

# CORE – XII - COST ACCOUNTING

COURSE: BBA

SUBJECT CODE: 17UBA17

SEMESTER - V



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# SYLLABUS

## COST ACCOUNTING

### UNIT – I

Cost Accounting – Definition – Classification of Costs – Cost Accounting – Definition – Advantages – Limitations – Financial Accounting Vs. Cost Accounting – Preparation of Cost Sheet – Tenders and Quotations

### UNIT – II

Materials – Material Control – Meaning – Objectives – Advantages – Methods of Stock Control – Stock Levels – EOQ – Stores Ledgere – FIFO, LIFO, Simple Average and weighted Average

### UNIT – III

Labour and Overhead – Methods of Wage Payment – Overheads – Classification – Allocation and Apportionment and Re-distribution

### UNIT – IV

Process Costing – Meaning – Characteristics – Process Accounts – Process Losses and Gains (Excluding Equivalent Production, By Products and Joint Product – Inter Process Profit) Contracts Cost Accounting – Meaning – Definition – Contract Account and Balance Sheet.

## UNIT – V

Marginal Costing – Nature of Marginal Costing – Advantages – Limitations – Break Even Analysis – Decision Making Problems.

NOTE: Question Paper Setting – 80% of the questions shall be problems and 20% of the questions shall be theory based

TEXT BOOK: COST ACCOUNTING Principles and Practices – S.P.JAIN & K.L.NARANG – Kalyani Publishers

### REFERENCE BOOKS:

1. Principles of Cost Accounting – Dr.S.N.Maheswari, Sultan Chand & Sons
2. Cost Accounting – S.P.Iyyengar – Sultan Chand
3. Cost Accounting – Rayudu – Tata McGraw Hill

# UNIT - I

Cost Accounting – Definition – Classification of Costs – Cost Accounting – Definition – Advantages – Limitations – Financial Accounting Vs. Cost Accounting – Preparation of Cost Sheet – Tenders and Quotations

# INTRODUCTION

In the initial stages cost accounting was merely considered to be a technique for ascertainment of cost of products or services on the basis of historical data. In course of time due to competitive nature of the market, it was realized that ascertainment of cost is not as important as controlling costs. Hence, cost accounting started to be considered more as a technique for cost control as compared to cost ascertainment. Due to technological development in all fields, now cost reduction has also come within the ambit of cost accounting. Cost accounting is thus concerned with recording, classifying and summarizing costs for determination of costs of products or services, planning, controlling and reducing such costs and furnishing of information to management for decision making.

# DEFINITIONS

## Definition of Cost:

“the amount of expenditure incurred on a given thing” – ICMA, London

## Definition of Costing:

“the technique and process of ascertaining cost” – ICMA, London

## Definition of Cost Accounting:

“it is the process of classifying, recording, allocating and reporting the various costs incurred in the operation of an enterprise”

“Cost accounting is a quantitative method that accumulates, classifies, summarizes and interprets information for three major purposes: (in) Operational planning and control ;( ii) Special decision; and (iii) Product decision.” -Charles T. Horngren

## Definition of Cost Accountancy:

“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” – ICMA, London

# CLASSIFICATION OF COST

## 1. Classification by Nature:

### **i. Material Cost:**

It is the cost of material of any nature used for the purpose of production of a product or a service. Material cost includes cost of procurement, freight inwards, taxes and duties, insurance etc. directly attributable to the acquisition. Trade discounts, rebates, duty drawbacks, refunds on account of modvat, cenvat, sales tax and other similar items are deducted in determining the costs of material.

### **ii. Labour Cost:**

Labour cost includes salaries and wages paid to permanent employees, temporary employees and also to employees of the contractor.

### **iii. Expenses:**

These are the costs other than material cost or labour cost which are involved in an activity. Expenditure on account of utilities, payment for bought-out services, job processing charges etc. can be termed as expenses.

## **2. Cost Classification in Relation to Cost Centre:**

### **i. Direct Costs:**

The direct costs are those which can be identified easily and indisputably with a unit of operation or costing unit or cost centre. Costs of direct material, direct labour and direct expenses can be directly allocated or identified with a particular cost centres or a cost unit and can be directly charged to such cost centre or cost unit. These costs are also called 'traceable costs'.

### **ii. Direct Material:**

The direct material costs are those which can be identified easily and indisputably with a unit of operation or costing unit or cost centre. The direct material cost can be directly allocated or identified with particular cost centres or cost units and can be directly charged to such cost centres or cost units.

### **iii. Direct Labour:**

The labour cost incurred on the employees who are engaged directly in making the product, their work can be identified clearly in the process of converting the raw materials into finished product is called 'direct labour cost'.

### **iv. Direct Expenses:**

The direct expenses refers to expenses that are specifically incurred and charged for specific or particular job, process, service, cost unit or cost centre. These expenses are also called 'chargeable expenses'.



## **v. Indirect Costs:**

Indirect costs cannot be allocated but which can be apportioned to cost centres or cost units. These costs are also called as 'common costs'. The indirect costs are not traceable to any plant, department, operation or to any individual final product. All overhead costs are indirect costs.

## **vi. Indirect Material:**

The costs incurred on materials used to further the manufacturing process, which cannot be traced into the end product and the material required in the production process but not necessarily built into the product are called 'indirect material'.

## **vii. Indirect Labour:**

The cost of indirect labour consist of all salaries and wages paid to the staff for the purpose of carrying and tasks incidental to goods or services provided which will not form part of salaries and wages paid in working directly upon the product.

## **viii. Indirect Expenses:**

Indirect expenses are those which are incurred by the organization in carrying out their total business activities and cannot be conveniently allocated to job, process, cost unit or cost centre. Rent, rates, taxes, insurance, lighting, telephone, postage and telegrams, depreciation etc. are the examples of indirect expenses.

### **3. Cost Classification by Time:**

#### **i. Historical Cost:**

The historical cost is the actual cost, determined after the event. Historical cost valuation states costs of plant and materials, for example, at the price originally paid for them.

#### **ii. Predetermined Cost:**

These costs relating to the product are computed in advance of production, on the basis of a specification of all the factors affecting cost and cost data. Predetermined costs may be either standard or estimated.

#### **iii. Standard Cost:**

It is a predetermined calculation of how much costs should be under specified working conditions. It is built up from an assessment of the value of cost elements and correlates technical specifications and the quantification of materials, labour and other costs to the prices and/or usage rates expected to apply during the period in which the standard cost is intended to be used.

#### **iv. Estimated Cost:**

It is a predetermined cost based on past performance adjusted to the anticipated changes. No minute appraisal of each individual component cost. It can be used in any business situation or decision making which does not require accurate cost.

## **4. Cost Classification for Decision Making:**

### **i. Marginal Cost:**

The term 'marginal cost' is defined as the amount at any given volume of output by which aggregate costs are changed if the volume of output is increased or decreased by one unit. It is a variable cost of one unit of a product or a service i.e., a cost which would be avoided if that unit was not produced or provided.

### **ii. Differential Cost:**

It is also known as 'incremental cost'. It is the difference in total cost that will arise from the selection of one alternative to the other. It is an added cost of a change in the level of activity.

### **iii. Opportunity Cost:**

It is the value of a benefit sacrificed in favour of an alternative course of action. It is the maximum amount that could be obtained at any given point of time if a resource was sold or put to the most valuable alternative use that would be practicable. Opportunity cost of good or service is measured in terms of revenue which could have been earned by employing that good or service in some other alternative uses.

### **iv. Relevant Cost:**

The relevant cost is a cost appropriate in aiding to make specific management decisions. Business decisions involve planning for future and consideration of several alternative courses of action. In this process the costs which are affected by the decisions are future costs. Such costs are called relevant costs because they are pertinent to the decisions in hand.

#### **v. Sunk Cost:**

The sunk cost is one for which the expenditure has taken place in the past. This cost is not affected by a particular decision under consideration. Sunk costs are always results of decisions taken in the past. This cannot be changed by any decision in future. The sunk costs are those costs that have been invested in a project and which will not be recovered if the project is terminated.

#### **vi. Replacement Cost:**

The replacement cost is a cost at which material identical to that is to be replaced could be purchased at the date of valuation (as distinct from actual cost price at the date of purchase). The replacement cost is a cost of replacing an asset at any given point of time either at present or in the future (excluding any element attributable to improvement).

#### **vii. Normal Cost:**

The normal cost is normally incurred at a given level of output in the conditions in which that level of output is achieved. Normal cost includes those items of cost which occur in the normal situation of production process or in the normal environment of the business. The normal idle time is to be included in the ascertainment of normal cost.

#### **viii. Abnormal Cost:**

It is an unusual or a typical cost whose occurrence is usually irregular and unexpected and due to some abnormal situation of the production. Abnormal cost arises due to idle time for some heavy break down or abnormal process loss. They are not considered in the cost of production for decision making and charged to Profit and Loss Account.

#### **ix. Avoidable Cost:**

The avoidable costs are those costs which under given conditions of performance efficiency should not have been incurred. Avoidable costs are logically associated with some activity or situation and are ascertained by the difference of actual cost with the happening of the situation and the normal cost.

#### **x. Unavoidable Cost:**

The unavoidable costs are 'inescapable costs' which are essentially to be incurred, within the limits or norms provided for. It is the cost that must be incurred under a program of business restriction. It is fixed in nature and inescapable.

#### **xi. Pre-Production Cost:**

The costs incurred prior to the starting of commercial production are called as 'pre-production costs'. These costs include preliminary expenses, trail run costs etc. These costs are incurred from the initiation of project till its formal commercial production.

#### **xii. Product Cost:**

The product cost is aggregate of costs that are associated with a unit of product. Such costs may or may not include an element of overheads depending upon the type of costing system in force – absorption or direct. Product costs are related to goods produced or purchased for resale and are initially identifiable as part of inventory.

#### **xiii. Period Cost:**

The period cost is a cost that tends to be unaffected by changes in level of activity during a given period of time. Period cost is associated with a time period rather than manufacturing activity and these costs are deducted as expenses during the current period without previously classified as product costs. Selling and distribution costs are period costs and are deducted from the revenue without their being regarded as part of the inventory cost.

#### **xiv. Traceable Cost:**

The traceable costs are those which can be identified easily and indisputably with a unit of operation or costing unit or cost centre. Costs of direct material, direct labour and direct expenses can be directly allocated or identified with particular cost centres or cost units and can be directly charged to such cost centres or cost units.

#### **xv. Common Cost:**

The common costs cannot be allocated but which can be apportioned to cost centres or cost units. The indirect costs are not traceable to any plant, department, operation or to any individual final product. All overhead costs are indirect costs. Cost of indirect material, indirect labour and indirect expenses in aggregate constitute the overhead costs and are the indirect component of the total cost.

### **xvi. Controllable Cost:**

The controllable cost is a cost chargeable to a budget or cost centre, which can be influenced by the actions of the person in whom control of the centre is vested. It is always not possible to predetermine responsibility, because the reason for deviation from expected performance may only become evident later.

### **xvii. Uncontrollable Cost:**

These costs cannot be influenced by the action of a specified member of the organization. The controllability of cost depends upon the level of responsibility under consideration. Direct costs are generally controllable by the shop level management. The uncontrollable cost is a cost that is beyond the control (i.e., uninfluenced by actions) of a given individual during a given period of time.

### **xviii. Short-Run Cost:**

The short-run costs are costs that vary with output when fixed plant and capital equipment remain the same and become relevant when a firm has to decide whether or not to produce more in the immediate future.

### **xix. Long-Run Cost:**

The long-run costs are those which vary with output when all input factors including plant and equipment vary and become relevant when the firm has to decide whether to setup a new plant or to expand the existing one.

### **xx. Past Cost:**

The past costs are actual costs incurred in the past and are generally contained in the financial accounts. These costs report past events and the time lag between event and its reporting makes the information out of date and irrelevant for decision-making. These costs will just act as a guide for future course of action.

### **xxi. Future Cost:**

The future costs are costs expected to be incurred at a later date and are the only costs that matter for managerial decisions because they are subject to management control. Future costs are relevant for managerial decision making in cost control, profit projections, appraisal of capital expenditure, introduction of new products, expansion programs and pricing etc.

### **xxii. Explicit Cost:**

These costs are also called as 'out of pocket costs'. The explicit cost is a cost that will necessitate a corresponding outflow of cash. These costs involve cash outlay or payment to other parties. Explicit costs are relevant in some decision making problems such as fluctuation of prices during recession, make or buy decisions etc. These costs are recorded in the books of account and can be easily measured.

### **xxiii. Implicit Cost:**

These costs are also called as 'imputed costs' or 'notional costs'. The implicit cost is a cost which doesn't involve actual cash outlay, which are used only for the purpose of decision making and performance evaluation. Interest on capital is common type of implicit cost. No actual payment of interest is made but the basic concept is that, had the funds been invested elsewhere they would have earned interest.

### **xxiv. Book Cost:**

The book costs are those which do not require current cash payments. Depreciation, is a notional cost in which no cash transaction is involved. Book costs can be converted into out of pocket costs by selling the assets and having them on hire. Rent would then replace depreciation and interest.

### **xxv. Shutdown Cost:**

The shutdown costs are the costs incurred in relation to the temporary closing of a department / division / enterprise. Such costs include those of closing, as well as, those of reopening. The shutdown costs are defined as those costs which would be incurred in the event of suspension of the plant operation and which would be saved if the operations are continued.

### **xxvi. Abandonment Cost:**

The abandonment cost is the cost incurred in closing down a department or a division or in withdrawing a product or ceasing to operate in a particular sales territory etc. The abandonment costs are the cost of retiring altogether a plant from service. Abandonment arises when there is a complete cessation of activities and creates a problem as to the disposal of assets.

### **xxvii. Urgent Cost:**

The urgent costs are those which must be incurred in order to continue operations of the firm. For example, cost of material and labour must be incurred if production is to take place.

### **xxviii. Postponable Cost:**

The postponable cost is that cost which can be shifted to the future with little or no effect on the efficiency of current operations. These costs can be postponed at least for some time, e.g., maintenance relating to building and machinery.

### **xxix. Conversion Cost:**

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



## **5. Cost Classification by Nature of Production Process:**

### **1. Batch Cost:**

It is the aggregate cost related to a cost unit which consists of a group of similar articles which maintain its identity throughout one or more stages of production.

### **2. Process Cost:**

When the production process is such that goods are produced from a sequence of continuous or repetitive operations or processes, the cost incurred during a period is considered as process cost. The process cost per unit is derived by dividing the process cost by number of units produced in the process during the period. Accounts are maintained for cost of a process for a period. The average cost per unit produced during the period is process cost per unit.

### **3. Operation Cost:**

It is the cost of a specific operation involved in a production process or business activity. When there are distinctly separate operations involved in a process, cost for each operation is found out for effective control mechanism.

### **4. Operating Cost:**

It is the cost incurred in conducting a business activity. Operating costs refer to the cost of undertakings which do not manufacture any product but which provide services.

### **5. Contract Cost:**

It is the cost of a contract with some terms and conditions of adjustment agreed upon between the contractee and the contractor. Contract cost usually implied to major long- term contracts as distinct from short-term job costs. Escalation clause is sometimes provided in the contract in order to take care of anticipated change in material price, labour cost etc.

### **6. Joint Cost:**

These are the common costs of facilities or services employed in the output of two or more simultaneously produced or otherwise closely related operations, commodities or services.

# COST ACCOUNTING - ADVANTAGES

- (a) **Benefits to the Management:** The information revealed by cost accounting aims at mainly assisting the management in decision making and optimizing profits. Besides this there are certain advantages of cost accounting to the management i.e. it helps in price fixation, in revealing profitable and unprofitable activities, idle capacity, in controlling cost and also helps in inventory control.
- (b) **Benefits to the Employees:** Cost accounting introduces wage scheme, bonus to the efficient & sincere employees which in turn increasing productivity, profitability and lowering cost.
- (c) **Benefits to Creditors:** The better management of finance through cost accounting leads to timely debt servicing by company in the form of repayment of loan and payment of interest. To stay and grow in competition and for judging soundness of present and perspective borrower and cost reports give better picture of efficiency profit prospectus and capacity.
- (d) **Benefits to the Government:** Cost accounting enables the Govt. to prepare plans for economic development of the country, to make policies regarding taxation, excise duty, export, price, ceiling, granting subsidy etc.
- (e) **Benefits to Consumers/Public:** Cost accounting helps consumers in getting goods of better quality at reasonable price

# COST ACCOUNTING - IMPORTANCE

- (a) **Control of Material Cost:** Cost of material is a major portion of the total cost of a product. It can be controlled by regular supply of material and spares for production, maintaining optimum level of funds in stocks of materials and stores.
- (b) **Control of Labour Cost:** If workers complete their work within the specified time cost of labour can be controlled.
- (c) **Control of Overheads:** By keeping a strict check over various overheads such as factory, administrative and selling & distribution, this can be controlled.
- (d) **Measuring Efficiency:** Cost accounting provides information regarding standards and actual performance of the concern activity for measuring efficiency.
- (e) **Budgeting:** The preparation of the budget is the function of costing department and budgeting is done to ensure that the practicable course of action can be chalked out and the actual perform corresponds with the estimated or budgeted performance.
- (f) **Price Determination:** On behalf of cost accounting information, management is enable to fix remunerative selling price for various items of products and services in different circumstances.
- (g) **Expansion:** The management may be able to formulate its approach to expansion on the basis of estimates of production of various levels.

# Cost Accounting vs. Financial Accounting

Basis	Cost Accounting	Financial Accounting
1) Purpose	Its main purpose to guide	It reveals the final results during the management for proper the particular period for every planning, controlling and concern. decision-making etc.
2) Coverage	It deals with expenses related	This deals with whole to or identified with products. organization connected with manufacturing and also other activities or areas.
3) Basis	This deals with estimated and actual actual data both.	This deals only with the actual actual financial transactions and figures and not on estimation.
4) Scope	It is related to a particular all commercial product or service.	It includes translation of organisation for a particular period of time
5) Parties Involved	This deals with internal translations between departments within the organisation	This concern with external parties as well as external translations.

6) Final Statement	Only one statement is prepared i.e. statement of cost.	Profit & Loss A/c and balance sheet both are prepared.
7) Valuation of Stock	Stock is valued at cost	Market value or cost whichever is lower is considered as the value of stock.
8) Nature	It does not consider only historical records but also predetermined cost.	It is related to the historical records.
9) Classification	It is clearly classifies the cost into fixed and variable cost.	In this cost is not classified into fixed and variable cost.
10) Legal Requirements	Generally these accounts are kept to meet management requirements. Now it has become obligatory.	It is required by companies act, Income Tax Act, etc. to keep these accounts.

# Limitations of Cost Accounting

- a) **Not Reliable:** Cost Accounting is based on estimates and so it is not reliable.
- b) **Failure of the System:** Cost Accounting system has failed to produce desired results in many concerns. Thus it could be said that this system is at fault.
- c) **Unnecessary:** it is not necessary in Business concern as it involves duplication of work.
- d) **Inapplicability:** Modern methods of cost accounting are not applicable to every type of industries.
- e) **Expenses:** It is expensive because double set of account books has to be maintained and its introduction involves considerable amount of expenditure.

# COST SHEET

A cost sheet is a statement that shows the various components of total cost for a product and shows previous data for comparison. You can deduce the ideal selling price of a product based on the cost sheet.

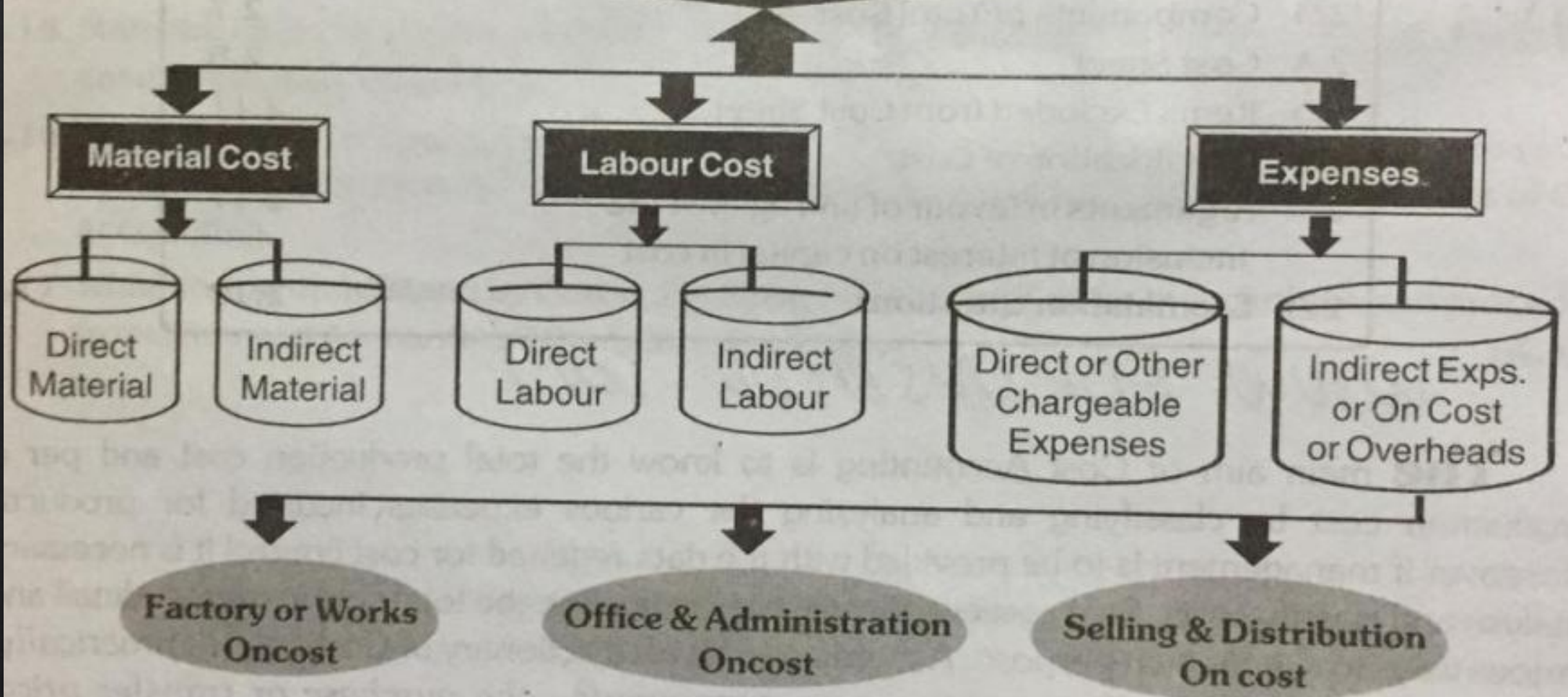
A cost sheet document can be prepared either by using historical cost or by referring to estimated costs. A historical cost sheet is prepared based on the actual cost incurred for a product. An estimated cost sheet, on the other hand, is prepared based on estimated cost just before the production begins.

# Importance of cost sheet

- 1. Determining cost:** The main objective of the cost sheet is to obtain an accurate product cost. It gives you both the total cost and cost per unit of a product.
- 2. Fixing selling price:** In order to fix the selling price of a product, you need to create a cost sheet so you can see the details of its production cost.
- 3. Cost comparison:** It helps the management compare the current cost of a product with a previous per unit cost for the same product. Comparing the costs helps management take corrective measures if costs have increased.
- 4. Cost control:** The cost sheet is an important document for a manufacturing unit, as it helps in controlling production costs. Using an estimated cost sheet aids in monitoring labour, material and overhead costs at each step of production.
- 5. Decision-making:** Some of the most important decisions management makes are based on the cost sheet. Whenever a business needs to produce or buy a component, or quote prices for its goods on a tender, managers refer to the cost sheet.



## 2.1 Elements of Cost



# PREPARATION OF COST SHEET

<p><b>STEP – I</b></p>	<p><b>Prime Cost</b> = Direct Material Consumed + Direct Labour + Direct Expenses</p> <p><b>Direct Material</b>= Material Purchased + Opening stock of raw material-Closing stock of raw material.</p>
<p>STEP – II</p>	<p><b>Works Cost</b> = Prime Cost + Factory Overheads (Indirect Material + Indirect Labour + Indirect Expenses)+opening Work in progress-Closing Work in progress</p>
<p>STEP – III</p>	<p><b>Cost of Production</b> = Works Cost + Office and Administration overheads + Opening finished goods-Closing finished goods</p>
<p>STEP –IV</p>	<p><b>Total Cost</b> = Cost of Production + Selling and Distribution Overheads</p>
<p>STEP – V</p>	<p>Sales – Total Cost</p>

# PROBLEMS

The following figures have been extracted from the records of a manufacturing company for the year ending 31st December, 2008. You are required to prepare a statement of cost showing : (a) Cost of raw materials consumed (b) Prime Cost (c) Factory Cost (d) Cost of production (e) Cost of goods sold (f) Total cost of goods sold and profit on sales. Rs.

Stock of Raw Materials (1-1-08) Rs.3,000 Stock of Raw Materials (31-12-08) Rs.2,400  
Purchases of Raw materials Rs.14,000 Stock of work-in-progress (1-1-08) Rs.1,000  
Stock of work-in-progress (31-12-08) Rs.800 Carriage inward Rs.500 Manufacturing  
wages Rs.4,000 Other direct expenses Rs.200 Indirect wages Rs.1,000 Experiment  
expenses Rs.400 Wastage of materials Rs.50 Factory overhead Rs.7,000  
Establishment on costs Rs.2,000 Selling overhead Rs.4,000 Distribution overhead  
Rs.1,000 Stock of finished goods (1-1-08) Rs.1,200 Stock of finished goods (31-12-08)  
Rs.3,000 Sales Rs.40,000

# SOLUTION

Particulars	Rs.	Rs.
Purchase of Raw Materials	14,000	
Add: Opening Stock of Raw Materials	3,000	
Carriage inward	500	
	17,500	
Less: Closing Stock of Raw Materials	2,400	
<b>(a) Cost of Raw Materials Consumed</b>		15,100
Add: Direct Wages		4,000
Other Direct Expenses		200
<b>(b) Prime Cost</b>		19,300

<b>Add: Factory Overheads:</b>		
Indirect Wages	1,000	
Experiment Expenses	400	
Wastage of Materials	50	
Factory Overheads	7,000	8450
		27,750
Add: Opening Stock of Work-in-Progress		1,000
		28,750
Less: Closing Stock of Work-in-Progress		800
<b>FACTORY COST</b>		<b>27,9750</b>
Add: Office Overheads:		
Establishment on Costs		2,000
<b>COST OF PRODUCTION</b>		<b>29,950</b>

<b>Add: Opening Stock of Finished Goods</b>		<b>1,200</b>
		31,150
Less: Closing Stock of Finished Goods		3,000
<b>COST OF GOODS SOLD</b>		<b>28,150</b>
Add: Selling Overheads		4,000
Add: Distribution Overheads		1,000
<b>TOTAL COST</b>		<b>33,150</b>
<b>SALES</b>		<b>40,000</b>
<b>NET PROFIT</b>		<b>6,850</b>

From the following particulars prepare cost sheet. Direct Material Rs.8,000; Direct Wages Rs.6,000; Direct Expenses Rs.2,500; Administrative Overheads Rs.4,000; Factory Overheads Rs.5,000; Sales Rs.40,000

### COST SHEET

PARTICULARS	Rs.
Direct Materials	8,000
Direct Wages	6,000
Direct Expenses	2,500
<b>PRIME COST</b>	<b>16,500</b>
Add: Factory Overheads	5,000
<b>FACTORY COST</b>	<b>21,500</b>
Add: Administrative Overheads	4,000
<b>COST OF PRODUCTION</b>	<b>25,500</b>
<b>PROFIT (B/F)</b>	<b>14,500</b>
<b>SALES</b>	<b>40,000</b>

**Problem 5 : Prepare a statement showing cost and profit for the year ended 31.12.98.**

	<b>1.1.98</b>	<b>31.12.98</b>
	Rs.	Rs.
Raw materials	1,00,000	1,23,500
Finished goods	71,000	42,000
Work-in-progress	31,000	34,000
Purchase of raw materials		88,000
Direct wages		70,000
Indirect wages		2,500
Works expenses		37,000
Administrative expenses		13,000
Sale of factory scrap		2,000
Selling & distribution expenses		15,000
Sale of finished goods		2,75,000



## STATEMENT SHOWING COST AND PROFIT

	Rs.	Rs.
Opening stock of raw materials	1,00,000	
Add Purchases of raw materials	88,000	
	1,88,000	
Less Closing stock of raw materials	1,23,500	
Materials consumed		64,500
Direct wages		70,000
		1,34,500
		<b>Prime Cost</b>
Factory overheads :		
Indirect wages	2,500	
Works expenses	37,000	39,500
		1,74,000
Add Opening work-in-progress		31,000
		2,05,000
Less Closing work-in-progress		34,000
		1,71,000
Less Sale of factory scrap		2,000
		1,69,000
		<b>Factory Cost</b>
Administrative expenses		13,000
		1,82,000
		<b>Cost of Production</b>
Add Opening stock of finished goods		71,000
		2,53,000
Less Closing stock of finished goods		42,000
		2,11,000
		<b>Cost of goods sold</b>
Selling & distribution expenses		15,000
		2,26,000
		<b>Cost of sales</b>
		49,000
		<b>Profit (bal. fig.)</b>
		2,75,000
		<b>Sales</b>

Prepare a Statement of Cost and Profit from the following data.

	Rs.
Opening stock of raw materials	10,000
Purchases of raw materials	40,000
Materials returned to supplier	2,000
Closing stock of raw materials	8,000
Direct wages	20,000

Works oncost 25% on wages; Office oncost 20% on works cost; Selling oncost 10% on works cost; Profit 10% on cost.

# STATEMENT OF COST AND PROFIT

	Rs.	Rs.
Opening stock of raw materials	10,000	
Add Purchases of raw materials	40,000	
	<u>50,000</u>	
Less Materials returned to supplier	2,000	
	<u>48,000</u>	
Less Closing stock of raw materials	8,000	
<b>Materials consumed</b>		40,000
Direct wages		20,000
<b>Prime cost</b>		<u>60,000</u>
Works oncost 25% on wages		5,000
<b>Works cost</b>		<u>65,000</u>
Office oncost 20% on works cost		13,000
<b>Cost of production</b>		<u>78,000</u>
Selling oncost 10% on works cost		6,500
<b>Cost of Sales</b>		<u>84,500</u>
Profit 10% on Rs. 84,500		8,450
<b>Sales</b>		<u>92,950</u>

The following data relate to the manufacture of a product during the month of April.

Raw materials consumed Rs. 80,000

Direct wages Rs. 48,000

Machine hours worked 8,000

Machine hour rate Rs. 4

Office overhead 10% on works cost

Selling overhead Rs. 1.50 p.u

Units produced ~~Rs.~~ 4,000

Unit sold 3,600 at Rs. 50 each.

Prepare a cost sheet and show a) Cost Per Unit and  
b) Profit for the period.

# COST SHEET

## for the month of April

(output 4,000 units)		
	Total Cost Rs.	Cost p.u. Rs.
Raw materials consumed	80,000	20.00
Direct Wages	48,000	12.00
<b>Prime cost</b>	<b>1,28,000</b>	<b>32.00</b>
Factory overhead (8,000 hours x Rs.4)	32,000	8.00
<b>Works Cost</b>	<b>1,60,000</b>	<b>40.00</b>
Office overhead (10% on works cost)	16,000	4.00
<b>Cost of production</b>	<b>1,76,000</b>	<b>44.00</b>
Less : Closing stock of finished good (400* units @ 44)	17,600	---
<b>Cost of goods sold</b>	<b>1,58,400</b>	<b>44.00</b>
Selling overhead (3,600 units x Rs. 1.50)	5,400	1.50
<b>Cost of Sales</b>	<b>1,63,800</b>	<b>45.50</b>
<b>Profit (bal. fig.)</b>	<b>16,200</b>	<b>4.50</b>
<b>Sales (3,600 units x Rs. 50)</b>	<b>1,80,000</b>	<b>50.00</b>

Sathya Industries manufactures product X. On 1<sup>st</sup> January, there were 5,000 units of finished product in the stock. Other stocks on 1<sup>st</sup> January were as follows:

Work-in progress      Rs. 57,500  
 Raw materials         Rs. 1,16,000

The informations available from cost records for the year ended 31st December 1998 were as follows :

	Rs.
Purchases of materials	-9,04,000
Direct labour cost	1,20,000
Freight on purchases	55,000
Indirect labour	3,48,000
Indirect materials	2,52,000
Other factory overheads	2,05,000
Stock of raw materials 31st December	95,000
Work-in-progress 31st December	42,500
Sales (1,50,000 units)	30,00,000

There are 15,000 units of finished stock in hand on 31st December 1998.

You are required to prepare a statement of cost and profit for the year assuming that opening stock of finished goods is to be valued at the same cost per unit as the finished stock at the end of the period.

**Statement of Cost & Profit for year ended 31-12-98.**

	Rs.		Rs.
Opening stock of raw materials	1,16,000		
Add purchases	9,04,000		
Freight on purchases	55,000		
	<u>10,75,000</u>		
Less Closing stock of raw materials	95,000		
Materials consumed			9,80,000
Direct labour cost			1,20,000
<b>Prime Cost</b>			<u>11,00,000</u>
Factory Overheads :			
Indirect materials	2,52,000		
Indirect labour	3,48,000		
Other factory expenses	2,05,000		8,05,000
			<u>19,05,000</u>
Add Opening work-in-progress			57,500
			<u>19,62,500</u>
Less Closing work-in-progress			42,500
<b>Works cost / Cost of Production</b>			<u>19,20,000</u>
	Units	Cost p.u.	
Work cost (cost of production)	(1) 1,60,000	12.00	19,20,000
Add Opening stock of finished goods	5,000	12.00	60,000
	<u>1,65,000</u>	12.00	<u>19,80,000</u>
Less Closing stock of finished goods	15,000	12.00	1,80,000
<b>Cost of goods sold</b>	<u>1,50,000</u>	12.00	<u>18,00,000</u>
<b>Profit (bal.fig)</b>			<u>12,00,000</u>
			<u>30,00,000</u>

Prepare a statement of cost giving the following information: 1] Prime Cost; 2] Works Cost; 3] Cost of Production; 4] Cost of Sales; and 5] Profit.

Raw materials consumed	40,000
Indirect materials	9,000
Wages traceable to jobs	15,000
Wages paid to maintenance worker	7,500
Lubricating oil	3,750
Consumable stores	4,250
Repairs to plant & machinery	5,100
Repairs to office building	1,500
Postage and telegram	1,200
Audit fees	2,800
Director's fees	6,400
Legal expenses	3,600
General expenses	1,250
Gas & Water	750
Advertising	4,900
Packing charges	2,200
Manager's salary (2/3rd for factory, 1/3 rd for office)	12,000
Interest received	1,900
Loss on sale of plant	4,000
Payment of sales tax	3,100
Travelling expenses & commission	2,500
Sales	1,50,000



# STATEMENT OF COST AND PROFIT

Raw materials consumed		Rs.	Rs.
Wage traceable to jobs			40,000
<b>Prime cost</b>			<u>15,000</u>
			<b>55,000</b>
<b>Factory overheads :</b>			
Indirect materials	9,000		
Wages paid to maintenance worker	7,500		
Lubricating oil	3,750		
Consumable stores	4,250		
Repairs to plant & machinery	5,100		
Gas and water	750		
Manager's Salary (2/3rd of Rs. 12,000)	8,000		38,350
<b>Factory cost</b>			<u>93,350</u>
<b>Administrative overhead :</b>			
Repairs to office building	1,500		
Postage & telegram	1,200		
Audit fees	2,800		
Directors fees	6,400		
Legal expenses	3,600		
General expenses	1,250		
Manager's salary (1/3rd of Rs. 12,000)	4,000		20,750
<b>Cost of production</b>			<u>1,14,100</u>
<b>Selling &amp; distribution overheads :</b>			
Advertising	4,900		
Packing charges	2,200		
Travelling expenses & commission	2,500		9,600
<b>Cost of sales</b>			<u>1,23,700</u>
<b>Profit (bal. fig.)</b>			<u>26,300</u>
<b>Sales</b>			<u>1,50,000</u>

Prepare a statement giving the maximum possible information about cost and its break up for the year 1998.

<b>Inventories at the beginning :</b>		
Raw materials		Rs. 16,000
Finished goods		10,500
<b>Inventories at the end :</b>		
Raw materials		12,000
Finished goods		7,000
<b>Purchases of raw materials</b>		<b>34,000</b>
<b>Expenses :</b>		
Direct		6,250
Factory		3,750
Office		5,500
Selling		4,500
<b>Salaries :</b>		
Works Manager		62,250
General Manager		57,000
Sales Manager		50,000
<b>Lighting :</b>		
Factory		6,500
Office		5,600
Showroom		4,400
<b>Insurance :</b>		
Factory		3,200
Office		2,400
<b>Carriage :</b>		
Inwards		1,250
Outwards		1,750
<b>Productive wages</b>		<b>10,000</b>
<b>Bad debts</b>		<b>1,750</b>
<b>Discount allowed</b>		<b>1,150</b>
<b>Goodwill written off</b>		<b>2,500</b>
<b>Transfer fees</b>		<b>3,750</b>
<b>Sales</b>		<b>3,00,000</b>

# Statement showing Cost and Profit for the year 1998

	Rs.	Rs.
Opening stock of raw materials	16,000	
Add Purchases of raw materials	34,000	
Carriage inwards	1,250	
	51,250	
Less Closing stock of raw materials	12,000	
<b>Materials consumed</b>		
Productive wages		39,250
Direct expenses		10,000
<b>Prime cost</b>		6,250
		55,500
<b>Factory overheads :</b>		
Factory expenses	3,750	
Works Manager's salary	62,250	
Factory lighting	6,500	
Insurance	3,200	75,700
<b>Factory cost</b>		
		1,31,200
<b>Administrative overheads :</b>		
Office expenses	5,500	
General manager's salary	57,000	
Office lighting	5,600	
Insurance	2,400	70,500
<b>Cost of Production</b>		
		2,01,700
Add : Opening stock of finished goods		10,500
		2,12,200
Less : Closing stock of finished goods		7,000
<b>Cost of goods sold</b>		2,05,200
<b>Selling &amp; distribution overheads :</b>		
Selling expenses	4,500	
Sales Manager's salary	50,000	
Lighting of showroom	4,400	
Carriage outwards	1,750	60,650
<b>Cost of sales</b>		
		2,65,850
<b>Profit (bal. fig.)</b>		34,150
<b>Sales</b>		3,00,000

Note : Bad debts, discount allowed, goodwill written off and transfer fees are purely financial transactions. Hence they are not taken into account in the preparation of cost sheet.

# TENDER AND QUOTATION

	Rs.
Completed stock on 1.1.98	NIL
Completed stock on 31.3.98	30,000
Stock of raw materials 1.1.98	5,000
Stock of raw materials 31.3.98	3,500
Direct wages	74,000
Factory overhead	8,000
Administration overhead	4,000
Purchases of raw materials	32,500
Sales	1,12,500

The number of fans manufactured during the month was 2,000. Prepare a statement showing the cost per fan and the price to be quoted for 750 fans to realise the same percentage of profit as was realised during the 3 months referred to above, assuming the same condition.

**Production Statement of Electric fans**  
**for the 3 months ending 31.3.98 (2,000 Fans)**

	Rs.	Total Rs.	Cost p.u Rs.
Stock of raw materials	5,000		
Add Purchases	<u>32,500</u>		
	37,500		
Less Closing stock of raw materials	<u>3,500</u>		
<b>Materials consumed</b>		<b>34,000</b>	<b>17.00</b>
Direct wages		74,000	37.00



Statement of Quotation for 750 fans	Rs.
Cost of production (750 fans x Rs. 60 p.u)	45,000
Profit 25% on cost (2)	<u>11,250</u>
Price to be quoted for 750 fans	<u>56,250</u>

**Working :**

- (1) Value of closing stock of finished goods = Rs. 30,000  
 Cost of production p.u. Rs. 60  
 No. of units held in stock = Rs. 30000 / Rs. 60 = 500 units
- (2) Percentage of profit on cost =  $\frac{\text{Profit}}{\text{Cost}} \times 100$   
 $= \frac{22,500}{90,000} \times 100 = 25\%$

A company has received an enquiry for the supply of 5,000 steel pipes. The costs are estimated as follows:

Raw materials 1,00,000 kgs at Rs.1.00 per kg.  
Direct wages 10,000 hours at Rs.4.00 per hour  
Variable overheads : Factory Rs. 2.40 per labour hour  
Selling and distribution Rs.16,000  
Fixed overheads : Factory Rs. 6,000  
Selling and distribution Rs. 14,000  
Prepare a statement showing the price to be quoted which will result in a profit of 20% on selling price.



### Quotation Statement

(Output 5,000 units)

	Total Cost Rs.	Cost per unit Rs.
Raw materials 1,00,000 × Re. 1	1,00,000	20.00
Direct wages 10,000 × Rs.4	40,000	8.00
<b>Prime Cost</b>	<b>1,40,000</b>	<b>28.00</b>
Factory overheads :		
Variable : 10,000 hours at Rs.2.40 per hour	24,000	4.80
Fixed	6,000	1.20
<b>Factory cost</b>	<b>1,70,000</b>	<b>34.00</b>
Selling & Distribution Overheads :		
Variable	16,000	3.20
Fixed	14,000	2.80
<b>Cost of Sales</b>	<b>2,00,000</b>	<b>40.00</b>
<b>Profit (1)</b>	<b>50,000</b>	<b>10.00</b>
<b>Sales (Price to be quoted)</b>	<b>2,50,000</b>	<b>50.00</b>

#### Working

<b>(1)</b>	Profit 20 % on sales	
	Sales is assumed as	Rs. 100
	Less Profit	Rs. 20
	Cost	Rs. 80

If cost is Rs. 80, profit is Rs. 20

If cost is Rs. 2,00,000, Profit =  $2,00,000 \times \frac{20}{80} = \text{Rs. } 50,000$   
 Profit = Rs. 50,000

BPL Television Company finds that in 1997, the cost to manufacture 200 T.V. sets was Rs.6,16,000 which it sold at Rs.4,000 each. Cost was made up of:

Materials Rs. 2,00,000  
Direct wages Rs. 3,00,000  
Factory expenses Rs. 60,000  
Office expenses Rs. 56,000  
For 1998, it estimates that

- a. Each Television will require materials of the value of Rs. 1,000 and wages Rs. 1,500.
- b. Absorb factory expenses on the basis of direct wages.
- c. Absorb office expenses on the basis of works cost.

Prepare a statement showing the profit it should make per unit if it enhances the price of television by Rs. 80.

(B.Com. Bharathidasan)

Solution

**Cost Sheet for the year 1997**  
(200 T.V. Sets)

	Total Rs.	Cost p.u. Rs.
Materials	2,00,000	1,000
Direct wages	3,00,000	1,500
<b>Prime cost</b>	<b>5,00,000</b>	<b>2,500</b>
Factory expenses	60,000	300
<b>Factory cost</b>	<b>5,60,000</b>	<b>2,800</b>
Office expenses	56,000	280
<b>Cost of production</b>	<b>6,16,000</b>	<b>3,080</b>
<b>Profit (bal. fig.)</b>	<b>1,84,000</b>	<b>920</b>
Sales (200 x Rs. 4000)	8,00,000	4,000

# ESTIMATE FOR A T.V. SET FOR THE YEAR 1998

Materials		1,000
Direct wages		1,500
	<b>Prime cost</b>	<b>2,500</b>
Factory expenses 20% on wages	(1)	300
	<b>Factory cost</b>	<b>2,800</b>
Office expenses 10% on factory cost	(2)	280
	<b>Cost of production</b>	<b>3,080</b>
	<b>Profit (bal.fig.)</b>	<b>1,000</b>
	<b>Selling price</b>	<b>4,080</b>

(Revised selling price = Rs. 4000 + Rs.80 = Rs. 4,080)

Working :

1. Percentage of factory expenses to direct wages

$$\frac{\text{Factory expenses}}{\text{Direct wages}} \times 100 = \frac{60,000}{3,00,000} \times 100 = 20\%$$

2. Percentage of office expenses to factory cost

$$\frac{\text{Office expenses}}{\text{Works cost}} \times 100 = \frac{56,000}{5,60,000} \times 100 = 10\%$$

The following are the costing records of a manufacturer for the year 1997.

Production 1,000 units; Cost of raw materials Rs.20,000; Labour cost Rs. 10,000; Factory overhead Rs. 9,000; Office overhead Rs.3,000/-; Selling overhead Rs.1,500; Rate of profit 25% on sales.

The manufacturer decided to produce 1,500 units during 1998. It is estimated that the cost of raw materials will increase by 25%. Labour cost will increase by 20%, selling overheads will be reduced by 10%. Rate of profit will remain the same. The factory and office overheads remain fixed in total as in 1997.

From the above particulars prepare a statement of estimate showing the selling price in 1998.

# COST SHEET FOR 1997

## (OUTPUT 1,000 UNITS)

	Total Rs.	Cost p.u. Rs.
Cost of raw materials	20,000	20.00
Labour cost	10,000	10.00
<b>Prime cost</b>	<b>30,000</b>	<b>30.00</b>
Factory overheads	9,000	9.00
<b>Factory cost</b>	<b>39,000</b>	<b>39.00</b>
Administrative overheads	3,000	3.00
<b>Cost of production</b>	<b>42,000</b>	<b>42.00</b>
Selling overheads	1,500	1.50
<b>Cost of Sales</b>	<b>43,500</b>	<b>43.50</b>
<b>Profit</b> (1)	<b>14,500</b>	<b>14.50</b>
<b>Sales</b>	<b>58,000</b>	<b>48.00</b>

*Estimated Cost Statement  
for the year ending 31.12.98*

(Output 1,500 units)

		Total Rs.	Cost p.u. Rs.
Cost of raw materials p.u	20		
Add 25% increase	5		
	<u>25</u>	37,500	25.00
Labour cost	10		
Add 20% increase	2		
	<u>12</u>	18,000	12.00
<b>Prime cost</b>		<b>55,500</b>	<b>37.00</b>
Factory overheads (total fixed)		9,000	6.00
<b>Factory cost</b>		<b>64,500</b>	<b>43.00</b>
Administrative overheads (total fixed)		3,000	2.00
<b>Cost of production</b>		<b>67,500</b>	<b>45.00</b>
Selling overheads	1.50		
Less: 10% reduction	<u>0.15</u>		
	<u>1.35</u>	2,025	1.35
<b>Cost of sales</b>		<b>69,525</b>	<b>46.35</b>
<b>Profit</b>	(2)	<b>23,175</b>	<b>15.45</b>
<b>Sales</b>		<b>92,700</b>	<b>61.80</b>

**Working :**

(1) Profit is 25% on sales

Sales is assumed as	Rs. 100
Less Profit	Rs. 25
Cost	Rs. <u>75</u>

If cost is Rs. 75, Profit is Rs. 25

If cost is Rs. 43,500, profit =  $\frac{43,500}{75} \times 25 = \text{Rs. } 14,500$

(2) If cost is Rs. 75, profit is Rs. 25

If cost is Rs. 69,525, profit is  $\frac{69,525}{75} \times 25 = \text{Rs. } 23,175$