

# UNIT – I

## INTRODUCTION

### MEANING & DEFINITION OF COST ACCOUNTING

#### Cost

The term cost has a variety of meanings according to the context. In common parlance, cost refers to the price of a product. But in management terminology, cost refers to expenditure. Generally cost means the total of all expenditures incurred on the production of an article. **The Institute of Cost and Management Accountants, (ICMA) London** defines Cost as “the amount of expenditure incurred on a given things”. For example, the cost of making a table includes the amounts spent on materials like timber, nails, polish, wages paid to carpenter and other overhead expenses. Generally cost 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”.

#### 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”

#### Cost Accounting: Definition

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.

## **SCOPE OF COST ACCOUNTING**

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 following are the major objectives of cost accounting:

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 analyze 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.

### **LIMITATIONS OF COST ACCOUNTING**

#### **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.

## DIFFERENCE BETWEEN FINANCIAL ACCOUNTING & COST ACCOUNTING

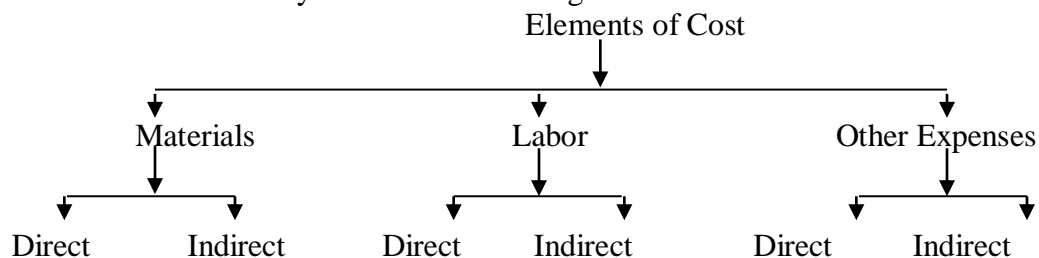
Financial accounting	Cost accounting
<b>1. Purpose</b>	
It provides information about the business in a general way that tells about profit and loss account of the business to the business man and outsiders of the business	It gives information to the management for planning, operation, control and decision – making.
<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

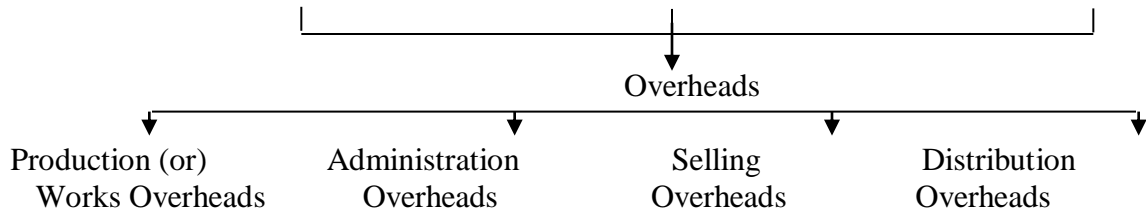
## DIFFERENCE BETWEEN COST ACCOUNTING AND MANAGEMENT ACCOUNTING

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

## 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 render the chapter "Overhead" for details.

## COST SHEET AND TENDER

### 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 Rs.	Cost per unit Rs.
Direct material:			
Opening stock of raw materials	XXX		
<u>Add</u> purchases			
<u>Add</u> Purchases expenses	<u>XXX</u>		
	XXX		
<u>Less</u> purchase returns	XXX	XXX	XXX
Direct labour		XXX	XXX
Direct expenses		XXX	XXX
<b>Prime cost</b>		XXX	XXX
<u>Add</u> Factory overhead or works overhead (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



Less Closing stock of finished goods	XXX	---
<b>Cost of goods sold</b>	XXX	XXX
Add 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:**

1. Unit cost column is to be provided only when it is requires to show t he cost per unit. Otherwise, it is not necessary.
2. Cost per unit is to be calculated for all the figures papering in the total cost column except the opening and closing stock items.
3. Cost per unit of each item.  
upto cost of production =  $\frac{\text{Cost of the concerned item}}{\text{No. of units produced}}$
5. Cost/profit per unit from  
cost of goods sold to sales =  $\frac{\text{Cost / amount of the concerned items}}{\text{No. of units sold}}$
6. When the value of closing stock of finished goods is not given, it is to be calculated in the following manner:  
 $\frac{\text{Cost of production}}{\text{No. of units produced}} \times \text{No of units in closing stock}$
7. 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.
8. Meaning of Spoilage: The loss due to defective goods, which cannot be rectified economically, is known as spoilage. If spoilage is normal, it is treated value of scrap is credited to profit and loss account or job account.

**Components of total cost**

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

**Factory cost:-** It comprises of prime cost and in addition works of factory overheads which includes costs of indirect material, indirect labour and indirect expenses of the factory. The cost is also known as works cost, production or manufacturing cost.

**Office cost:** - If office and administrative overheads are added to factory cost office cost is arrived at this is also termed as administrative cost or the total cost of production.

**Total cost:-** Office cost or total cost of production selling and distribution overheads are added to the total cost of production to get the total cost or the cost of sales.

Cost of sales or total cost. The various components of total cost can be depicted through the help of the following chart:-

**Components of Total cost**

Direct material plus  
Direct labour plus  
Direct expenses } Prime cost or Direct cost or First cost

Prime cost plus  
manufacturing overheads } works cost or factory or production cost

Work cost plus office and  
Administrative overheads } Cost of Production

Office cost plus selling  
And distribution overheads } Cost of Sales

### Adjustments for inventories

The following adjustments may have to be made for inventories of raw materials, work – in – progress and finished goods while computing the different components of cost:

- (i) Direct Material Consumed = Opening stock of Direct material + Purchases of Direct material - Closing stock of Direct material
- (ii) Works cost = Gross works cost + Opening work -in progress - Closing work - in progress
- (iii) Cost of production of goods sold = cost of production + Opening stock of finished goods - Closing stock of finished goods

**Illustration 1.** Calculate prime cost from the following information:-

Direct material - Rs. 40,000, Direct labour - Rs. 30,000 Direct expenses - Rs. 25,000

**Solution:** Prime cost = Direct Material + Direct labour + Direct expenses  
= Rs. 40,000 + Rs.30, 000 + Rs. 25,000  
= Rs. 95,000

**Illustration 2.** Calculate prime cost from the following information:-

Opening stock of raw material = Rs. 12,500  
Purchased raw material = Rs. 75,000  
Expenses incurred on raw material = Rs. 5,000  
Closing stock of raw material = Rs. 22,500  
Wages Rs. 47,600 Direct expenses Rs. 23,400

**Solution: -** Calculation of raw material consumed:-

Raw material consumed = Opening stock of material + purchases of Raw material + expenses incurred on raw material - closing stock of raw material  
 = Rs 12,500 + Rs 75,000 + Rs 5,000 – Rs 22,500  
 = Rs. 92,500 – Rs 22,500  
 = Rs. 70,000

**Prime cost** = Raw material consumed + Direct labour + Direct expenses  
 = Rs 70,000 + Rs 47,600 + Rs 23,400  
 = Rs 1, 41,000 (OR)

It can be shown in vertical form such as cost sheet

Particular	Details (Rs)	Amount (Rs)
Opening stock of raw material	12,500	
<b>Add:-</b> Purchase	7,500	
<b>Add:-</b> Expenses incurred on purchases	5,000	
	-----	
Raw material available	92,500	
<b>Less :-</b> closing stock of raw material	22,500	
	-----	
Raw material consumed		70,000
<b>Add:-</b> Direct wages or labour		47,600
<b>Add:-</b> Direct expenses		23,400
		-----
<b>Prime cost</b>		1,41,000

**Illustration 3.** Calculate works cost or factory cost from the following details:-

Raw material consumed = Rs 50,000  
 Direct wages = Rs20, 000  
 Direct expenses = Rs 10,000  
 Factory expenses 80% of direct wages  
 Opening stock of work in progress = Rs 15,000  
 Closing stock of work in progress = Rs 21,000

**Solution:** - Calculation of factory cost

Particular	Amount (Rs)	Amount (Rs)
Direct material consumed	50,000	
<b>Add:-</b> Direct wages	20,000	
<b>Add:-</b> Direct Expenses	10,000	
	-----	
<b>Prime cost</b>		80,000
<b>Add:-</b> Factory expenses		16,000

Current manufacturing cost		----- 96,000
<b>Add:-</b> Opening stock of work in progress		15,000
		-----
Total goods processed during the period		1,11,000
<b>Less:-</b> Closing sock of work in progress		21,000
		-----
<b>Factory cost or work cost</b>		90,000

**Illustration 4.** Calculate cost of production from the following information:-

Raw material purchased = Rs 42,500

Freight paid = Rs 5,000

Labour charges = Rs 12,500

Direct expenses = Rs 10,000

Factory overhead 80% of Direct labour charges

Administrative overhead = 10% of work cost

	Opening stock	Closing stock
Raw material	8,000	10,000
Work in progress	7,500	9,000

**Solution: -** Calculation of cost of production:-

Particular	Amount (Rs)	Amount (Rs)
Material purchased	42,500	
<b>Add:-</b> freight	5,000	
	-----	
Total cost of material purchased	47,500	
<b>Add:-</b> Opening stock of Raw material	8,000	
	-----	
Material available for consumption	55,500	
<b>Less:-</b> Closing stock of Raw material	10,000	
	-----	
Raw material consumed	45,500	
<b>Add:-</b> Direct labour charges	12,500	
<b>Add:-</b> Direct expenses	10,000	
<b>Prime cost</b>		68,000
<b>Add:-</b> Factory overhead		10,000
		-----
Current manufacturing cost		78,000
<b>Add:-</b> Opening stock of work in progress		7,500
		-----
Total goods processed during the period		85,500
<b>Less:-</b> Closing stock of work in progress		9,000
		-----

Factory cost		76,500
<b>Add:-</b> Administrative overhead		7,650
		-----
<b>Cost of production</b>		84,150

**Illustration 5.** Prepare cost sheet from the following particular in the book of B. M. Rehman

Raw material purchased = Rs. 1, 20,000

Paid freight charges = Rs 10,000

Wages paid to laborers = Rs 35,000

Directly chargeable expenses = Rs 25,000

Factory on cost = 20% of prime cost

General and administrative expenses = 4% of factory cost

Selling and distribution expenses = 5% of production cost

Profit 20% on sales

	Opening stock	Closing stock
Raw material	15,000	20,000
Work in progress	17,500	24,000
Finished goods	20,000	27,500

**Solution:-**

**Book of B. M. Rehman**  
**Cost sheet**

Raw material purchased	1,20,000
<b>Add:-</b> freight charges	10,000
	-----
Total cost of raw material purchased	1,30,000
<b>Add:-</b> opening stock of raw material	15,000
	-----
Cash of raw material available	1,45,000
<b>Less:-</b> closing stock of raw material	20,000
	-----
<b>Raw material consumed</b>	1,25,000
<b>Add:-</b> wages paid to labours	35,000
<b>Add:-</b> Directly chargeable expenses	25,000
	-----
<b>Prime cost</b>	1,85,000
<b>Add:-</b> Factory overhead 20% of prime cost	37,000
	-----
Current manufacturing cost	2,22,000
<b>Add:-</b> Opening stock of work in progress	17,500
	-----
Total goods processed during the period	2,39,500
<b>Less:-</b> closing stock of work in progress	24,000
	-----
<b>Factory on work cost</b>	2,15,500
<b>Add:-</b> General & administrative expenses 4% of factory cost	8,620
	-----

	<b>Cost of production</b>	2,24,120
<b>Add:-</b>	opening stock of finished goods	20,000
		-----
	Goods available for sales	2,44,120
<b>Less:-</b>	closing stock of finished goods	27,500
		-----
	<b>Cost of goods sold</b>	2,16,620
<b>Add:-</b>	selling and distribution expenses 5% of production cost	11,206
		-----
	<b>Cost of sales</b>	2,27,826
<b>Add:-</b>	Profit	56,956.50
		-----
	<b>Sales</b>	2,84,782.50

**Illustration 6.** Prepare cost sheet in the book of M. B. Rehman from the following particulars.

Opening stock: -	Raw material	=	Rs 5,000
	Finished goods	=	Rs 4,000
Closing stock: -	Raw material	=	Rs 4,000
	Finished goods	=	Rs 5,000
	Raw material purchased	=	Rs 50,000
	Wages paid to laboures	=	Rs 20,000
	Chargeable expenses	=	Rs 2,000
	Rent and Taxes	=	Rs 7,400
	Power	=	Rs 3,000
	Experimental expenses	=	Rs 600
	Sale of wastage of material	=	Rs 200
	Office management salary	=	Rs 4,000
	Office printing & stationery	=	Rs 200
	Salaries to salesman	=	Rs 2,000
	Commission to traveling agents	=	Rs 1,000
	Sales	=	Rs 1, 00,000

**Solution:-**

**Book of B. M. Rehman  
Cost sheet**

Particular	Details (Rs)	Amount (Rs)
Raw material purchased	50,000	
<b>Add:-</b> Opening stock of raw material	5,000	
	-----	
Raw material for consumption	55,000	
<b>Less:-</b> closing stock of raw material	4,000	
	-----	
Raw material consumed	51,000	
<b>Less:-</b> Sale of wastage of materials	200	

	-----	50,800
<b>Add:-</b> Direct labour		20,000
<b>Add:-</b> Direct chargeable expenses		2,000
	-----	
<b>Prime cost</b>		72,800
<b>Add:-</b> Factory overhead		
Rent & Taxes	7,400	
Power	3,000	
Experimental charges	600	
	-----	11,000
<b>Factory cost</b>		83,800
<b>Add:-</b> Administrative overhead:-		
Office management salary	4,000	
Office printing & stationery	200	
	-----	4,200
<b>Cost of production</b>		88,000
<b>Add:-</b> Opening stock of finished goods		4,000
		-----
Goods available for sales		92,000
<b>Less:-</b> closing stock of finished goods		5,000
		-----
<b>Cost of goods sold</b>		87,000
<b>Add:-</b> selling and distribution overhead:-		
Salaries of salesman	2,000	
Commission to traveling agent	1,000	
	-----	3,000
Cost of sales		90,000
Profit		10,000
		-----
<b>Sales</b>		1,00,000

**Illustration 7.** The cost of sale of production 'A' is made up as follows:-

Material used in manufacturing	Rs 5,500
Material used in packing material	Rs 1,000
Material used in selling the product	Rs 150
Material used in the factory	Rs 175
Material used in the office	Rs 125
Labour required in production	Rs 1,000
Labour required for supervision in factory	Rs 200
Expenses direct factory	Rs 500
Expenses indirect factory	Rs 100
Expenses office	Rs 125
Depreciation of office building	Rs 75
Depreciation on factory plant	Rs 175
Selling expenses	Rs 350

Freight on material  
Advertising

Rs 500  
Rs 125

Assuming that all products manufactured and sold, what should be the selling price be fixed to obtain a profit of 20% on selling price.

**Solution**

**Cost Sheet**

Particular	Amount (Rs)	Amount (Rs)	Amount (Rs)
<b>Direct material:-</b>			
Material used in manufacturing		5,500	
Material used in Packing material		1,000	
Freight on material		500	
		-----	7,000
<b>Direct wages:-</b>			
labour require in production			1,000
Direct expenses:- Direct factory			500
			-----
<b>Prime cost</b>			8,500
<b>Add:- <u>Factory overhead</u></b>			
Indirect material used in factory		75	
Indirect labour required for supervision		200	
Indirect factory expenses	100		
Depreciation factory	175		
	-----	275	
		-----	550
<b>Factory on works cost</b>			9050
<b>Add:- <u>office &amp; administrative expenses</u></b>			
Indirect material		125	
Indirect expenses office	125		
Indirect depreciation	75		
	-----	200	
		-----	325
<b>Total cost of production</b>			9375
<b>Add:- <u>selling and distribution overhead:-</u></b>			
Indirect material		150	
Indirect expenses	350		
Advertisement	125		
	-----	475	
		-----	625
Cost of sales			10,000
Profit			2,500
			-----
<b>Sales</b>			12,500

**Illustration 8.**



**Prepare a statement of cost from the following trading and P/L account for the year ending March 31, 2008**

<b>Particular</b>	<b>Amount (Rs)</b>	<b>Particular</b>	<b>Amount (Rs)</b>
To opening stock material	12,000	By sales	2,00,000
Finished goods	40,000	By closing stock material	20,000
To purchases	1,20,000	Finished goods	50,000
To cost of moulds	3,000		
To salary of factory manger	1,000		
To depreciation of machine	800		
To gross profit	63,200		
	-----		-----
	2,70,000		2,70,000
	-----		-----
To office salary	9,000	By Gross profit	63,200
To salesman salary	6,000	By interest from bank	800
To insurance of office building	1,000	By dividend received	200
To godown expenses	800	By rent received	900
To directors fees	2,000		
To telephone charges	700		
To showroom expenses	1,200		
To delivery van expenses	1,500		
To preliminary expenses	2,000		
To interest on deb.	700		
To market research exp.	600		
To net profit	39,000		
	-----		-----
	65,100		65,100
	-----		-----

**Solution**

**Statement of cost  
(For the year ending 31<sup>st</sup> March 2008)**

<b>Particular</b>	<b>Details (Rs)</b>	<b>Amount (Rs)</b>
Direct material:-		
Raw material purchased	1,20,000	
<b>Add:-</b> opening stock of raw materials	12,000	
	-----	
Raw material for consumption	1,32,000	
<b>Less:-</b> Closing sock of raw materials	20,000	
	-----	
Raw material consumed	1,12,000	
<b>Add:-</b> Direct labour	30,000	

<b>Prime cost</b>	-----	1,42,000
<b>Add:-</b> Factory overhead:-		
Cost of moulds	3,000	
Factory manager salary	1,000	
Depreciation on machinery	800	
	-----	4,800
		-----
<b>Factory cost</b>		1,46,800
<b>Add:-</b> office and administrative overhead		
Salary	9,000	
Insurance	1,000	
Directors fees	2,000	
Telephone charges	700	
	-----	12,700
		-----
<b>Cost of production</b>		1,59,500
<b>Add:-</b> Opening stock of finished goods		40,000
		-----
Goods available for sales		1,99,500
<b>Less:-</b> Closing stock of finished goods		50,000
		-----
		1,49,500
<b>Cost of goods sold</b>		
<b>Add:-</b> selling & distribution ext:-		
Salesman's salary	6,000	
Insurance (godown)	800	
Showroom expenses	1,200	
Expenses of delivery van	1,500	
Market research expenses	600	
	-----	10,100
		-----
Cost of sales		1,59,600
Profit		40,400
		-----
<b>Sales</b>		2,00,000

### Illustration 9.

The following inventory data relate to Nazia Ltd.

#### Inventories

	Opening	Closing
Finish goods	Rs 1,100	Rs 950
Work in progress	Rs 700	Rs 800
Raw materials	Rs 900	Rs 950

**Additional information:-**

Cost of goods available for sales	= Rs 6840
Total goods processed during the period	= Rs 6540
Factory on cost	= Rs 1670
Direct material used	= Rs 1930

**Requirements:-**

- (i) determine raw material purchase
- (ii) determine the direct labour and cost incurred
- (iii) determine the cost of goods sold

**Solution**

- (i) Raw material purchased:-

Raw material consumed	=	opening stock + purchases – closing stock
<b>OR</b> Rs 1,930	=	Rs 900 + Purchases – Rs 950
<b>OR</b> Rs 1,930 + Rs 50	=	purchases
Rs 1,980	=	Raw material purchased

- (ii) Direct labour cost:-

Cost of goods processed during the year	= Rs 6,540
Less: - Opening work in progress	= Rs 700
	-----
	Rs 5,840
Less: - Factory overheads	= Rs 1,670
	-----
Prime cost	= Rs 4,170
Less: - Raw material consumed	= Rs 1930
	-----
Direct labour cost	= Rs 2,240

- (iii) Cost of goods sold:-

= cost of goods available for sales – closing stock finished goods
= 6840 – 950 = Rs 5890

**Illustration 10.**

Mr. Zia furnishes the following data related to the manufacture of a standard product during the month of August 2008

Raw material consumed	-	Rs 15,000
Direct labour	-	Rs 5,000
Machine hours worked	-	Rs 900
Machine hour rate	-	Rs 5
Administration overheads	=	20% of works cost
Selling overheads	-	Rs 0.50 per unit

Unit produced - Rs 17,100  
 Unit sold - 16,000 @ Rs 4 per unit

You are required to prepare a cost sheet from the above showing:-

- (a) The cost per unit  
 (b) Cost per unit sold and profit for the period

**Solution**

**Book of Zia  
 Cost sheet  
 (For the month of August 31, 2008)**

Particular	Amount (Rs)	Amount (Rs)
Direct material consumed	15,000	0.878
Direct labour	5,000	0.292
Direct expenses	4,000	0.233
	-----	-----
<b>Prime cost</b>	24,000	1.403
Factory overheads (900 hours @ Rs 5 per hour)	4,500	0.263
	-----	-----
<b>Work cost</b>	28,500	1.666
Administrative overheads @ 20% of works cost	5,700	0.333
	-----	-----
Cost of production	34,200	2,000
Less:- closing stock on August 31, 2008 (1100 units @ Rs 2 per unit)	2,200	-----
	-----	-----
Cost of goods sold	32,000	2.000
Selling overheads @ Rs 0.50 per unit for 16000	8,000	0.50
	-----	-----
Cost of sales	40,000	2.50
Profit	24,000	1.50
	-----	-----
<b>Sales (1600 unit)</b>	64,000	4.00

\* Closing stock = unit produced - units sold  
 = 17100-16000  
 = 1100 units

**Exercise Questions.**

**Theoretical Questions:-**

- 1) What are the components of direct cost?

- 2) Write the formula of calculating the raw material consumed
- 3) Explain the meaning of cost of goods sold and cost of sales
- 4) Explain the meaning of
  - a) First cost
  - b) Works cost and works on cost
  - c) Cost of production and goods available for sales

### Practical problems (Short Answers)

1.
 

Opening stock of raw material	- Rs 15,000
Closing stock of raw material	- Rs 20,000
Material purchased	- Rs 1, 20,000
Find raw material consumed	
	(Ans. 1, 15,000)
  
2.
 

Raw material consumed	- Rs 1, 02,000
Raw material for consumption	- Rs 1, 10,000
Raw material purchased	- Rs 1, 00,000
Find opening & closing stock of raw material	(Ans. Rs 10,000 and Rs 8,000)
  
3.
 

Prime cost	- Rs 1, 85,000
Current manufacturing cost	- Rs 2, 22,000
Total goods processed during the period	- Rs 2, 39,500
Works cost	- Rs 2, 15,000
Find factory overheads, opening and closing stock of work in progress	
	(Ans. Rs 37,000, Rs 17,500 and Rs 24,000)
  
4.
 

Cost of production	- Rs 11,206
Goods available for sales	- Rs 12,206
Cost of goods sold	- Rs 10,831
Cost of Sales	- Rs 11, 391
Sales	- Rs 12,000
Find opening and closing stock of finished goods, selling expenses and profit or loss	
	(Ans. Rs 1,000, Rs 1,375, Rs 560 and Rs 609 profit)
  
5.
 

Direct material consumed	- Rs 60,000
Direct labour 50% of material consumed	
Direct expenses -	33 <sup>1</sup> / <sub>3</sub> % of direct labour
Factory overheads -	40% of direct labour
Office overheads -	on cost 66 <sup>2</sup> / <sub>3</sub> % of works
Find office cost	(Ans. Rs 1, 20,000)

### PRACTICAL PROBLEMS (long answers)

1. From the following particulars prepare a cost sheet showing the total cost per tone for the period ended 31<sup>st</sup> December 1998

	<b>Rs</b>		<b>Rs</b>
--	-----------	--	-----------

Raw material	33,000	Director's fees (office)	2,000
Productive wages	35,000	Factory cleaning	500
Direct expenses	3,000	Sundry office expenses	200
Unproductive wages	10,500	Estimating	800
Factory rent and terms	7,500	Factory stationery	750
Factory lighting	2,200	Office stationery	900
Factory heating	1,500	Factory insurance	1,100
Motive power	4,400	Office insurance	500
Haulage	3,000	Legal expenses	400
Director's fees (works)	1,000	Rent of warehouse	300
Depreciation of		Unkeeping of delivery vans	700
- plant and machinery	2,000	Bank charges	50
- office building	1,000	Commission on sales	1,500
- delivery vans	200	Loose tools written off	600
Bad debts	100	Rent and taxes (office)	500
Advertising	300	Water supply	1,200
Sales department	1,500		
Salaries			

The total output for the period has been 10,000 tones.

(Ans. Prime cost Rs 71,000 works cost Rs 1,08,050 office cost Rs 1,13,600 total cost Rs 1,18,200 cost per tone Rs 11.82)

2. Prepare a cost sheet to show the total cost of production and cost per unit of goods manufactured by a company for the month of July 1994. Also find out the cost of sales.

	<b>Rs</b>		<b>Rs</b>
Stock of raw materials 1-7-1994	3,000	Factory rent & rates	3,000
Raw materials purchased	28,000	Office rent	500
Stock of raw materials 31-7-1994	4,500	General expenses	400
Manufacturing wages	7,000	Discount on sales	300
Depreciation on plant	1,500	Advertisement	600
Loss on sale of a part of plant	300	Expenses to be charged fully income tax paid	2,000

The number of units produced during July 1994 was 3,000

The stock of finished goods was 200 and 400 units on 1-7-1994 and 31-7-1994 respectively. The total cost of units on hand on 1-7-1994 was Rs 2,800. All these had been sold during the month.

(Ans. Prime cost Rs 33,500 factory cost Rs 38,000 cost of production Rs 38,900 cost of sales Rs 37416)

3. The following particulars relating to the year 1994 have been taken from the books of a chemical works manufacturing and selling a chemical mixture:

	Rs	Rs
<b>Stock on 1<sup>st</sup> Jan. 1994</b>		
Raw materials	2,000	2,000
Finished mixture	500	1,750
Factory stores	-----	7,250
<b><u>Purchases</u></b>		
Raw materials	1,60,000	1,80,000
Factory stores	-----	24,250
<b><u>Sales</u></b>		
Finished mixture	1,53,050	9,18,000
Factory scrap	-----	8,170
Factory wages	-----	1,78,650
Power	-----	30,400
Depreciation of machinery	-----	18,000
<b><u>Salaries</u></b>		
Factory	-----	72,220
Office	-----	37,220
Selling	-----	41,500
<b><u>Expenses</u></b>		
Direct	-----	18,500
Office	-----	18,200
Selling	-----	18,000
<b>Stock on 31<sup>st</sup> December 1994</b>		
Raw material	1,200	
Finished mixture	450	
Factory stores	-----	5,550

The stock of finished mixture at the end of 1994 is to be valued at the factory cost of the mixture for that year. The purchase price of raw-materials unchanged throughout 1994.

Prepare a statement giving the maximum possible information about cost and its break up for the year 1994.

(Ans. Prime cost Rs 3,77,800 factory cost Rs 5,16,200 cost of production of finished mixture sold Rs 5,71,852 cost of sales Rs 6,31,352)

4. Calculate
- Value of raw-materials consumed
  - Total cost of production
  - Cost of goods sold and
  - The amount of profit from the following particulars:

	Rs		Rs
<b>Opening stock</b>		Power	2,000

Raw – materials	5,000	Factory heating and lighting	2,000
Finished goods	4,000	Factory insurance	1,000
<b>Closing stock</b>		Experimental Expenses	500
Raw – materials	4,000	Sales of wastage of materials	200
Finished goods	5,000	Office management salaries	4,000
Raw – materials purchased	50,000	Office printing and stationery	200
Wages paid to labourers	20,000	Salaries of salesmen commission of traveling agent	2,000
Chargeable expenses	2,000		
Factory rent, rates & taxes	5,000	Sales	1,00,000

(Ans. (a) Rs 50,800, (b) Rs 87,500, (c) Rs 89,500, (d) Rs 10,500)

[Hint sales of raw-materials wastage of Rs 200 has been deducted from the cost of raw-materials]

5. The cost of the sale of product 'X' is made up as follows:

	<b>Rs</b>
Materials used in manufacturing	1,020
Materials used in packing materials	2,500
Materials used in selling the product	350
Materials used in office	75
Materials used in factory	125
Labour required in producing	2,500
Salary paid to works manager and other principal officers of the factory	450
Expenses – indirect office	250
Expenses – direct factory	1,000
Bad debts	300
Packing expenses	150
Lighting and heating charges of the factory	200
Expenses – indirect factory	125

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

Illustrate in a chart form for presentation to your manager, the division of costs of product 'X'

[Ans. Prime cost Rs 16,200, works cost Rs 17,100 cost of sales Rs 18,225 sales Rs 21,870]

6. Calculate the prime cost, factory cost, total cost of production and cost of sales from the following particulars:

Raw materials consumed		<b>Rs.</b>
Directly chargeable expenses		12,000
Wages paid to labourers		500
Grease, oil, cotton waste etc.		2,500
		25



Salary manager and clerks		1,750
Insurance of stock of raw materials		300
Consumable stores		400
<b>Printing and stationery:</b>		
Factory	50	
Office	200	
Sales deptt.	100	
	-----	350
Rent of office building		150
<b>Depreciation :</b>		
Factory premises	200	
Office furniture	50	
Delivery vans	75	
	-----	325
Power and fuel		500
Contribution to provident fund of factory employees		1,000
Salaries of administrative directors		100
Bank charges		75
Cost of samples		250
Salaries of sales manger		300
Advertising		500
Packing material		350
Storage in stocks of finished goods		20

[Ans. Prime cost Rs 15,000, factory cost Rs 19225 total cost of production Rs 19,800 cost of sales Rs 21,395]

7. Calculate

- Value of raw-materials consumed
- Total cost of production
- Cost of goods sold and
- The amount of profit from the following particulars:

	<b>Rs</b>
<b>Opening stock:</b>	
Raw materials	1,350
Finished goods	2,500
<b>Closing stock:</b>	
Raw-materials	750
Finished goods	1,500
Raw materials purchased	20,000
Wages paid to labourers	8,000
Direct expenses	1,250
Experimental expenses	450
Factory printing and stationery	350
<b>Rent :</b>	

Factory	250	
Office	120	
	-----	370
Wages of fireman		1,000
Lighting – office		125
Audit fees		150
Telephone expenses		500
Advertising		1,250
Market research expenses		550
Salary of godown – keepers		175
Traveling expenses		750
Commission of traveling agent		500
Sales		50,000

[Ans. (a) value of raw – materials consumed Rs. 20,600 (b) Total cost of production Rs 32,795, (c) cost of goods sold Rs 33,795, (d) profit Rs 12,980]

8. Prepare a statement of cost from the following trading and profit and loss account for the year ending 31<sup>st</sup> March, 1995.

Particulars	Rs	Particulars	Rs
<b>Opening stock:</b>		Sales	1,00,000
Materials	8,000	<b>Closing stock:</b>	
Finished goods	25,000	Materials	15,000
Purchase of materials	70,000	Finished goods	30,000
Direct labour	10,000		
Grease, oil etc.	500		
Salary of storekeeper	700		
Power & fuel	800		
Gross profit c/d	30,000		
	-----		-----
	1,45,000		1,45,000
	-----		-----
Lighting:		Gross profit b/d	30,000
Office	500	Dividends received	2,000
Sales deptt.	650	Interest on loan	600
<b>Depreciation:</b>		Transfer fees	1,450
Office premises	1,000	Received	
Delivery vans	750		
Fees of office manager	2,000		
Bank charges	1,500		
Selling expenses	1,500		
Sales commission	500		
Preliminary expenses	3,000		
Packing expenses	1,100		

Dividends paid on Share capital of company	1,000		
Discount on debentures	500		
Net profit	20,000		
	-----		-----
	34,000		34,000

[Ans. Prime cost Rs 73,000, works cost Rs 75,000, total cost of production Rs 80,000 cost of goods sold Rs 75,000 cost of sales Rs 79,000 profit Rs 21,000]

9. The following data relate to the manufacture of standard product during the four week ending on 28<sup>th</sup> Oct. 1994.

Raw materials consumed	Rs 20,000
Direct wages	Rs 12,000
Machine hr worked	950 (hrs)
Machine hour rate	Rs 2.00
Office overhead 15% on works cost	
Selling overhead	Rs 0.37 per unit
Units produced	20,000
Units sold @ Rs 2.50 each	18,000
Prepare a statement from the above showing:	
(a) The cost of production per unit, and	
(b) The profit for the period	

[Ans. (a) Rs 1,949 (b) Rs 3,258]

10. A firm has purchased a plant to manufacture a new product, the cost data for which is given below:

Estimated annual sales	24,000 units
<b>Estimated costs:</b>	
Material	Rs 4.00 per unit
Direct labour	Rs 0.60 per unit
Overheads	Rs 24,000 per year
Administrative expenses	Rs 28,800 per year
Selling expenses	15% of sales
Calculate the selling price if profit per unit is Rs 1.02	

[Ans. Rs 9.20]

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

Raw materials consumed	Rs 1,60,000
Direct wages	Rs 80,000
Factory overheads 20% of direct wages	

Office overheads 10% of factory cost	
Selling overheads	12,000
Unit produced	4,000
Units sold	3,600
Selling price	Rs 100 per unit

[Ans. Prime cost Rs 2,40,000, factory cost Rs 2,56,000, cost of production Rs 2,81,600, cost of sales Rs 2,65,440, profit Rs 94,560]

### **Preparation of tender**

12. The accounts of Pleasant Company Ltd., shows the following details for the year 2010.

Materials 3,50,000

Labour 2,70,000

Factory overheads 81,000

Administrative overheads 56,080

It is estimated that Rs.1,000 for materials and Rs.700 for labour will be required for one unit of the finished product for quotation purpose.

Absorb factory overheads on the basis of labour and administration overheads on the basis of works cost. A profit of 12.5% on selling price is required on quotation.

Prepare cost sheet and a statement of the selling price per unit of the finished product.

[Ans: Cost of production Rs.7,57,080, percentage of factory overheads to wages 30%, percentage of administrative overheads to works cost 8% and selling price to be quoted 2,35,749]