decisions are future costs, it is the economic costs that are used for decision-making.
 - Accounting profits are the firm's total revenue less its explicit costs. But economists define profits differently. Economic profits are total revenue less all costs (explicit and implicit costs).
- **Controllable and Non-controllable Costs:** Controllable costs are those which are capable of being controlled or regulated by executive vigilance and, therefore, can be used for assessing executive efficiency. Non-controllable costs are those which cannot be subjected to administrative control and supervision. Most of the costs are controllable, except, of course, those due to obsolescence and depreciation.
- **Out-of-Pocket Costs and Book Costs:** Out of pocket costs are those costs that involve current cash payments to outsiders. For example, wages and salaries paid to the employees are out-of-pocket costs. Other examples of out-of-pocket costs are payment of rent, interest, transport charges, etc. On the other hand, book costs are those

business costs which do not involve any cash payments but for them a provision is made in the books of account to include them in profit and loss accounts and take tax advantages. For example, the salary of an owner-manager, if not paid, is a book cost. The interest cost of an owner's own funds and depreciation cost are other examples of book costs.

- **Relevant Costs and Irrelevant Costs:** The relevant costs for decision-making purposes are those costs which are incurred as a result of the decision under consideration. The relevant costs are also referred to as incremental costs. Costs that have been incurred already and costs that will be incurred in the future, regardless of the present decision, are irrelevant costs as far as the current decision problem is concerned. There are three main categories of relevant or incremental costs: The present-period explicit costs, the opportunity costs implicitly involved in the decision, and the future cost implications that flow from the decision.
- **Sunk Costs and Incremental Costs:** Sunk costs are expenditures that have been made in the past or must be paid in the future as part of a contractual agreement or previous decision. For example, the money already paid for machinery, equipment, inventory and future rental payments on a warehouse that must be paid as part of a long term lease agreement are sunk costs. In general, sunk costs are not relevant to economic decisions. Sometimes sunk costs are also called non-avoidable or non-escapable costs. On the other hand, incremental cost refers to the total additional cost of implementing a managerial decision. Change in product line, change in output level, adding or replacing a machine, changing distribution channels etc. are examples of incremental costs. Sometimes incremental costs are also called avoidable or escapable costs. Since incremental costs may also be regarded as the difference in total costs resulting from a contemplated change, they are also called differential costs.
- **Fixed and Variable Costs:** Fixed costs are that part of the total cost of the firm which does not change with output. Expenditures on depreciation, rent of land and buildings, property taxes, and interest payment on bonds are examples of fixed costs. Given a capacity, fixed costs remain the same irrespective of actual output. Variable costs, on the other hand, change with changes in output. Examples of variable costs are wages and expenses on raw material. There are some costs which fall between these extremes; they are called semi-variable costs. They are neither perfectly variable nor absolutely fixed in relation to changes in output. For example, part of the depreciation charges is fixed and part variable.
- **Replacement Cost:** Replacement cost is the cost which will have to be incurred if that asset is purchased now. The difference between historical and replacement costs results

from price changes over time. Suppose a machine was acquired for ₹50,000 in the year 1995 and the same machine can be acquired for ₹1,20,000 in the year 2001. Here ₹50,000 is the historical or original cost of the machine and ₹1,20,000 is its replacement cost. In conventional financial accounts the value of assets is shown at their historical costs. But for decision-making, firms should try to adjust historical costs to reflect price level changes.

- **Profit Centre:** A profit centre is a unit of a company that generates revenue in excess of its expenses. It is expected that, through the sale of goods or services, the unit will turn a profit. This is in contrast to a cost centre, which is a unit inside a company that generates expenses with no responsibility for creating revenue. The only expectation a cost centre has is to lower expenses whenever possible while staying within a specific budget that is determined at the corporate level. Creating separate profit centres within a company allows management to evaluate the profitability of each unit or business activity.

Difference between Cost Centres and Profit Centres

1. Cost centres are the smallest segment of activity or area of responsibility for which costs are accumulated or ascertained, whereas profit centres are that segment of activity which is responsible for both revenue and expenses and discloses the profit of a particular segment of activity.
2. Cost centres are created for accounting convenience, whereas profit centres are created to delegate responsibility to individuals.
3. A cost centre does not have a target cost, but efforts are made to minimize cost. But each profit centre has a profit target.
4. There may be a number of cost centres in a profit centre. All profit centres are cost centres but all cost centres are not profit centres.