

**STUDY MATERIAL**  
**SUBJECT : COST ACCOUNTING**  
**SEMESTER : V**  
**UNIT : I**  
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### **Meaning of Cost, Costing and Cost accounting**

#### **Cost**

It means the total of all expenditures incurred on the production of an article.

#### **Costing**

It is the techniques and process of ascertaining costs. It enables the management to know the total cost and each elements of cost of a product. It has been defined by Wheldon as, “the classifying, recording and appropriate allocation of expenditure for the determination of the costs of products or services, and the presentation of suitably arranged data for purposes of control and guidance of management”.

#### **Cost Accounting**

Cost Accounting – Meaning & objectives – elements of costs –Preparation of cost Sheets.

Cost accounting is the process of classifying, recording, allocating and reporting the various costs incurred in the operation of an enterprise.

#### **Difference between Costing and Cost Accounting**

The words costing and cost accounting are used interchangeably. However, they do not mean the same thing. Costing denotes the techniques and process of ascertaining cost. It can be carried out arithmetically. However, cost accounting is a formal system established for recording costs in the books of accounts.

**Cost Accountancy:** Cost Accountancy is a comprehensive term. Cost accountancy 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. It includes the presentation of information for decision-making.

#### **Definition**

Costing is referred to as,

**“Classifying, recording and appropriate allocation of expenditure for the determination of the costs of products or services”**

ICMA, London defines Costing as,

**” The technique and process of ascertaining cost”**

### **Scope of Cost Accountancy**

The scope of cost accountancy is very wide and includes the following:

#### **1. Cost Ascertainment**

It deals with the collection and analysis of expenses, the measurement of production of the different products at the different stages of manufacture and the linking up of production with the expenses. In fact, the varying procedures for the collection of expenses give rise to the different systems of costing as Historical or Actual costs, estimated costs, standard costs etc. Again the varying procedures for the measurement of production have resulted in different methods of costing such as specific order costing, operation costing etc. For linking up of production with the expenses the different techniques of costing such as marginal costing, the total cost technique, direct cost technique have been evolved. All the three i.e., systems, methods and techniques can be used in one concern simultaneously.

#### **2. Cost Accounting**

It is the process of accounting for cost, which begins with recording of expenditure and ends with the preparation of statistical data. Costs of products or services are ascertained and controlled by means of formal mechanism. Cost can be ascertained wither by following the historical or predetermined system of costing. Cost either can be predetermined by standard costing or estimated costing. If the cost and financial accounts are kept separately then their reconciliation is also to be done in order to verify the accuracy of both the sets of accounts.

#### **3. Cost Control**

Cost Control is the guidance and regulation by executive action of the costs of operating an undertaking. It aims at guiding the actual towards the line of targets, regulates the actual if they deviate or vary from the targets, this guidance and regulation is done by an executive action. The cost can be controlled by standard costing, budgetary control, proper presentation and reporting of cost data and cost audit objectives of Costing Accounting

## **Objectives of Cost Accounting**

The objectives are listed below:

1. To find out the total cost and cost per unit of various products produced.
2. To disclose the proportion of different elements such as materials, labors and overheads in the total cost
3. To provide necessary data for fixing the selling price.
4. To ascertain the profitability of each product and advise the management to how to maximize these profit.
5. To supply estimates of costs based on historical data, for the preparation of tender etc.
6. To provide important cost data to the management for decision-making, planning and controlling.
7. To adopt suitable system of inventory control to avoid excessive locking up of working capital in stocks
8. To identify the sources of wastages and losses in the business
9. To help in the preparation of budgets and implementation of budgetary control
10. To compare actual cost with standard cost and analyse the causes of variances.
11. To advise the management on future expansion policies and proposed capital projects
12. To exercise effective control on the idle time of men and machines
13. To supply useful data to the management to take decisions such as introduction of new product etc.,

## **Advantages of cost accounting**

### **I. To the Management**

#### **i. Action against unprofitable activities**

It tells the unproductive, unprofitable and inefficient activities to the management which will act as a base to take correct and proper steps in time.

#### **ii. It helps in decision-making**

Cost accounting helps in decision-making. It provides vital information necessary for decision-making. For example, it helps in deciding whether to make or buy a product, whether to accept or reject an export order.

#### **iii. It helps in fixing prices**

Cost accounting helps in fixing prices. It provides detailed cost data of each product, which enables in fixation of selling prices.

#### **iv. Reward to efficiency**

By using standard costing and budgetary control, they can introduce new principles and thereby they can improve the efficiency, which in turn will result in reward of profit to the management.

#### **v. It helps cost control**

By comparison, of various products produced, it is possible to reduce the cost and to control the cost to the maximum possible extent.

#### **vi. Inventory control**

The control on stock of materials, stores can be effectively carried out only by proper costing system. This system helps in avoiding both the purchase of excess stock and lack of stock of goods to carry out the production.

#### **vii. To prevent fraud**

By preventing fraud, cost accounting supplies realizable cost data to the management. Scope of manipulation and fraud is minimized as the cost accounting envisages sound systems of inventory control and standard costing.

### **II. To the Employees**

#### **i. Incentives**

Cost accounting introduces bonus plans and incentive wages system to suit the needs of the organizations. These plans and system provides more remuneration to an efficient labour and less to an inefficient labor.

#### **ii. Promotion**

As the efficiency is clearly found out by the management, most efficient person will get promotion. By this, not only the worker is benefited but also the management because an efficient person alone can change an unprofitable concern to a profitable concern.

### **III. To the Creditors**

- i. Bankers, creditors, investors can have a better understanding of the firm regarding the progress and growth.
- ii. The exact cause of an increase or decrease in profit or loss can be found with the aid of cost accounting, which in turn will provide more benefit to the creditors.

### **IV. To the Government**

#### **i. Plans and Developments**

Cost accounts are of great use in the preparation of national plans and economic development.

## **ii. Formulation of plans**

Cost accounting is not post mortem examination. It is a system of foresight based on past, it helps in the formulation of definite plans in quantitative terms.

## **iii. Cost Audit**

It is important. Industries have to keep books of accounts to show the use of materials, labour and other costs.

## **V. To the Public**

- i. Consumers will get good quality product at cheaper rate.
- ii. This system helps the customers to pay fair price.
- iii. By development of industries, it creates employment opportunities.
- iv. A steady progress is there for the constant economic growth.

## **Disadvantages**

### **1. It is unnecessary**

Cost accounting is of recent origin. Many industries have prospered in the past without the aid of cost accounting. Even today, some companies doing well without cost accounting. Hence, it is unnecessary.

### **2. It is expensive**

It is said that installation of costing system is expensive, especially in the introduction stage. The benefits derived are less as compared to the expenses incurred.

### **3. It is a failure**

It is argued that costing system has failed to produce desired results in many cases. The main reasons behind this is only due to lack of facilities which are required for carrying out the costing system in an effective way.

### **4. Routine forms and Statements**

Cost accounting involves reporting cost data to the management. A large number of forms and statements are to be sent as matter of routine. As a result, there is a lot of unwanted paper work, which creates only additional burden to the workers.

### **5. Restricted Applicability**

Modern methods of costing have only restricted applicability. Costing can be applied effectively only in trading concerns or small organizations. It is not applicable in all types of industries.

### **6. It is not reliable**

Costing is also based on estimates. It may give a correct answer. However, this system is also not a fully reliable system.

## **Cost Accounting has become an Essential Tool in the Hands of Management (Costing as an aid to management)**

Costing accounting plays a very important role in modern management. It helps the management in the formulation of business policies, organizing and control of day-to-day functions of the organization. Cost accounting serves the management in the following ways.

**1. Decision Making:** The management has to select a course of action out of the several alternatives available. This involves decision-making. Cost accounting provides accounting information necessary for making decision such as whether to make a component or buy from outside? Whether to accept an export order or not? Which is the most profitable product mix? Which is the most profitable level of capacity utilization? How to utilize the scarce resources profitably?

**2. Planning:** Cost accounting is very useful to the management in the formulation of plans. Through the process of budgeting, the goals are expressed clearly in quantitative terms. This helps in directing the efforts of the organization towards achievement of concrete objectives. Standard costing establishes standards to be attained in respect of each element of cost. Establishment of standards is based on a careful study of various factors and planning. As result, plans are formulated clearly and objectively.

**3. Organizing:** Installation of a costing system helps to build up a formal organization structure consisting of departments, cost centers and responsibility centers. The authority, duties and responsibilities of each department/ center are clearly defined. Further, communication channels are set up for proper reporting. The creation of a sound organizational structure facilitates the smooth functioning of the organization.

**4. Controlling:** Cost accounting is essential for controlling. It provides detailed mechanisms for control of material, labor and overheads costs. Perpetual inventory system is operated to control supplies. Various levels of stock and the economic ordering quantity are determined for the purpose of material control. Labor costs are controlled by maintaining time and job records. Overheads are also classified into controllable and uncontrollable. Management can concentrate on a few items for effective control.

**5. Pricing:** Cost is the most important factor in pricing. Cost accounting provides accurate cost data. It facilitates the determination of price and the preparation of estimates, quotations and tenders. Cost accounting techniques enable the management to take special pricing decisions such as pricing during depression, price at which additional orders can be accepted.

**Conclusion**

Thus, costing has become an essential tool of management. It helps the management from the stage of decision making to the final stage of execution and control.

**Necessity or importance of Costing**

A good costing system is an invaluable aid to the management". This statement is true because the costing system helps the management in carrying out its functions by the following ways

**1. Classification and subdivision of costs**

The costs are collected, collected, and classified into various elements that help the management to ascertain the profitability of each activity and to control them

**2. Control of materials, labour and overhead costs**

The cost accounting helps the management to exercise control over the materials, labour and overhead costs by the application of various techniques.

**3. Business policies**

It guides the management in taking decisions regarding various matters connected with the production and sale of goods.

**4. Budgeting**

It is a co-ordinate plan of action. It helps to correct inefficiencies before they enter into the business.

**5. Standard costing**

It provides the basis for the measurement of efficiency and future planning.

**6. Price determination**

It provides the reliable cost data to get maximum output at minimum cost.

**7. Maximum use of resources**

It provides the reliable cost data to get maximum output at minimum cost

**8. Expansion programmes**

The expansion policies can be decided only based on cost data.

**9. Instrument of control**

The costing is an instrument for planning and controlling the activities of an undertaking to achieve the desired results.

**10. Other factors**

It also informs the management about the optimum profitability, seasonal variations, idle time, capacity etc.

Thus, it is clear from the above that the system of cost accounting in an organization helps the management in the formulation of policies, their execution and comparison of actual with the estimated. Such comparison helps to appraise the policies and to effect changes if necessary. Therefore, it is rightly remarked that costing is an invaluable aid to the management.

**Objections to Costing Accounting**

**1. Unnecessary**

Without the help of costing industries prepared in the past therefore, it is argued that the introduction of costing is unnecessary and waste.

**2. Inapplicability**

There is no separate system of costing applicable to all types of industries. Hence, it cannot suit the requirements of many industries and inapplicable to such industries.

**3. Defective**

It has been proved as a defective system in many cases since it fails to produce the desired results.

**4. Expensive**

It is quite an expensive system. Therefore, big industries alone can adopt it with advantages.

**Difference between Financial Accounting & Cost Accounting**

| FINANCIAL ACCOUNTING   | COST ACCOUNTING  |
|--|--|
| <b>1. PURPOSE</b>  |  |
| It provides information about the business in a general way that tells about profit and loss account of the business to the business man | It gives information to the management for planning, operation, control and decision – making. |

|  |   |
|--|---|
| and outsiders of the business  |   |
| <b>2. FORM OF ACCOUNTS</b>   |   |
| The accounts are maintained as per the requirement of the Companies Act and Income Tax Act   | They are usually kept voluntarily to meet the requirement of the management, but during the recent times maintaining of the cost accounting data are made compulsory for some of the manufacturing concerns |
| <b>3. RECORDING</b>  |   |
| It classifies, record and analyses the transactions in a subjective manner i.e., according to the nature of expenses                           | It records the expenditure in an objective manner i.e., according to the purpose for which the costs are incurred   |
| <b>4. PERIODICITY OF REPORTING</b>   |   |
| It reports operating results and financial position usually at the end of the year   | It gives information through cost reports to management as and when desired   |
| <b>5. ANALYSIS OF PROFIT</b>   |   |
| Financial accounts are the accounts of the whole business. They are independent and disclose the net profit or loss of the business as a whole | Cost accounting are only a part of the financial accounting and so they disclose profit and loss of each of the product, job or services  |
| <b>6. NATURE OF TRANSACTIONS</b>   |   |
| Financial accounts relate to commercial transactions of the business and include all expenses  | Cost accounts relate to transactions connected with the manufacture of goods and services and include only those expenses, which enter into the production.   |
| <b>7. INFORMATION</b>  |   |
| Monetary information is only used  | It deals with both Monetary and Non – monetary information like units   |
| <b>8. FIXATION OF SELLING PRICE</b>  |   |
| Financial accounts are not maintained with object of fixing up of selling price  | Cost accounts provides sufficient data for fixation of selling price  |
| <b>9. STOCK VALUATION</b>  |   |
| Stocks are valued at cost or market price whichever is less  | Stocks are usually valued at cost   |
| <b>10. TYPE OF SCIENCE</b>   |   |
| Financial accounts are usually positive science  | Cost accounts are not only positive science but also normative  |

#### Difference between Cost Accounting and Management Accounting

| COST ACCOUNTING   | MANAGEMENT ACCOUNTING   |
|---|---|
| <b>1. DEALS WITH</b>  |   |
| It deals with ascertainment, allocation, apportionment and accounting aspect of costs | It deals with the effect and impact of costs on the business  |
| <b>2. BASE</b>  |   |
| It provides a base for management accounting  | It is derived from both financial and cost accounting   |
| <b>3. ROLE</b>  |   |
| It is helpful in collecting costing data for the management                           | The data obtained from cost and financial accounting are used in such a way that they will provide information to the management as they prefer |
| <b>4. STATUS</b>  |   |
| Cost account comes after the management account                                       | Management accountant is senior in position to cost accountant  |
| <b>5. OUTLOOK</b>   |   |

|   |  |
|---|--|
| Cost accountant has a narrow approach                                     | Management accountant has a broader approach financial and cost data   |
| <b>6. TOOLS AND TECHNIQUE</b>   |  |
| It has standard costing, variable costing, break even analysis etc.,      | Along with the above the management accountant uses tools like fund and cash flow statements, ratio analysis etc., |
| <b>7. SCOPE</b>   |  |
| It does not include financial accounting, tax planning and tax accounting | It includes financial and cost accounting, land tax, income tax planning and accounting                            |
| <b>8. INSTALLATION</b>  |  |
| It can be installed without management accounting                         | Management accounting needs both financial and costing data for installation                                       |

## **Method of Costing**

### **1. Job Costing**

This system is adopted in industries where each job has separate identities that are produced against specific orders. The costs are collected for each job separately under this system. It is also known as lot costing, Specific or production order.

### **2. Construct Costing**

It is similar to job costing. However, requires a long period for completion. It is applied in industries engaged in construction works. Under this system, a separate account is opened for each contract and each contract is considered as a separate cost unit.

### **3. Batch costing**

This method is adopted in industries where the goods are produced for stock and for sale to the customers in general. Under this method, the costs are computed for a batch or lot instead of a job in job costing. The unit cost is calculated by dividing the total cost of a batch by the number of units produced in that batch. It is suitable for industries producing components and spare parts for assembling finished products.

### **4. Process costing**

The system adopted to ascertain the cost of each process of production is known as process costing. It is suitable for industries where a product passes through different processes for completion. In other words, it is a system adopted in industries where the finished product of one process is the raw materials of the next process. This system is suitable for industries like cotton textile, paper, and sugar, chemical and mining.

### **5. Unit, Output or Single Costing**

This method is suitable for industries where manufacturing is continuous and the units are identical. It is applied in industries like mines, quarries, oil drilling, breweries, brick works etc. The unit cost is determined by dividing the total cost by the number of units produced.

### **6. Operating costing**

This system is employed in undertakings performing service rather than producing goods like transport and power supply companies, hospitals, hotels etc. This method is used to ascertain the cost of performing the service.

### **7. Multiple costing or composite costing**

This method is the combination of two or more costing methods. This is suitable for industries where a number of component parts are separately produced and subsequently assembled into a final product e.g., industries manufacturing cycles, automobiles, radios, typewriters etc.

#### **Type of costing**

##### **1. Uniform Costing**

When the same costing principle and practices are used by several concerns for the common control or comparison of costs, it is known as uniform costing.

##### **2. Marginal costing**

It means the ascertainment of marginal cost by differentiating between fixed and variable costs and of the effect on profit due to changes in volume or type of output.

##### **3. Standard costing**

It is the preparation of standard costs and applying them to measure the variances from standards. It analyses the causes of variations with a view to maintain maximum efficiency in production.

##### **4. Historical Costing**

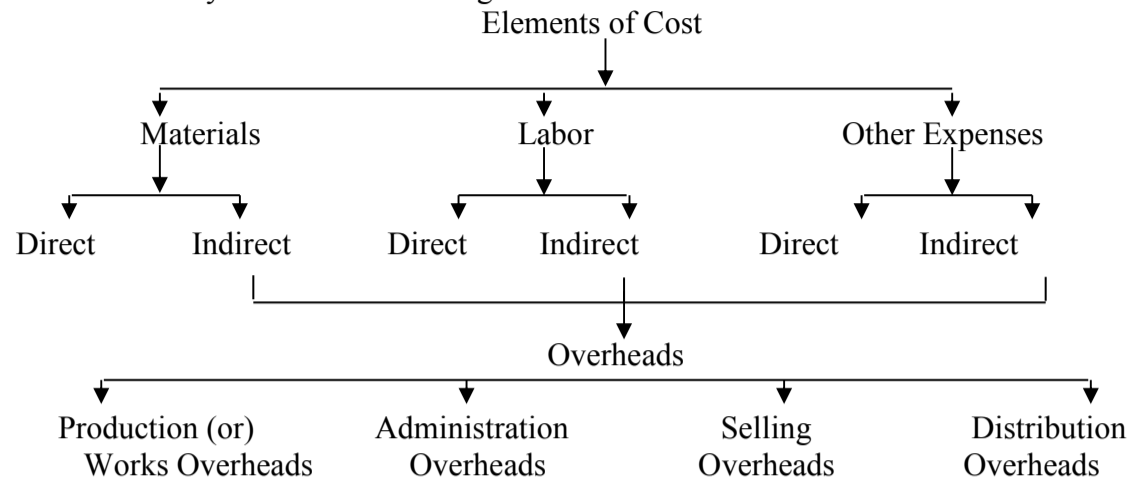
Under this costing, the costs are not predetermined but are ascertained after their occurrence. Therefore, the costs are not available in time to correct inefficiencies and to control costs.

### 5. Direct costing

The practice of charging all direct costs to the products is known as direct costing under this system, the indirect costs are written off against the profit of the period.

### Elements of Costs

Elements of costs are analyzed in different categories as follows:



**Direct materials:** All those materials that can be easily identified as chargeable to a particular product, job or process, are known as direct materials. Examples: Timber used in furniture's, paper used in notebooks etc.

**Direct Labour:** All those laborers who can be easily identified as attributable to a particular job, production process are known as direct labour. The wages given to them are known as direct wages. Example: Workers directly engaged on production.

**Direct or chargeable expenses:** All those expenses, which are incurred specifically for a particular job, product or process, are known as direct expenses. Examples: Expenses on drawings, models, design, excise duty, royalty etc.

**Overhead:** Indirect materials, indirect labour and indirect expenses are collectively known as "Overhead"

The students are advised to refer the chapter "Overhead" for details.

### Cost Concepts

**1. Cost Unit:** It is a unit product or service or time in terms of which costs may be computed, e.g., per tone in case of coal, per meter in case of cloth etc.

**2. Cost Centre:** It is a part of an undertaking for which costs may be ascertained. So, it may be location like a department or an area or an item of equipment like lathe or a person like salesperson, foreman.

**3. Profit Centre:** A profit centre is that segment of activity of a business, which is responsible for both revenue, expenses, and discloses the profit of a particular segment of activity. Profit centers are created to delegate responsibility to individuals and measure their performance.

### Classification of Costs

#### 1) According to Variability

1. Fixed costs or period costs are those costs which remain constant irrespective of the volume of output e.g., factory rent, insurance etc.

2. Variable costs or product costs are those costs, which will vary, in direct proportion to the output, e.g., direct materials, direct labour, power etc.

3. Semi-variable costs are those costs, which are partly fixed and partly variable, e.g., telephone charges.

#### 2) According to Controllability

Controllable costs are those costs, which are not within the control of management e.r., rent of building

#### 3) According to Normality

**1. Normal cost:** It is normally incurred at a given level of output and it forms part of the cost of production.

**2. Abnormal cost:** It is not normally incurred at a given level of output and therefore, it is charged to costing profit and loss account.

#### 4) According to Managerial Decision

**i) Marginal Cost:** It is the total variable cost comprising of prime cost and variable overheads.

**ii) Out of Pocket Cost:** It is a cost, which gives rise to cash expenditure.

**iii) Differential Cost:** It is the change in costs due to change in the level of activity or method of production.

**iv) Sunk Costs:** It is a cost, which cannot be recovered due to the permanent closure of a plant.

- v) **Shut down Costs:** It is the cost incurred on the plants kept idle due to the temporary suspension of activities.
- vi) **Imputed costs or Notional Cost:** It is the cost in respect of which no actual expenditure is incurred e.g., rent of won building, interest on capital etc. Therefore, it appears only in the cost accounts.
- vii) **Replacement Cost:** It is the cost at which an asses can be replaced.
- viii) **Opportunity Cost:** It is the cost, which may be earned from the alternative use of a productive capacity.
- ix) **Avoidable Cost:** It is the cost, which can be eliminated on the discontinuation of a product or department, e.g., salary of clerks in that department.
- x) **Unavoidable Cost:** It is that cost which cannot be eliminated on the discontinuation of a product or department, e.g., salary factory manager

**Expenses and incomes excluded from cost accounts**

The total cost of a product should include only those items of expenses, which are a charge against profits. The other items of expenses, which are relating to capital assets, capital losses, distribution of profits and items of pure financial nature should not form part of the cost.

The following items of expenses and revenues are to be excluded from the cost accounts:

**Expenses**

1. Abnormal waste of materialism idle time, bad debts and other abnormal expenses
2. Interest on capital and borrowings
3. Loss on sale of capital assets
4. Discount and commission on issue of shares and debentures
5. Preliminary expenses
6. Fines and penalties
7. Dividend paid.
8. Income –tax and super taxes.
9. Goodwill written off and 10. Charitable donations

**Revenues**

1. Profits from the sale of fixed assets
2. Transfer fee received.
3. Rent received.
4. Dividends received.
5. Interest on back deposits

**Cost Sheet/Statement of Cost/Production Statement**

It is a statement showing the total cost of a product or job in detail. It also shows the various elements of cost and cost per unit.

**Advantages of cost sheet**

1. It helps in fixing up the selling price
2. It is useful for determining the estimated prices for tenders or quotations.
3. It enable the manufacturer to control and minimize the cost.
4. It is useful for the formulation of production policies.

**Specimen of a cost sheet or statement of cost (and profit)  
for the period ending .....**

| Particular  | Details    | Total Cost<br>Rs. | Cost per unit<br>Rs. |
|---|------------|-------------------|----------------------|
| Direct material:  |            |                   |                      |
| Opening stock of raw materials  | XXX        |                   |                      |
| <u>Add purchases</u>  |            |                   |                      |
| <u>Add Purchases expenses</u>   | <u>XXX</u> |                   |                      |
|   | XXX        |                   |                      |
| <u>Less purchase returns</u>  | XXX        | XXX               | XXX                  |
| Direct labour   |            | XXX               | XXX                  |
| Direct expenses   |            | XXX               | XXX                  |
| <b>Prime cost</b>   |            | XXX               | XXX                  |
| <u>Add Factory overhead or works overhead</u><br>(Factory on cost or works on cost) |            |                   |                      |
| .....   | XXX        |                   |                      |
| .....   | XXX        |                   |                      |



|  |     |     |     |
|--|-----|-----|-----|
| .....  | XXX |     |     |
|  | XXX |     |     |
| <u>Less</u> Scrap realised                     | XXX |     |     |
|  |     | XXX | XXX |
|  |     | XXX | XXX |
| <u>Add</u> Opening stock of work in progress   |     | XXX | --- |
|  |     | XXX |     |
| <u>Less</u> Closing stock of work in progress  |     | XXX | --- |
|  |     | XXX | XXX |
| <b>Factory cost or works cost</b>              |     | XXX | XXX |
| <u>Add</u> Office and administrative overheads |     |     |     |
| .....  | XXX |     |     |
| .....  | XXX |     |     |
| .....  | XXX | XXX | XXX |
| <b>Cost of production</b>                      |     | XXX | XXX |
| <u>Add</u> Opening stock of finished goods     |     | XXX | --  |
|  |     | XXX | XXX |
| <u>Less</u> Closing stock of finished goods    |     | XXX | --- |
| <b>Cost of goods sold</b>                      |     | XXX | XXX |
| <u>Add</u> Selling and distribution expenses   |     | XXX | XXX |
| <b>Cost of Sales or Total Cost</b>             |     | XXX | XXX |
| <b>Profit</b>                                  |     | XXX | XXX |
| Sales  |     | XXX | XXX |

**Notes:**

- Unit cost column is to be provided only when it is required to show the cost per unit. Otherwise, it is not necessary.
- Cost per unit is to be calculated for all the figures appearing in the total cost column except the opening and closing stock items.
- Cost per unit of each item.  

$$\text{upto cost of production} = \frac{\text{Cost of the concerned item}}{\text{No. of units produced}}$$
- Cost/profit per unit from  

$$\text{cost of goods sold to sales} = \frac{\text{Cost / amount of the concerned items}}{\text{No. of units sold}}$$
- When the value of closing stock of finished goods is not given, it is to be calculated in the following manner:  

$$\frac{\text{Cost of production}}{\text{No. of units produced}} \times \text{No of units in closing stock}$$
- Meaning of Scrap:** It is the residue from the materials used in the process of manufacture. The scrap may be realized without further processing. Such realized value of scrap is credited to profit and loss account or job account.
- Meaning of Spoilage:** The loss due to defective goods, which cannot be rectified economically, is known as spoilage. If spoilage is normal, its value is credited to profit and loss account or job account.

**Tender or Quotations**

Estimation of cost of production is needed to quote price and submit tenders, quotations or price lists. It is also needed for preparing budgets. It is made based on the recent cost sheet, by making adjustments in the relevant costs. Orders are accepted upon the acceptance of these quotations. It is prepared by the manufacturer known as, tender statement. It is also a kind of cost sheet. The indirect expenses are calculated based on experiences.

**Factors to be Considered While Preparing Tender**

- Past cost figures
- Variations in cost in the current period
- Expected margin of profit and
- Competition in the field

Since, the lowest tender is accepted by the intending buyer, the producer has to be carefully taken into consideration the above factors. A slight difference in calculation of the tender price may result in losing the tender.

The preparation of tender takes the form of a cost sheet. The cost sheet includes estimated material cost, wages, overheads and expected profit. In preparation of estimates or tender, overheads are not generally given. They are estimated as percentages. Usually works overheads is estimated as a percentage on wages and office and selling overheads on work cost.

**Problem No: 1**

The following data relate to the manufacture of a standard product during the month of March 2004.

|                        |            |                  |                    |
|------------------------|------------|------------------|--------------------|
| Raw materials consumed | Rs. 80,000 | Office overhead  | 10% of works cost  |
| Direct Wages           | Rs. 48,000 | Selling overhead | Rs.1.50 per unit   |
| Machine hours worked   | 8,000      | Units produced   | 4,000              |
| Machine hour rate      | Rs.4       | Units Sold       | 3,600 @ Rs.50 each |

You are required to prepare a cost sheet in proper form.

**Problem No: 2**

Prepare a cost sheet from the following data to find out profit and cost per unit:

|                        |             |                   |           |
|------------------------|-------------|-------------------|-----------|
| Raw materials consumed | Rs.1,60,000 | Selling overheads | Rs.12,000 |
| Direct wages           | Rs.80,000   | Units produced    | 4,000     |
| Factory overheads      | Rs.16,000   | Units sold        | 3,600     |

Office overheads 10% of factory cost.

Selling price Rs.100 per unit.

**Problem No: 3**

Prepare the cost sheet to show the total cost of production and cost per unit of goods manufactured by a company for the month of July 2003. Also, find out the cost of sales.

|                                  |          |                        |       |
|----------------------------------|----------|------------------------|-------|
| Stock of raw materials 1.7.2003  | Rs.3,000 | Office rent            | 500   |
| Raw materials purchased          | 28,000   | General expenses       | 400   |
| Stock of raw materials 31.7.2003 | 4,500    | Discount on sales      | 300   |
|                                  |          | Advertisement expenses |       |
| Manufacturing wages              | 7,000    | to be charged fully    | 600   |
| Depreciation on plant            | 1,500    |                        |       |
| Loss on sale of a part of plant  | 300      | Income tax paid        | 2,000 |
| Factory rent and rates           | 3,000    |                        |       |

The number of units produced during July 2003 was 3,000.

The stock of finished goods was 200 and 400 its on 1.7.2003 and 31.7.2003 respectively. The total cost of units on hand on 1.7.2003 was Rs.2,800. All these had been sold during the month.

**Problem No: 4**

From the following particulars, prepare a Cost Sheet showing the total cost per tonne for the period ended 30<sup>th</sup> June 2004.

|                          |        |                             |       |
|--------------------------|--------|-----------------------------|-------|
| Raw Material             | 33,000 | Rent and taxes (Office)     | 500   |
| Productive Wages         | 35,000 | Water supply (Works)        | 1,200 |
| Direct Expenses          | 3,000  | Factory Insurance           | 1,100 |
| Unproductive wages       | 10,500 | Office Insurance            | 500   |
| Factory rent and taxes   | 7,500  | Legal expenses              | 400   |
| Factory Lighting         | 2,200  | Rent of warehouse           | 300   |
| Factory Heating          | 1,500  | Depreciation of             |       |
| Motive Power             | 4,400  | - Plant and Machinery       | 2,000 |
| Haulage (Works)          | 3,000  | - Office Building           | 1,000 |
| Director's fees (Works)  | 1,000  | - Delivery Vans             | 200   |
| Director's fees (Office) | 2,000  | Bad Debts                   | 100   |
| Factory cleaning         | 500    | Advertising                 | 300   |
| Sundry office expenses   | 200    | Sales Department's Salaries | 1,500 |
| Estimating expenses      |        |                             |       |
| (Works)                  | 800    | Upkeep of delivery vans     | 700   |

|                         |     |                     |       |
|-------------------------|-----|---------------------|-------|
| Factory stationery      | 750 | Bank Charges        | 50    |
| Office stationery       | 900 | Commission on Sales | 1,500 |
| Loose tools written off | 600 |                     |       |

The total output for the period has been 14,775 tones.

**Problem No: 5**

The accounts of Z manufacturing Company for the year ended December 2003 show the following:

|                                |          |   |          |
|--------------------------------|----------|---|----------|
| Factory Office Salaries        | 6,500    | Traveller's Salaries & Commission             | 7,700    |
| General Office Salaries        | 12,600   | Productive wages                              | 1,26,000 |
| Carriage Outward               | 4,300    | Depreciation                                  |          |
| Carriage on Purchases          | 7,150    | - Plant and Machinery                         | 6,500    |
| Bad Debts written off          | 6,500    | - Furniture                                   | 300      |
| Repairs of Plant and Machinery | 4,450    | Director's Fees                               | 6,000    |
| Rent, Rates, Taxes & Insurance |          | Gas and Water                                 |          |
| - Factory                      | 8,500    | - Factory                                     | 1,200    |
| - Office                       | 2,000    | - Office                                      | 400      |
| Sales                          | 4,61,100 | Manager's Salary (3/4 Factory and 1/4 Office) | 10,000   |
| Stock of Materials             |          | General Expenses                              | 3,400    |
| - 31st Dec. 2002               | 62,800   | Income Tax                                    | 500      |
| - 31st Dec. 2003               | 48,000   | Dividend                                      | 1,000    |
| Materials Purchased            | 1,85,000 |   |          |
| Travelling Expenses            | 2,100    |   |          |

Prepare statement giving the following information:

a) Materials consumed; b) Prime Cost; c) Factory Cost; d) Cost of Production; e) Total Cost and f) Net Profit.

**Problem No: 6**

The following data have been extracted from the books of Sunshine Industries Ltd., for the year 2004.

|                               |        |                                  |          |
|-------------------------------|--------|----------------------------------|----------|
| Opening Stock of Raw Material | 25,000 | Indirect consumption of Material | 500      |
| Purchase of Raw Material      | 85,000 | Salary                           |          |
| Closing Stock of Raw Material | 40,000 | - Office                         | 2,500    |
| Carriage Inward               | 5,000  | - Salesmen                       | 2,000    |
| Wages – Direct                | 75,000 | Other Factory Expenses           | 5,700    |
| Wages – Indirect              | 10,000 | Other Office Expenses            | 900      |
| Other Direct Charges          | 15,000 | Manager's Remuneration           | 12,000   |
| Rent and Rates                |        | Bad debts written off            | 1,000    |
| - Factory                     | 5,000  | Advertisement Expenses           | 2,000    |
| - Office                      | 500    | Travelling Expenses of Salesmen  | 1,100    |
| Depreciation                  |        | Carriage and Freight Outward     | 1,000    |
| - Plant and Machinery         | 1,500  | Sales                            | 2,50,000 |
| - Office Furniture            | 100    | Advance Income Tax paid          | 15,000   |

The manager has the overall charge of the company and his remuneration is to be allocated at Rs.4,000 to the factory, Rs.2,000 to the office and Rs.6,000 to the selling operations.

From the above particulars, prepare a statement showing a) Prime Cost; b) Factory Cost; c) Cost of Production; d) Cost of Sales and e) Net Profit.

**Problem No: 7**

Following information has been obtained from the records of a Manufacturing Company.

|                           | 1.1.2003 (in Rs.) | 31.12.2003 (in Rs.) |
|---------------------------|-------------------|---------------------|
| Stock of Raw Materials    | 40,000            | 50,000              |
| Stock of Finished Goods   | 1,00,000          | 1,5000              |
| Stock of Work-in-Progress | 10,000            | 14,000              |

|                           |          |                                  |           |
|---------------------------|----------|----------------------------------|-----------|
| Indirect Labour           | 50,000   | Administration expenses          | 1,00,000  |
| Lubricants                | 10,000   | Power                            | 30,000    |
| Insurance on Plant        | 3,000    | Direct Labour                    | 3,00,000  |
| Purchase of raw materials | 4,00,000 | Depreciation on Machinery        | 50,000    |
| Sale Commission           | 60,000   | Factory Rent                     | 60,000    |
|                           |          | Property tax on factory building | 11,000    |
| Salaries of Salesmen      | 1,00,000 | Sales                            | 12,00,000 |
| Carriage outward          | 20,000   |                                  |           |

Prepare a Statement of Cost and Profit showing a) Cost of Raw Materials consumed; b) Prime Cost; c) Total Manufacturing Cost; d) Factory Cost; e) Cost of Production; f) Cost of Goods Sold; g) Cost of Sales and h) Profit.

**Problem No: 8**

Following information has been obtained from the records of a manufacturing concern:

|                           | 1.1.2003 | 31.12.2003 |
|---------------------------|----------|------------|
|                           | Rs.      | Rs.        |
| Stock of Raw Materials    | 30,000   | 35,000     |
| Stock of Finished Goods   | 15,000   | 20,000     |
| Stock of Work-in-Progress | 43,700   | 54,000     |

|                        |          |                           |          |
|------------------------|----------|---------------------------|----------|
| Indirect Wages         | 9,720    | Purchase of Raw Materials | 1,20,000 |
| Sales                  | 3,25,000 | Productive wages          | 90,000   |
| Factory Rent and Rates | 7,830    | Plant repair              | 3,420    |
| Office Salaries        | 15,030   | Depreciation on Plant     | 8,360    |
| General Expenses       | 13,500   | Factory Lighting          | 7,380    |
| Office Rent            | 2,000    | Salesmen's Salaries       | 7,650    |
| Rent of Show Room      | 1,200    |                           |          |

Prepare:

- i) Cost Sheet showing cost of raw materials consumed, prim cost, factory cost incurred and factory cost.
- ii) Income statement in traditional form for the year showing gross profit and net profit.

**Problem No: 9**

From the following particulars, prepare a cost statement showing the component of total cost and the profit for the year ended 31<sup>st</sup> December 2003.

|                           | 1.1.2003 | 31.12.2003 |
|---------------------------|----------|------------|
|                           | Rs.      | Rs.        |
| Stock of Finished Goods   | 6,000    | 15,000     |
| Stock of Raw Materials    | 40,000   | 50,000     |
| Stock of Work-in-progress | 15,000   | 10,000     |

|                                   |          |   |          |
|-----------------------------------|----------|---|----------|
| Purchase of raw materials         | 4,75,000 | Sales for the year                                    | 8,60,000 |
| Carriage inward                   | 12,500   | Income tax  | 500      |
| Wages                             | 1,75,000 | Dividend  | 1,000    |
| Works Manager's Salary            | 30,000   | Debenture interest                                    | 5,000    |
| Factory employees' salaries       | 60,000   | Transfer to Sinking Fund for replacement of machinery | 10,000   |
| Factory rent, taxes and insurance | 7,250    | Goodwill written off                                  | 10,000   |
| Power expenses                    | 9,500    | Payment of Sales tax                                  | 16,000   |
| Other production expenses         | 43,000   | Selling expenses                                      | 9,250    |
| General expenses                  | 32,500   |   |          |

**Problem No: 10**

From the following particulars of a manufacturing firm, prepare a statement showing a) Cost of materials used; b) Works Cost; c) Cost of production; d) Percentage of works overheads to productive wages; e) Percentage of general overhead to works cost.

|                                     |           |                                      |          |
|-------------------------------------|-----------|--------------------------------------|----------|
| Stock of Materials on 1.1.2003      | 40,000    | Works Overhead                       | 1,50,000 |
| Purchases of materials in 1.1.2003  | 11,00,000 | Office and general expenses          | 1,00,000 |
| Stock of finished goods on 1.1.2003 | 50,000    | Stock of materials on 31.1.2003      | 1,40,000 |
| Productive Wages                    | 5,00,000  | Stock of finished goods on 31.1.2003 | 60,000   |
| Finished goods sold                 | 24,00,000 |                                      |          |

**Problem No: 11**

Mr. X furnishes the following data relating to the manufacture of a standard product during the month of April 2004.

|                          |                         |
|--------------------------|-------------------------|
| Raw materials consumed   | Rs. 15,000              |
| Direct labour charges    | Rs. 9,000               |
| Machine hours worked     | 900                     |
| Machine hour rate        | Rs. 5                   |
| Administrative overheads | 20% on works cost       |
| Selling overheads        | Re. 0.50 per unit       |
| Units produced           | 17,100                  |
| Units sold               | 16,000 at Rs.4 per unit |

You are required to prepare a Cost Sheet from the above, showing a) the cost per unit b) profit per unit sold and profit for the period.

**Problem No: 12**

Prepare the cost sheet to show the total cost of production and cost per unit of goods manufactured by a company for the month of July 2004. Also, find the cost of sales and profit.

|                                    |        |                        |        |
|------------------------------------|--------|------------------------|--------|
| Stock of Raw Materials (1.7.2004)  | 3,000  | Office Rent            | 500    |
| Raw Materials purchased            | 28,000 | General expenses       | 400    |
| Stock of Raw Materials (31.7.2004) | 4,500  | Discount on sales      | 300    |
| Manufacturing wages                | 7,000  | Advertisement Expenses | 600    |
| Depreciation on Plant              | 1,500  | Income tax paid        | 2,000  |
| Loss on sale of a part of plant    | 300    | Sales                  | 50,000 |
| Factory rent and rates             | 3,000  |                        |        |

The number of units produced during July 2004 was Rs.3,000.

The stock of finished goods was 200 and 400 units on 1.7.2004 and 31.4.2004 respectively. The total cost of the units on hand on 1.7.2004 was Rs.2,800. All these had been sold during the month.

**Problem No: 13**

The cost of sale of product A is made up as follows:

|   |        |   |       |
|---|--------|---|-------|
| Materials used in manufacturing         | 55,000 | Indirect expenses - factory                   | 1,000 |
| Materials used in primary packing       | 10,000 | Administration expenses                       | 1,250 |
| Materials used in selling the product   | 1,500  | Depreciation on Office Building and Equipment | 750   |
| Materials used in the factory           | 750    | Depreciation on Factory Building              | 1,750 |
| Materials used in the office            | 1,250  | Selling expenses                              | 3,500 |
| Labour required in producing            | 10,000 | Freight on materials purchased                | 5,000 |
| Labour required for factory supervision | 2,000  | Advertising                                   | 1,250 |
| Direct expenses                         | 5,000  |   |       |

Assuming that all the products manufactured are sold what should be the selling price to obtain a profit of 20% on selling price?