
UNIT 2 BASIC COST CONCEPTS

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2.0 OBJECTIVES

After studying this unit, you should be able to :

- 1 describe the need for cost data;
- 1 meaning and classification of costs;
- 1 explain the concept of cost unit and cost centre;
- 1 describe the elements of cost;
- 1 prepare a Proforma of Cost Sheet and identify the components of total cost;
- 1 prepare a statement of quotation and ascertain the price of a tender; and
- 1 describe different methods of costing and identify the industries to which each method is applicable.

2.1 INTRODUCTION

In this unit you will learn about certain basic cost concepts like cost, cost unit, cost centre, classification of costs, elements of costs and components of total cost. Apart from these aspects, the unit also covers preparation of cost sheet showing details of various components of total cost. You will also study about the preparation of statement of quotation. The unit also discusses various methods and types of costing.

2.2 NEED FOR COST DATA

Enterprises may be either profit making or non-profit making organisations. If they are profit making organisations, one of their primary objectives is to operate at a profit. Non profit organisations are generally providers of service. Cost data is required to know how much profit the enterprise is earned. To properly set their prices at a level to ensure a profit for the entity as a whole, the enterprise must know what their costs are. Similarly, decisions regarding adding new products or dropping old products, etc., knowledge of cost data is essential to know how profit changes with various alternatives. In case of non-profit institution, cost data helps to know what level of funding is needed to provide the services. It also helps the management to decide what kind of activities can engage in most efficiently. Thus the management of an organisation requires cost data for the following purposes :

- 1) To ascertain profit or loss periodically,
- 2) To plan the operations and performance evaluation,
- 3) For cost control,
- 4) To price the products or services,
- 5) To value inventory and measure the expenses in external financial reports, and
- 6) In day to day operations of plans and policies,

2.3 COST CONCEPT

In principle, a cost is a sacrifice of resources. According to the terminology of British Institute of Cost and Works Accountants, “Cost is the amount of expenditure (actual or notional) incurred on or attributable to a given thing”. In other words, cost indicates, (i) an actual or estimated expenditure (ii) a direct or indirect expenditure, and (iii) it relates to a job, process, product or service. Examples of such costs are : Material, labour, factory overheads, administrative overheads, selling and distribution overheads.

Cost is a very broad and flexible term. It does not give an exact meaning unless it is used in some particular context. It varies with time, volume, firm, method or purpose. The meaning of cost may change according to its interpretation and the manner in which it is ascertained. It does not mean the same thing under all circumstances. Therefore, cost must indicate its purpose and the conditions under which it is computed.

Costs and Expenses

Cost information is necessary both for managerial accounting and financial accounting. When costs are used inside the organisation to evaluate its performance we say that costs are used for managerial accounting purposes. On the other hand when costs are used by outsiders (interested parties) to evaluate the performance of management and make investment decisions in the organisation, then costs are used for financial accounting purpose.

It is also important to distinguish between cost as used in managerial accounting, from expense, as used in financial accounting. A cost is a sacrifice of resource to achieve specific objective which has been deferred or not yet utilized for the realisation of revenues. The price paid for the acquisition of fixed assets, materials, etc. are the examples of such deferred costs.

An expense is a cost that is charged against revenue in an accounting period and hence expenses are deducted from revenue in that accounting period. Examples are : Salaries, rent rates, etc. Generally Accepted Accounting Principles and Regulations specify when costs are treated as expenses to be charged to revenues.

In accounting for managerial decisions the focus is on costs, and not on expenses. For external reporting, the term expense is used as defined by Generally Accepted Accounting Principles. But in practice, the terms cost and expenses are sometimes used synonymously.

Cost and Loss : There is difference between 'cost' and 'loss'. You know that cost signifies an expenditure incurred for recurring some benefit to the enterprise. If no benefit is derived from a particular expenditure, it is treated as a loss. Cost of material destroyed by fire, salary paid to a foreman during the period of strike etc., are the examples of loss to the business.

2.4 CLASSIFICATION OF COSTS

Costs may be classified into different categories depending upon the purpose. The following are the various bases according to which costs have been classified :

- 1) According to functions to which they relate,
- 2) According to their identifiability with jobs, products, or services,
- 3) According to their variability with changes in output,
- 4) According to the association with product or period,
- 5) According to their controllability, and
- 6) According to their relevance to decision-making

Let us discuss all the above in detail.

2.4.1 Functional Classification

The most common classification of costs in a manufacturing establishment is on the basis of functions to which they relate because costs have to be ascertained for each of these functions. On the basis of functions, costs are classified into four categories. They are :

- i) Manufacturing Costs
- ii) Administrative Costs
- iii) Selling Costs
- iv) Distribution Costs

Manufacturing Costs : Manufacturing costs are those costs related to factory operations which are essential to the completion of the product. It includes direct material costs, direct labour costs and manufacturing overheads. Direct materials are the major components of the finished product and can be easily identified with the product. Direct labour is the labour which is used in actually producing the product. Manufacturing overheads consist of all other costs related to the manufacturing process. These are also termed as 'production costs'.

Administrative Costs: Administrative costs includes all those costs incurred on the general administration and control of the firm. Examples of such costs are : salaries of the office staff, rent of the office building, depreciation and repairs of the office furniture etc. Infact any expenditure which is not related directly to production, selling, distribution, research and development forms part of the administrative costs.

Selling Costs: Selling costs are those costs which are incurred in connection with the sale of goods. Some examples of such costs are : Cost of warehousing, advertising, salesmen salaries etc.

Distribution Costs: Distribution costs are those costs which are incurred on despatch of finished products to customer including transportation. Examples of such costs are: packing, carriage, insurance, freight outwards, etc.

2.4.2 On the Basis of Identifiability with Products

On this basis costs are divided into (i) Direct Costs, and (ii) Indirect Costs:

Direct Costs : Direct costs are those costs which are the major components of the finished products and can be clearly identified with the product being produced. The examples of direct costs are : raw materials, labour and other direct expenses which are exclusively incurred for a particular job, product or process.

Indirect Costs : indirect costs are those costs which cannot be assigned to any particular product, job or process. These costs are usually incurred for the business as a whole and therefore, are to be allocated to various products manufactured in the factory on some reasonable basis. Examples of indirect costs are : factory lighting, rent of factory building, salaries of foreman, etc, Indirect costs are also called as 'overheads' or 'on costs'. These overheads can be further subdivided into factory overheads, administrative overheads, selling and distribution overheads.

2.4.3 On the Basis of Variability

Another classification is based on the cost behaviour. On this basis costs are classified into (i) Fixed Costs, (ii) Variable Costs, and (iii) Semi-variable (or semi-fixed) Costs, (iv) Step Costs.

Fixed Costs: These costs remain fixed irrespective of a change in the volume of output. But fixed cost varies when it is expressed on per unit basis. In other words fixed cost per unit decreases when the volume of production increases and vice versa.

Rent and lease, salary of production manager, salaries of staff, etc., are the examples of fixed cost. It should also be noted that fixed costs do not remain fixed always. They remain fixed only upto a certain level of production activity. If there is a change in the production capacity which require additional building and equipment, staff, etc., such cost will also change. Therefore, fixed costs are fixed within a relevant range of production. For example, if we produce 1000 units or 10,000 units of a particular product during a particular period, the rent of the factory building or the salary of the production manager will remain the same.

Variable Costs: Variable costs are those costs which vary directly or almost proportionately with the level of output. When volume of output increases, total variable cost also increases and when volume of output decreases the variable cost also decreases. But the variable cost per unit will remain unaffected. The examples of variable costs are : direct material, direct wages, power, commission of salesmen etc. Let us see the following example how the variable cost varies with the change in the level of output.

Variable Cost	Level of Output (Units)		
	3,000	4,000	5,000
Unit Costs:	Rs.	Rs.	Rs.
Direct Material (Rs. 1 per unit)	3,000	4,000	5,000
Direct Labour (Rs. 2 per unit)	6,000	8,000	10,000
Direct Expenses (Rs. 1 per unit)	3,000	4,000	5,000
Total Variable Cost	12,000	16,000	20,000
Cost per unit (Total VC ÷ No. of Units)	Rs. 4	Rs. 4	Rs. 4

In the above example the variable cost varies in direct proportion to the activity level but the variable cost per unit is fixed.

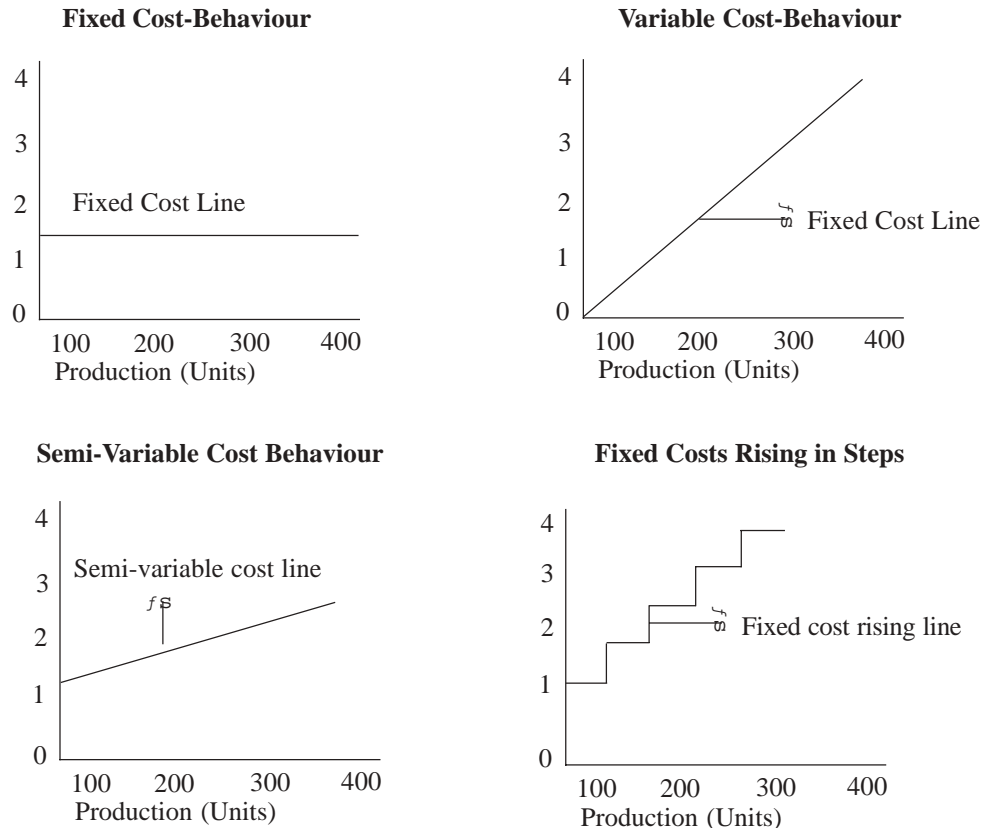
The following are the characteristics of variable costs :

- The variable cost varies direct proportion to the volume of output.
- The cost per unit will remain the same irrespective of level of activity.
- It is easy to accurate allocation and apportionment to different cost centres.
- Variable costs can be controlled by functional managers as they incur only when production takes place.

Semi-variable Costs (or semi-fixed costs): These costs are partly fixed and partly variable. These are the costs which do vary but not in direct proportion to output. A part of semi variable costs comprising of fixed cost component , is not expected to change in response to the changes in the level of activity. Thus, semi-variable costs vary in the same direction but not direct proportion to the changes in the volume of output. Telephone bills, power consumption, depreciation, repairs, etc., are the examples of semi-variable costs. In case of telephone bills, there is a minimum rent and after specified number of calls, the charges are according to the number of calls made. Similarly, power costs include a fixed portion of minimum charge will be charged even if the power is not consumed and variable charge is based on the consumption of power. Thus, telephone and power charges increase with an increase in the usage level but not in the same direction.

Step Costs: Fixed cost in general remain fixed over a range of activity and then jump to a new level as activity changes. For example, a foreman can supervise a given number of workers in a particular shift. The introduction of another shift will require additional foreman and certain costs will increase in lumps. Such costs are known as 'step costs' or 'stair step costs'.

The graphical representation of fixed costs, variable costs, semi-variable costs and step costs is shown below:



Identification of costs according to their behaviour into fixed and variable elements is essential for profit planning, cost control, fixation of prices, preparation of budgets and also in various managerial decisions like make or buy or drop out decisions, selection of a product mix, level of activity decisions, etc.

2.4.4 On the Basis of Product or Period

Product costs are those costs which are easily attributable to products. These costs are necessary for the production and will not be incurred if there is no production. Product costs consist of direct material, direct labour and a reasonable share of factory overhead. These costs are also called inventoriable costs because these are included in the cost of product as work-in-progress, finished goods or cost of sales. Generally all manufacturing costs are treated as product costs.

Costs which are easily attributable to time interval are known as period costs. These costs do not attach to products. These costs are incurred for a time period and generally non-manufacturing costs are treated as period costs. These costs are charged to profit and loss account. The examples of period costs are rent of office building, salary of company executives, etc.

Period costs affect profit as they are charged to profit and loss account after they are incurred whereas product costs will affect profit only when the goods are realized. Thus, classification of costs on the basis of product and period is significant from the profit determination point of view.

2.4.5 On the Basis of Controllable and Non-Controllable Costs

Controllable costs are those costs which can be controlled by a specified person or a level of management. Variable costs are generally controllable by the lower level of management like departmental heads. For example cost of raw materials can be controlled by purchasing them in bulk quantities. Uncontrollable costs are those costs which cannot be controlled or influenced by a specified person of an enterprise. For example costs like factory rent, managerial salaries etc. It should be noted that the costs which are not controllable in the short run likely to become controllable in the long run at some level in the organisation. Similarly, when one moves to the higher levels of management in the organisation more and more costs become controllable. Sometimes classification of costs as controllable or non controllable will be a discretionary matter of the management. The classification of costs on the basis of controllability is important for the evaluation of performance of the executives and assigning the responsibility in the organisation.

2.4.6 On the Basis of Relevance to Decision-Making

The following are some important cost concepts which help the management in decision making process.

Differential Costs: The difference in total costs among the various alternatives is termed as differential cost. In other words, differential cost is the result of change in the total cost from an alternative course of action. If the change increases the cost it is called incremental cost and the change decreases the cost it is called decremental cost. The difference in the total cost may be due to change in the methods of production, change in sales volume, product mix, make or buy or drop out decisions, etc. While assessing the profitability of a proposed change, the incremental costs should be matched with the incremental revenues. Look at the following example :

A company is selling 1500 units @ Rs. 15 per unit. The variable cost per unit is Rs. 7 and the total fixed costs is Rs. 6000. The company receives an export order for the supply of 300 units @ Rs. 12 per unit. If this order is accepted, fixed cost will be increased by Rs. 300.

Solution

The cost and sales before and after accepting the export order is worked out as follows:

<i>Particulars</i>	<i>Before the Export Order</i>		<i>After the Export Order</i>		<i>Incremental</i>	
	<i>Cost Rs.</i>	<i>Revenue Rs.</i>	<i>Cost Rs.</i>	<i>Revenue Rs.</i>	<i>Cost Rs.</i>	<i>Revenue Rs.</i>
Sales		22,500		26,100		3,600
Less Variable Costs	10,500		12,000			
Fixed Costs	6,000	16,500	6,300	18,900	2,400	
Profit		6,000		7,200		1,200

The proposed export order will result a profit of Rs. 1200. If the proposal is implemented it results an incremental revenue of Rs. 3600 against the incremental cost of Rs. 2400. Thus the differential concept is important for managerial decision making.

Sunk Costs: Sunk costs results from past expenditure. Sunk costs cannot be changed now and management has no control over such costs. The examples of Sunk costs are : past cost of inventory, past costs of long term assets etc. It should be noted that past information is totally irrelevant but can be used to predict differential costs in future course of actions. Further the management uses the past expenditure information in performance evaluation.

Imputed Costs : These costs are also called hypothetical costs or notional costs. These costs are included in cost accounts only for the purpose of taking managerial decisions. For example, interest on capital, rent of own building should be taken into account while evaluating the relative profitability of the projects.

Opportunity Costs : Opportunity cost refers to the benefit foregone as a result of accepting one course of action. The manager, while taking a decision should not only take into account the costs and benefits of the proposed alternative but also the profit sacrificed by making the decision. For example, if an owned building is proposed to be utilized for housing a new project plant, the likely revenue which the building could fetch, if it is let out, is the opportunity cost which should be taken into account while evaluating the profitability of the project.

2.5 CONCEPTS OF COST UNIT AND COST CENTRE

2.5.1 Cost Unit

The main function of costing is to ascertain cost per unit of output. Each economic activity has to be measured in identifiable units which may serve as the basis of accounting. Such units for the purpose of costing may be as follows :

- 1) Unit of product, or a group of products (e.g., pair of shoes or one batch of shoes say one dozen)
- 2) Unit of operating service (e.g., cost of running a bus per one kilometer)
- 3) Unit of time (e.g., cost of generating electricity per hour)
- 4) Unit of weight (e.g., cost per one tonne of steel)
- 5) Unit of measurement (e.g., cost per meter of cloth or one litre of petrol)

Thus a cost unit is 'a unit of product, service or time in relation to which costs may be ascertained or expressed'. In other words cost unit is unit of measurement of cost. It will be normally the quantity of product for which price is quoted to the consumers. The selection of cost unit must be appropriate, natural to the business, easily understandable and acceptable to all concerned. Firstly, it should offer convenience in cost ascertainment. Secondly, it should be easier to associate expenses with cost units. Thirdly, it should be according to the nature and prevailing practice of the business.

Some examples of cost unit for different products and services are given below:

Product/Activity	Cost Unit
Cement	Per-tonne/per bag
Iron	Per-tonne/quintal
Chemicals	Per-tonne/kilogram/litre, etc
Power	Per-kilowatt hour
Coal	Per tonne/kilogram
Bricks	Per thousand
Printing press	Per thousand copies
Paper	Per ream/per kilogram
Transport	Per passenger per kilometer/per kilogram per kilometer
Telephone	Per call
Timber	Per cubic foot/square foot
Pencils	Per dozen or gross

Petrol	Per litre
Television	Per set
Gold	Per gram
Hotel	Per room per day
Nursing Homes	Per bed per day
Cars	Per car

2.5.2 Cost Centre

A cost centre is 'location, person, or item of equipment (or group of these) for which costs may be ascertained and used for the purpose of control'. Thus a cost centre refers to a section of business to which costs can be charged. It may consist of either or a combination of the following :

Location : Factory, Department, Office, Warehouse, Stores, Sales Depot, etc.

Person : Salesman, a machine operator, customer, etc.

Equipment : Machine, Car, Truck, etc.

Types of Cost Centres : Cost centres may be divided into the following four types :

- 1) Process Cost Centre (Based on sequence of operations)
- 2) Production Cost centre (for regular production in a factory)
- 3) Operation Cost Centre (where various operations are involved in the production process)
- 4) Service Cost Centre (for activities supporting the main production)

Thus identification or selection of cost centres depends on the nature and types of industry. The identification of cost centres helps us in :

- i) ascertaining the centre-wise costs,
- ii) comparing the centre-wise costs periodically,
- iii) finding out the major trends of variance, and
- iv) applying the techniques of control to check undue, undesirable or unexpected movements in cost.

A cost centre segregates operations, demarcates activities, and distributes expenses. This also helps in fixing responsibilities for every cost centre.

Check Your Progress A

1. What is the concept of Cost ?

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2. Distinguish between direct and indirect costs.

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3. Give four examples of indirect expenses.

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4. Distinguish between cost and loss.
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5. Give two examples of semi-variable costs.
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6. State whether each of the following statements is True or False
- i) Variable cost remains fixed per unit but varies direct proportion to the volume of output.
 - ii) Variable costs are controllable.
 - iii) Operating costing is used in transport industry.
 - iv) Semi-variable costs vary in the same direction to the volume of output but not direct proportion to the changes in the volume of output.
 - v) Fixed costs are also known as period costs.
 - vi) Direct Material + Direct wages + Direct expenses = Works cost.
 - vii) Works cost + Office overheads = Cost of production.

2.6 ELEMENTS OF COST

In order to understand and interpret the term 'cost', it will be necessary to understand about the elements of cost. The following are the three elements of costs: (1) Materials, (2) Labour, (3) Expenses

These can be further sub-dividend into as direct or indirect as follows :

Direct	Indirect
Material	Material
Labour	Labour
Expenses	Expenses

2.6.1 Materials

The term 'materials' refers to those commodities which are used as raw materials, components, or consumables for manufacturing a product. In other words, the substance from which the product is made is known as 'materials'. Materials can be direct or indirect.

Direct Materials: All materials which become an integral part of the finished product and which can be conveniently assigned to specific physical units is termed as 'Direct Materials'. Direct material generally becomes a part of the finished product. The following are some examples of direct material :

- i) All materials or components specifically purchased, produced or requisitioned from stores (e.g., sugar can for sugar, cloth for ready-made garments, cotton for cloth, tyres for car, etc.)
- ii) Primary packing material (e.g., wrapping, cardboard, boxes etc.)
- iii) Partly produced or purchased components

Indirect Materials: All materials which are used for purposes ancillary to the business and which cannot conveniently be assigned to specific physical units is termed as 'indirect materials'. These materials cannot be conveniently identified with individual cost units. Their cost is insignificant in the finished product. Pins, screws, nuts, bolts etc., are some examples. There are some other items which do not physically become part of the finished product. Examples are : Consumable stores, lubricating oil, Greece, printing and stationery etc., These items do not form part of the finished product.

2.6.2 Labour

The workers employed for converting material into finished product or doing various odd jobs in the business are known as 'Labour'. Labour can be direct as well as indirect.

Direct Labour: The workers who are directly involved, in the production of goods are known as 'direct labour'. They may be labourers producing manually or workers operating machinery. Direct labour costs can be conveniently identified with a particular product, job or process. For example, the wages paid to a machine operator engaged in the manufacture of goods. The wages paid to such workers are known as 'manufacturing wages'.

Indirect labour : The workers employed for carrying out tasks incidental to production of goods or those engaged for office work and selling and distribution activities are known as indirect labour. The wages paid to such workers are known as 'indirect wages'. Indirect labour is of general character in nature and cannot be conveniently identified with a particular unit of output. The examples of indirect labour costs are : wages of storekeepers, foremen, directors' fees, salaries of salesman, etc.

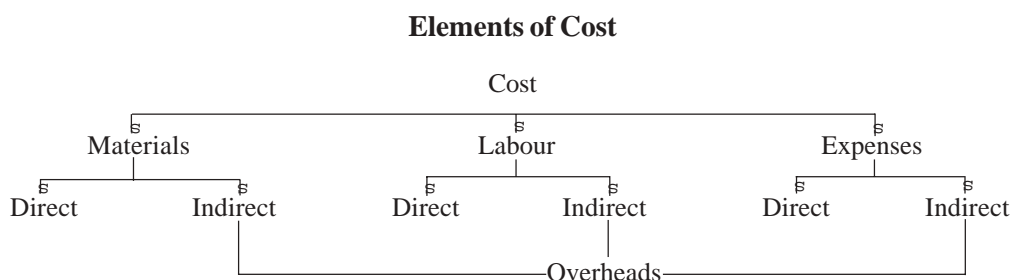
2.6.3 Expenses

All expenses other than material and labour are termed as 'expenses'. Expenses may be direct or indirect.

Direct Expenses : Expenses which can be identified with and allocated to cost centres or units are called direct expenses. These are the expenses which are specifically incurred in connection with a particular cost unit. Direct expenses are also called as 'chargeable expenses'. The examples of such expenses are : Carriage inwards, production royalty, hire charges of special equipment, cost of special drawings, designs and layouts, experimental costs, etc.

Indirect Expenses : These are expenses which cannot be directly or wholly allocated to cost centres or cost units. In other words, all expenses other than indirect material and labour which cannot be directly attribute to a particular product, job or service are called indirect expenses. Examples of such expenses are : Rent and Rates, lighting and heating, advertising, insurance, repairs, carriage, etc.

The above elements of cost may be shown in the form of a chart as shown below:



All materials, Labour, expenses which cannot be identified as direct costs are termed as 'indirect costs'. The three elements of indirect costs viz., indirect materials, indirect labour and indirect expenses are collectively known as 'overheads' or 'on costs'.

Overheads are grouped into three categories:

- 1) Factory (or manufacturing) overheads,
- 2) Office (or administrative) overheads, and
- 3) Selling and distribution overheads.

1) **Factory Overheads**

All indirect manufacturing costs which cannot be identified with specific unit of output are called factory overheads. It includes:

- i) Indirect material such as lubricants, oil, consumable stores etc.,
- ii) Indirect labour a such as gate-keepers' salary, works manager's salary etc., and
- iii) Indirect expenses such as factory rent, depreciation on factory building and equipment, factory insurance, factory lighting etc.,
- iv) Factory overheads are also known as manufacturing overheads, indirect production costs, factory on cost, overhead expenses etc.

2) **Office Overheads**

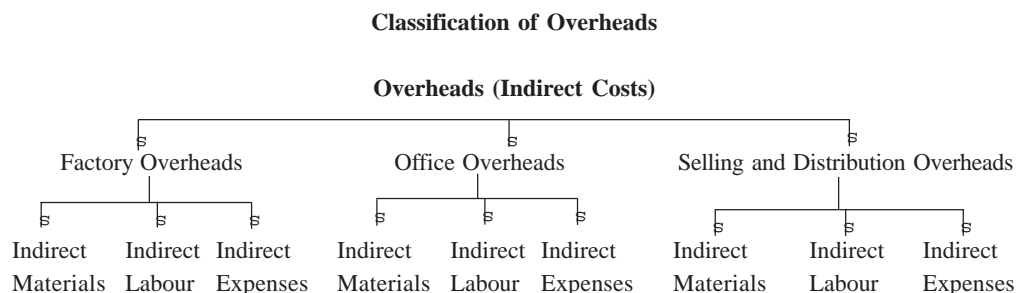
Indirect expenses incurred in connection with the general administration like formulating policies, planning and controlling of a firm for attainment of its goal, are included in these overheads. They include (i) indirect material used in office such as printing and stationary material, brooms and dusters etc. (ii) Indirect labour such as salaries payable to office manager, clerks, etc. and (iii) indirect expenses such as rent, insurance, lighting of the office etc.,

3) **Selling and Distribution Overheads**

Selling and distribution overheads include all those costs which are incurred for promoting and marketing the products. These include :

- (i) Indirect material used such as packing material, printing and stationary material etc, (ii) Indirect labour such as salaries of salesmen, sales manager, etc. and (iii) Indirect expenses such as rent, insurance, advertising expenses etc.

The above classification of overheads can be shown with the help of the following Figure:



2.7 TOTAL COST BUILD-UP

Components of Total Cost

Total cost of a product is the combination of direct costs and indirect costs. Direct Costs, as you know, consist of direct materials, direct labour and direct expenses and it is also known as prime cost. Indirect Costs known as overheads consists of factory overheads, office overheads and selling and distribution overheads. Thus, the two main components of total cost are: 1) Prime cost, and (2) Overheads.

If we add various costs one by one, we get the framework of total cost build up as follows :

- 1) **Prime Cost:** It consists of cost of direct material, direct labour and direct expenses. It is also known as basic, first or flat cost. Thus,

$$\text{Prime cost} = \text{Direct material} + \text{Direct Labour} + \text{Other direct expenses}$$
- 2) **Factory Cost :** It includes Prime Cost and factory overheads which consists of indirect material, indirect labour and indirect factory expenses. The factory cost is also known as works cost, production or manufacturing costs. Thus,

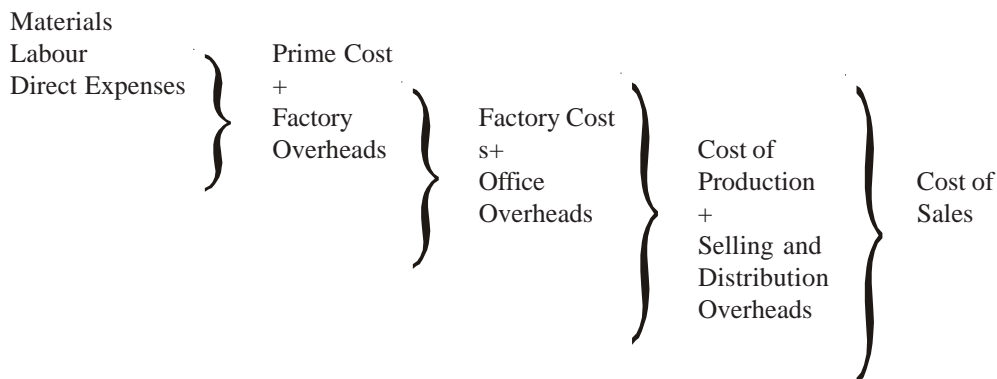
$$\text{Factory Cost} = \text{Prime Cost} + \text{Factory Overheads}$$
- 3) **Cost of Production:** It comprises factory cost and office and administrative overheads. It is also known as office cost. Thus,

$$\text{Cost of Production} = \text{Factory Cost} + \text{Office and Administrative Overheads}$$
- 4) **Total Cost:** It comprises cost of production and selling and distribution overheads. It is also called as cost of sales.

$$\text{Total Cost} = \text{Cost of Production} + \text{Selling and Distribution overheads}$$

The above framework of total cost building-up is shown in the following Figure :

Total Cost Build Up



Thus, the components of total cost are :

Prime Cost, (2) Works Cost, (3) Cost of Production, and (4) Cost of Sales.

2.8 COST SHEET

The elements of cost can be presented in the form of a statement called 'Cost Sheet'. A cost sheet is a statement showing the various components of total cost of output for a certain period which acts as a guide to pricing decisions and cost control. It has been defined as "a document which provides for the assembly of the detailed cost of a cost centre or cost unit". The cost sheet should be prepared properly and at frequent intervals, i.e., weekly, monthly, quarterly, yearly etc. Cost sheet may be prepared separately for each cost centre. Additional columns can also be provided for the purpose of comparison of current data with the previous data.

Cost Sheet, generally serves the following purposes :

- i) It provides total cost and cost per unit of production,
- ii) It gives the details regarding various elements of total cost, i.e., material, labour, overheads, etc.,
- iii) It gives scope for a comparative study of cost of production of the current period with that of the previous period.
- iv) It helps the management in taking managerial decisions relating to pricing decisions, quotation of tenders, cost control etc.

The information to be shown in the cost sheet will depend upon the nature and requirement of the enterprise. Generally, following information may be incorporated into a cost sheet :

- 1) Name of the product, cost centre or cost unit
- 2) Period to which the statement relates
- 3) Output of the period
- 4) Details of various components of total cost
- 5) Item-wise cost per unit
- 6) Changes in stock position
- 7) Cost of goods sold
- 8) Profit or loss position

The Proforma of Cost sheet is given below :

Proforma of Cost Sheet

COST SHEET OF.....

For the month ending.....

Output.....nits

	<i>Total Rs.</i>	<i>Per Unit Rs.</i>
Raw Materials consumed :		
Opening Stock of Raw of materials		
Add : Purchases of Raw Materials		
Less : Closing stock of raw materials		
Direct Labour		
Direct Expenses		
PRIME COST		
Factory Overheads :		
Rent		
Depreciation on premises		
Power and light		
Indirect material		
Indirect wages		
Telephone Charges		
Insurance etc.		
WORKS COST		

Office and Administrative Overheads:		
Office salaries		
Office rent		
Office expenses, etc		
COST OF PRODUCTION		
(.....units)		
Add Opening Stock of Finished goods		
(.....units)		
Less Closing Stock of Finished Goods		
(.....units)		
COST OF GOODS SOLD		
(.....units)		
Selling and Distribution Overheads :		
Salaries and commission		
Advertising		
Packing expenses		
Travelling expenses		
Warehouse charges		
Carriage outwards, etc.		
COST OF SALES		
(.....units)		
PROFIT (LOSS)		
SALES/SELLING PRICE		

Look at the following illustration and see how a Cost Sheet is prepared with the following information:

Illustration 1

From the following particulars of a manufacturing firm prepare a cost sheet showing different components of total cost for the year ending 31st March, 2003.

Particulars	Amount (Rs.)
Stock of material (April 1, 2002)	80,000
Purchase of Raw materials	12,00,000
Stock of finished goods on 1-4-2002 (10,000 units)	1,00,000
Direct wages	8,00,000
Direct chargeable expenses	8,000
Finished goods sold (1,80,000 units)	25,40,000
Factory rent rates and power	20,000
Indirect wages	5,000
Depreciation on Plant and Machinery	2,000
Carriage Outwards	20,000
Carriage Inwards	2,000
Office rent and taxes	1,500
Telephone charges	3,000
Travelling expenses	60,000
Advertising	10,000
Depreciation on office premises	1,500
Stock of materials on 31.3.2003	1,60,000
Stock of finished goods on 31.3.2003 (12,000 units)	1,20,000

Solution

Firstly, we have to find out the number of units produced during the year, before preparing the cost sheet.

	No. of Units
Closing Stock (31.3.2003)	12,000
Add: Number of Units sold	1,80,000
	<u>1,92,000</u>
Less : Opening Stock (1.4.2002)	<u>10,000</u>
Number of units produced during the year	<u>1,82,000</u>

COST SHEET for the year ending 31.3.2003

Output: 1,82,000 Units

Particulars	Total Rs.	Per Unit Rs.
Raw Materials Consumed:		
Opening Stock (1.4.2002) 80,000		
Add: Purchase of Raw material 14,21,000		
Add : Carriage inwards 2,000		
	<u>15,03,000</u>	
Less : Closing stock of raw material (as on 31.3.2003) 1,60,000		
	<u>13,43,000</u>	
Direct wages 8,00,000		
Other direct chargeable expenses 8,000		
	<u>21,51,000</u>	
Prime Cost		
Works Overheads:		
Indirect wages 5,000		
Factory rent, rates and power 20,000		
Depreciation on plant and machinery 2,000		
	<u>27,000</u>	
Works Cost	<u>21,78,000</u>	
Office and Administrative Overheads:		
Office rent and taxes 1,500		
Telephone charges 3,000		
Depreciation on office premises 1,500		
	<u>6,000</u>	
Cost of Goods Sold	<u>21,84,000</u>	12.00
(1,82,000 units @ Rs.12 per unit)		
Add : Opening stock of Finished goods (10,000 units @ Rs.12 per unit)	<u>1,20,000</u>	12.00
	<u>2,30,000</u>	
Less : Closing stock of Finished goods (12,000 units @ Rs.12 per unit)	<u>1,44,000</u>	12.00
	<u>21,60,000</u>	

Cost of Goods Sold (180,000 units)			
Selling and Distribution Overheads:			
Travelling expenses	60,000		
Carriage outwards	20,000	90,000	0.50
Advertising	10,000		
Cost of Sales			
Profit		22,50,000	12.50
		6,30,000	3.50
SALES		28,80,000	16.00

2.9 CALCULATION OF RECOVERY RATES

Sometimes, you are required to calculate overheads recovery rates based on the cost sheet prepared by you. Such rates are usually in respect of factory overheads and administration overheads. Factory overhead rate is usually calculated as a percentage of direct wages as follows:

$$\text{Factory Overhead Rate} = \frac{\text{Factory Overheads}}{\text{Direct wages}} \times 100$$

Administration overhead rate is usually calculated as a percentage of works cost as follows:

$$\text{Administration Overhead Rate} = \frac{\text{Office Administration Overheads}}{\text{Factory or Works Cost}} \times 100$$

Selling and distribution overheads rate may be computed either as a percentage of Works cost or as a percentage of sales as follows :

$$\text{Selling and Distribution Overhead Rate} = \frac{\text{Selling and Distribution Overheads}}{\text{Works Cost or Sales}} \times 100$$

Let us see the following illustration how the recovery rates are calculated :

Illustration 2

The following is the cost data relating to a manufacturing company for the period ending December 31, 2002 :

	Rs.
Raw material purchased	1,20,000
Stock of raw material on 1-1-2002	25,000
Direct wages	1,00,000
Factory overheads	60,000
Carriage inwards	1,00,000
Selling and distribution overheads	72,800
Administration overheads	67,200
Stock of raw material on 31.12.2002	35,000
Sales during the year	6,12,000

Find out a) Cost of Production

b) Cost of Sales

c) The Net Profit for the year

d) The percentage of factory overheads on direct wages

e) The percentage of administration overheads on works cost

f) The percentage of selling and distribution overheads on works cost and

g) The percentage of profit to cost of sales.

Solution

Cost Sheet for the period ending December 31, 2002

Cost of Raw material consumed :	Rs.	Rs.
Stock of Raw Material (as on 1-1-2002)	25,000	
Add : Raw material purchased	1,20,000	
Add : Carriage inwards	1,00,000	
	<hr/>	
	2,45,000	
Less : Stock of Raw Material (as on 31-12-2002)	35,000	
	<hr/>	
		2,10,000
Direct Wages		1,00,000
		<hr/>
	PRIME COST	3,10,000
Factory Overheads		60,000
		<hr/>
	WORKS COST	3,70,000
Administration Overheads		67,200
		<hr/>
	(a) COST OF PRODUCTION	4,37,200
Selling and Distribution Expenses		72,800
		<hr/>
	(b) COST OF SALES	5,10,000
	(c) PROFIT	1,02,000
		<hr/>
	SALES	6,12,000
		<hr/>

(d) Percentage of Factory Overheads to Direct Wages

$$\begin{aligned}
 &= \frac{\text{Factory Overheads}}{\text{Direct Wages}} \times 100 \\
 &= \frac{60,000}{1,00,000} \times 100 \\
 &= 60\%
 \end{aligned}$$

(e) Percentage of Administration Overheads to Works Cost

$$\begin{aligned}
 &= \frac{\text{Administration Overheads}}{\text{Works Cost}} \times 100 \\
 &= \frac{67,200}{3,70,000} \times 100 \\
 &= 18.16\%
 \end{aligned}$$

(f) Percentage of Selling and Distribution Expenses on Works Cost

$$= \frac{\text{Selling and Distribution Expenses}}{\text{Works Cost}} \times 100$$

$$= \frac{72,800}{3,70,000} \times 100$$

$$= 19.68\%$$

(g) Percentage of Profit to Cost of Sales

$$= \frac{\text{Profit}}{\text{Cost of Sales}} \times 100$$

$$= \frac{1,02,000}{5,10,000} \times 100$$

$$= 20\%$$

2.10 STATEMENT OF QUOTATION

A manufacturer, sometimes, may be asked to quote a price for supply a particular article with certain specifications. The term 'Quotation' refers to quoting the minimum price for obtaining a specific order. Such a price is quoted before the commencement of actual production in anticipation of obtaining a particular order. While quoting the price the manufacturer has to keep in view the likely impact of inflationary trends on the input. Before submitting a tender or fixing price he must have full information regarding cost of inputs like raw materials, wages, different overheads and a reasonable amount of profit. On the basis of past records, he can prepare a cost sheet incorporating inflationary trends in price levels of various components of production. While quoting the price for such specific order, he has to be cautious that the price is neither too high nor too low. In case the price is too high, the tender will be rejected outright. On the other hand, if the price is too low, it will result in either lower profit or loss. Therefore, it is important to estimate the cost as accurately as possible.

Statement of quotation is prepared in the same manner as Cost Sheet as shown in illustration 3

Illustration 3

A manufacturing company receives a quotation for the supply of 10,000 units of its products. The costs are estimated as follows :

Raw material 80,000 kgs. @ Rs. 4 per kg.

Direct wages 10,000 hours @ Rs. 2 per hour

Variable overheads :

Factory @ Rs. 2.50 per labour hour

Selling and Distribution Rs. 30,000

Fixed Overheads :

Factory Rs. 10,000

Office and Administration Rs. 75,000

Selling and Distribution Rs. 20,000

The company adds 10% to its cost as its margin of profit. Prepare a Statement of Quotation showing the price to be quoted.

Solution

Statement of Quotation showing the price to be quoted for 10,000 units

	<i>Total Rs.</i>	<i>Per Unit Rs.</i>
Estimated cost of Direct Materials (80,000 kgs X Rs. 4 per kg)	3,20,000	32.00
Estimated Cost of Direct Labour (10,000 hours X Rs. 2 per hour)	20,000	2.00
Estimated Prime Cost	3,40,000	34.000
Add : Estimated Factory Overheads :		
Variable (10,000 hours X Rs. 2.50)	25,000	
Fixed	<u>10,000</u>	
	35,000	35.00
Estimated Factory Cost	3,75,000	37.50
Add: Estimated Office and Administrative Overheads	75,000	45.00
Estimated Cost of Production	4,50,000	45.00
Add: Estimated Selling and Distribution Overheads		
Variable	Rs. 30,000	
Fixed	<u>Rs. 20,000</u>	
	50,000	5.00
Estimated Cost of Sales	5,00,000	50.00
Add: Deserved Profit @ 10% on cost price	50,000	5.00
Estimated Selling Price	5,50,000	55.00

Sometimes, cost records for a particular period are given and the estimated cost of material and labour of a work order are provided for the purpose of ascertaining its selling price to be quoted. In such a situation, you should prepare the cost sheet first and ascertain the recovery rates for factory overheads as a percentage to direct wages, for administrative overheads as a percentage of works costs, and for selling and distribution overheads as percentage of cost of goods sold or as suggested in the given question. These rates must be duly adjusted with the anticipated changes, if any, before preparing the statement of quotation. Look at the following illustration and how the statement of quotation for a work order is prepared with the help of a give cost data.

Illustration 4

The following figures have been obtained from the cost records of a manufacturing company for the year 2002 :

Cost of Materials	1,20,000
Wages for Direct labour	1,00,000
Factory overheads	60,000
Distribution expenses	28,000
Administration expenses	67,200
Selling expenses	44,800
Profit	84,000

A work order was executed in 2003 and the following expenses were incurred :

Cost of Materials	16,000
Wages for labour	10,000

Assuming that in 2003 the rate for factory overheads went up 20%, distribution charges went down by 10% and selling and administration charges went up by $12\frac{1}{2}\%$,

at what price should the product be quoted so as to earn the same rate of profit on the selling price as in 2002. Show the full workings.

Factory overheads are based on direct wages while administration, selling and distribution expenses are based on factory cost.

Solution

Statement of Cost for the year 2002

	Rs.
Cost of Direct Materials	1,20,000
Direct wages	1,00,000
PRIME COST	2,20,000
Factory Overheads	60,000
WORK COST	2,80,000
Administration Overheads	67,200
COST OF PRODUCTION	3,47,200
Selling Overheads	44,800
Distribution Overheads	28,000
COST OF SALES	4,20,000
Profit	84,000
SALES	5,04,000

$$\begin{aligned}
 \text{Factory Overhead Rate} &= \frac{\text{Factory Overheads}}{\text{Direct Wages}} \times 100 \\
 &= \frac{60,000}{1,00,000} \times 100 \\
 &= 60\%
 \end{aligned}$$

$$\begin{aligned}
 \text{Administrative Overheads Rate} &= \frac{\text{Administration Overheads}}{\text{Works Cost}} \times 100 \\
 &= \frac{67,200}{2,80,000} \times 100 \\
 &= 24\%
 \end{aligned}$$

$$\begin{aligned}
 \text{Selling Overheads Rate} &= \frac{\text{Selling Overheads}}{\text{Works Cost}} \times 100 \\
 &= \frac{44,800}{2,80,000} \times 100 \\
 &= 16\%
 \end{aligned}$$

$$\begin{aligned}
 \text{Distribution Overhead Rate} &= \frac{\text{Distribution Overheads}}{\text{Works Cost}} \times 100 \\
 &= \frac{28,000}{2,80,000} \times 100 \\
 &= 10\%
 \end{aligned}$$

$$\begin{aligned}
 \text{Rate of Profit} &= \frac{\text{Profit}}{\text{Cost of Sales}} \times 100 \\
 &= \frac{84,000}{4,20,000} \times 100 \\
 &= 20\% \text{ cost of sales}
 \end{aligned}$$

Statement of Quotation showing the price to be quoted for a work order

		Rs.
Cost of Direct Materials		16,000
Direct wages		10,000
PRIME COST		26,000
Factory Overheads : 60% of wages	6,000	
Add 20% increase	1,200	7,200
WORK COST		33,200
Administration Overheads: 24% of works cost	7968	
Add : $12\frac{1}{2}$ increase	996	8,964
COST OF PRODUCTION		42,164
Selling Overheads : 16% of works cost	5312	
Add : $12\frac{1}{2}$ increase	664	5,976
Distribution Overheads : 15% of works cost	3320	
Less : 10% decrease	332	2,988
COST OF SALES		51,128.00
Profit (20% of Cost of Sales)		10,225.50
SALES		61,353.50

Check Your Progress B

1) What is a cost Sheet ?

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2) Name the basic methods of costing

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3) Name different types of costing.

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4) What do you mean by quotation? Why is it necessary ?

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5) State whether each of the following statement is True or False

- i) Selling and distribution overheads are recovered on the basis of percentage to cost of production.
- ii) Office and administrative overheads are recovered usually on the basis of percentage to factory cost.
- iii) Factory overheads rate is usually calculated as a percentage of direct wages.
- iv) $\text{Cost of sales} = \text{Factory cost} + \text{Selling and Distribution overheads}.$
- v) $\text{Selling price} = \text{Cost of sales} + \text{Profit}.$

2.11 METHODS OF COSTING

Business enterprises are not alike. They are different from another in some way or other. The basic principles and procedures of costing remains the same in all industries but the method of analysis and presentation of cost of their products and services vary from industry to industry. Therefore, the choice of a particular method of costing depends upon the nature and types of the product or service provided by a business unit. The various methods of costing can be summarized as follows :

2.11.1 Job Costing

Under this method, costs are ascertained for each job or work order separately. The job may consist of a single unit or it may consist of identical or similar products under a single work order. This method applies where work is undertaken against customers' requirements. Job costing is suitable to industries like printing, repairs, foundries, interior decorators, building construction etc. Non profit organisations like rehabilitation or street repair programmes also use job costing to ascertain cost of individual projects. It can also be used in industries where different product lines are manufactured. For example, a furniture manufacturer may produce a batch of similar chairs, a batch of tables and so on. Each batch can be treated as a job for accounting purposes. Job costing also found in service organisations like engineering, consultancy and accounting firms. Job costing procedure is the same both in manufacturing and service organisations, except that service units use no direct material.

The purpose of job costing is to ascertain the cost of production of each job for fixing selling prices, bidding, controlling costs and evaluating performance. It also provides information for negotiating price increase with the customers.

2.11.2 Contract Costing

This method is used in case of big jobs and therefore, the principles of job costing are applied to contract costing. The contract work usually involves heavy expenditure, spreads over a long period and is usually undertaken at different sites. Hence, each contract is treated as a separate unit for the purpose of cost ascertainment and control. Contract costing is also termed as terminal costing as the cost can be terminated at some point and related to a particular job. Contract costing is employed in business undertakings engaged in construction of buildings, roads, bridges, ship building and other civil and mechanical engineering works.

2.11.3 Batch Costing

This method of costing is used in industries where the production is carried on in batches. Each batch consist of identical products which maintains its identity throughout one or more stages of production. Each batch cost is used to determine the unit of cost of products. On completion of the batch the cost per unit can be calculated by dividing the 'total batch cost' by the number of units produced. This method of costing is suitable to industries where production consists of repetitive production in nature and specified number of products are produced in one batch. It is generally used in industries like engineering component industry, pharmaceuticals, footwear, bakery, readymade garments, toy manufacturing, bicycle parts etc.

2.11.4 Unit Costing

Unit Costing is a method of cost accounting where costs are determined per unit of a single product. This method is also called single or output costing. This method is suitable to industries where production is continuous and uniform and engaging in the production of a single product in two or three varieties. The cost per unit is found by dividing the total cost by the total number of units produced. Where the product is produced in different grades, costs are ascertained grad wise. It is suitable for industries like collieries, quarries, brick works, flour mills, paper mills, cement, textile mills, diaries etc.

2.11.5 Process Costing

Where a product passes through different processes and each process is distinct and well defined the method employed for ascertaining the cost at each stage of production is called process costing. Process costing is used in those industries where the production is continuous and the final product is the result of sequence of operations or processes. The finished product of one process will become the raw material of the next process and the output of the last process will be the finished stock. The cost per unit at each process will be calculated by dividing the total cost by the number of units produced at each stage and the cost per unit of the final product is the average cost of all the processes. During the course of processing of raw material, loss of some raw material is unavoidable or it may give rise to the production of several products called joint products or by products. Process costing is used in case of chemicals, paints, textiles, bakeries, oil refining, food products, etc. Standardization of processes helps the management to submit quotations in time without any delay. As actual and budgeted costs are available in each process it facilitates managerial control by evaluating the performance at each process level.

2.11.6 Operating Costing

Operating Costing is also called as 'service costing' because this method is used in those undertakings which provide services and are not engaging in manufacturing tangible products. It is used for ascertaining the cost of operating a service such as railways, roadways, airways, hotels, nursing homes, power supply, water supply etc. In these undertakings the cost unit is a service unit which is as follows:

Undertaking	Cost Unit
Canteen	per cup of tea
Cinema	per seat
Electricity	per kilo watt
Hospital	per bed
School/College	per student
Transport	per passenger kilometer/per tonne kilometer

A large amount of capital is invested in fixed assets and comparatively less working capital is required in these industries. Operating costing is different from operation costing. Operating costing is used to determine the cost of providing a service whereas operation costing is used to find out cost of each operation in those of industries which produce goods consisting of a number of operations.

2.11.7 Multiple Costing

It is an application of more than one method of costing in respect of the same product. This method is suitable in industries where a number of components are manufactured separately and then assembled into a finished product. In cases of motor car, type writer, television, refrigerators, etc., costs are to be ascertained for each component as well as for finished product. This involves use of different methods of costing for different components and so it is known as 'multiple' or 'composite costing'.

2.11.8 Uniform Costing

The practice of using a common method of costing by a number of firms in the same industry is known as 'uniform costing'. Thus it is not a separate method of costing. It simply refers to a common system using agreed concepts, principles and standard accounting practices. This helps in making inter-firm comparisons and fixation of prices.

It should be noted that there are two basic methods of costing. They are : (i) Job costing, and (ii) Process costing. The other methods discussed above are simply variants of these two methods.

2.12 TYPES OF COSTING

2.12.1 Marginal Costing

It is also known as Variable Costing. It may be defined which methods of costing refers to the process and practice of ascertaining costs of products and services, the types of costing refers to the technique of analysing and presenting costs for the purpose of control and managerial decisions. The types of costing (also known as techniques of costing) generally used are as follows:

as "the ascertainment of marginal costs and of the effect on profit of changes in volume or type of output by differentiating between fixed costs and variable costs." It is a technique of costing which emphasizes the distinction between product costs and period costs. Only variable costs (direct material, direct labour, other direct expenses and variable overheads) are allocated to products without taking into account fixed costs. Fixed costs are treated as period costs and are charged to costing profit and loss account of the period in which they are incurred. The profitability of the product is based on the amount of contribution made by each product. Contribution is the difference between selling price and marginal cost of sales. The price of a product will be determined on the basis of marginal cost plus contribution. The difference between the total contribution and total fixed cost represents the profit ($\text{Profit} = \text{Contribution} - \text{Fixed cost}$).

The technique of marginal costing is a valuable tool to management in making managerial decisions like fixation of selling price, selection of suitable product mix, selection of alternative methods of production, make or buy decisions, and also for cost control.

2.12.2 Absorption Costing

Absorption costing is a principle whereby fixed as well as variable costs are allotted to cost units. It is a technique of charging all costs, both fixed and variable costs, to production of a product. Absorption costing does not require a break-down of costs into fixed and variable costs. As such fixed costs are treated as product costs under absorption costing. The reports prepared under absorption costing can be used for external use.

2.12.3 Historical Costing

It refers to a system of cost accounting under which costs are ascertained only after they have been incurred. In other words, accounting is done in terms of actual costs and not in terms of predetermined and standard costs. In the initial stages of development of cost accounting, historical costing is the only system available for ascertaining costs. This system is not useful for cost control and measuring the performance efficiency of the concern. Moreover, it is not useful in price quotations and production planning.

2.12.4 Standard Costing

It refers to the system of cost accounting under which costs are determined in advance on certain predetermined standards. These are known as standards which indicate the level of costs that should be attained under a given set of operating conditions. The standard costs are compared periodically with the actual costs and underlying causes for variances are analysed so that corrective action may be taken in time wherever necessary. The Standard Costing is helpful to the management for cost control, production planning, formulation of policies, measuring efficiencies, eliminating inefficiencies, etc.

2.13 LET US SUM UP

Cost data is required by an organisation for the purpose of ascertaining profit or loss periodically, to plan its future operations as well as to evaluate its performance and cost control. It also requires to price its products or services, to value its inventory and day to day operations of plans and policies. Costs indicates (i) an actual or estimated expenditure (ii) a direct or indirect expenditure and (iii) it relates to a job, process, product or services. Cost is a flexible concept. It varies with time, volume, firm, method or purpose. There is difference between 'cost' and 'loss'. Cost signifies an expenditure incurred for recurring some benefit and if no benefit is desired from a particular expenditure, it is treated as loss.

Cost can be classified in various ways. On the basis of functions to which they relate, costs are classified into manufacturing costs, administrative costs, selling and distribution costs. On the basis of Identifiability with products costs can be classified into direct costs and indirect costs. On the basis variability costs can be classified into fixed costs, variable costs and semi variable costs. Costs can also be classified on the basis of product or period. Product costs are those costs which are easily attributable to products where as costs which are easily attribute to time interval are known as period costs. Costs can also be classified on the basis of controllable and non-controllable costs.

A cost unit is a unit of product, service or time in relation to which costs may be ascertained or expressed. A cost centre is a location, person or item of equipment (or group of these) for which costs may be ascertained and used for the purpose of control. There are three elements of costs : (i) Materials (ii) Labour and (iii)

Expenses. These costs can be further sub-divided into as direct or indirect costs. Indirect costs are : indirect material, indirect labour, and indirect expenses. Indirect costs are known as ‘overheads’. Overheads can be classified into factory overheads, office overheads, selling and distribution overheads.

The main components of total cost are prime cost, works cost, cost of production and cost of sales. The elements of cost can be presented in the form of a statement called ‘cost sheet’ A cost sheet is a statement showing the various components of total cost of output for a certain period which acts as a guide to pricing decisions and cost control. Overhead recovery rates are based on the cost sheet. Sometimes, a statement of quotations is required to be prepared in order to find out the price to be quoted to the prospective buyer for obtaining a specific order. Such a price is quoted before the commencement of actual production after taking into consideration the inflationary trends in the price levels of various components of production.

There are various methods of costing. These are: (i) Job costing (ii) Contract costing (iii) Batch costing (iv) Unit costing (v) Process costing (vi) Operating costing (vii) Multiple costing (viii) Uniform costing. The types of costing refers to the techniques of analysing and presenting costs for the purpose of control and managerial decisions. The types of costing generally used are: (i) Marginal costing (ii) Absorption costing (iii) Historical costing, and (iv) Standard costing.

2.14 KEY WORDS

Allocation: Distribution of expenditure among various cost centres.

Costing: The technique and process of ascertaining costs.

Cost Sheet: A statement showing different elements of cost relating to a particular product or a job for a particular period.

Cost Centre: A location, person, equipment or department for which costs may be ascertained and used for purpose of control.

Direct Expenses: Expenses or decrease in the same proportion on the increase or decrease in the output.

Cost of Sales: Total cost of a product including selling and distribution expenses.

Prime Cost: Cost of direct expenses including direct materials and wages.

Semi-variable costs: Expenses which change with changes in output, but not in the same proportion.

Works cost: Prime cost plus factory overheads.

Chargeable expenses: Other direct expenses.

By-product: A product of relatively small value produced incidentally from processing the raw material for the main product.

Joint Product: Two or more products resulting from processing a particular raw material.

Process Costing: A method of ascertaining the cost of a product at each stage or process of manufacturing.

Contract Costing: A special form of job costing applicable to big projects which involves huge cost to complete and is usually site-based.

Job Costing: Specific order costing involving accumulation of costs relating to a single cost unit - the job - when each order is of comparatively short duration.

2.15 ANSWERS TO CHECK YOUR PROGRESS

- A) 6 i) True (ii) False iii) True (iv) True (v) True (vi) False (vii) True
B) 4 i) False (ii) True iii) True iv) False v) True

2.16 TERMINAL QUESTIONS

- 1) Distinguish among variable, fixed and semi-variable costs. Why is this distinction important?
- 2) "fixed Costs are really variable. The more you produced the less they become". Comment the statement.
- 3) Describe briefly the different methods of costing and state the particular industries to which they can be applied.
- 4) Distinguish between the following :
 - i) Product cost and period cost
 - ii) Controllable and uncontrollable cost
 - iii) Variable and fixed costs
 - iv) Direct and indirect costs
- 5) Costs may be classified according to their nature and characteristics' Explain.
- 6) Cooling Ltd manufactured and sold 1,000 refrigerators in the year ending 31st March, 2002. The summarized Trading and Profit & Loss Account is set out below :

	Rs.		Rs.
To Cost of Sales	8,00,000	By Sales	40,00,000
To Direct Wages	12,00,000		
To Other Manufacturing Cost	5,00,000		
To Gross Profit c/d	15,00,000		
	<u>40,00,000</u>		<u>40,00,000</u>
To Management and Staff Salaries	6,00,000	By Gross Profit b/d	15,00,000
To Rent, Rates and Insurance	1,00,000		
To Selling Expenses	3,00,000		
To General Expenses	2,00,000		
To Net Profit	3,00,000		
	<u>15,00,000</u>		<u>15,00,000</u>

For the year ending 31st March, 2003, it is estimated that

- a) Output and sales will be 1,200 refrigerators.
- b) Prices of Material will go up by 20% on the level of previous year.
- c) Wages will rise by 5%
- d) Manufacturing costs will rise in proportion to the combined cost of Material and wages.
- e) Selling cost per unit will remain unaffected
- f) Other expenses will also remain constant

You are required to submit a statement to the Board of Directors showing the price at which the refrigerators should be marketed so as to show profit of 10% on selling price.

(Answer : Estimated selling price Rs. 51,00,000 Profit Rs. 5,10,000)

7) The following particulars have been made available from the Cost Ledger of a Company :

	Rs.
Stock of Raw materials on 31.12.2000	25,600
Stock of finished Goods on 31.12.2000	56,000
Purchase of Raw materials	5,84,000
Direct wages	3,97,000
Sales	11,84,000
Stock of Raw Materials on 31.12.2001	27,200
Stock of Finished goods on 31.12.2001	60,000
Works Overheads	88,072
Office and general Charges	71,048

The company is required to submit a tender for a large machine. The Cost Department estimates that the materials will cost Rs. 40,000 and wages to fabricate the machine Rs. 24,000. The tender is to be made at a net profit of 20% on selling price.

Prepare a statement showing a) Cost of materials used, b) total cost, c) percentage of factory overheads to direct wages, and d) percentage of office overheads to works cost.

Also prepare a statement of quotation showing the price at which the tender of the machine can be submitted.

(Answer : Cost of materials used Rs. 5,82,400; Total Cost Rs. 11,38,520; Percentage of Factory overheads to Direct Wages 22%; Percentage of Office Overheads to Works Cost 6.65%; Price to be quoted in tender : Rs. 92,360)

Note : These questions will help you to understand the unit better. Try to write answers for them. But do not submit your answers to the University. These are for your practice only.

2.17 SOME USEFUL BOOKS

Arora, M. N. 2000, *A Text Book of Cost Accountancy*. Vikas Publishing House Pvt. Ltd., New Delhi (Chapter 1-2).

Bhar, B. K. 1990. *Cost Accounting : Methods and Problems*. Academic Publishers, Calcutta (Chapter 1-2)

Maheswari, S. N. and Mittal, S. N. 1990. *Cost Accounting : Theory and Problems*. Shree Mahavir Book Dept, Delhi (Chapter I)

Nigam B. M. L. and Sharma G. L. 1990. *Theory and Techniques of Cost Accounting*. Himalaya Publishing House, Bombay (Chapter 1-3)

Owler. L. W. J. and J. L. Brown 1984. *Wheldon's Cost Accounting*. ELBS, London (Chapter 1-2)