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Cost Accounting – Introduction

(1) Development of Cost Accounting

The function of any accounting system is to make available necessary information accurately for all parties who are concerned with the welfare of an organisation – owners, employees, creditors, potential investors and management. The requirements of majority of them are satisfied by means of profit and loss account and balance sheet. The management, however requires far more detailed information than what the conventional financial statements can offer. Its main focus lies not in the past but in the future, as the management is concerned with future and not the past. For a businessman, who manufactures goods or renders services, cost accountancy is an useful aid. It is an extension of financial accounting and it was developed, on account of limitations of financial accounting, to meet ever growing needs of the management.

Industrialisation and advent of factory system during the second half of 19th Century necessitating accurate cost information have led to the development of cost accounting. The growth of cost accounting was slow. To quote Eldons Handristen “Not until the last 20 years of the 19th Century was there much literature on the subject of cost accounting in England and even very little was found in the United States. Most of the literature until this time emphasised the procedure for the calculation of prime costs only”.

Rapid development in cost accounting has taken place after 1914 with the growth of heavy industry and large scale production as a consequence of First World War when costs other than material and labour (overhead) constituted a significant portion of total cost.

The development of cost accounting in India is of recent origin and it is given importance after independence, when provision for Cost Audit under Sec. 233B of Companies Act was made. Vivian Bose Enquiry Committee revealed the malpractices of manufacturing companies. It was felt that the financial audit falls short of expectations to reveal the malpractices. Therefore, under the Companies Act, the government was given the power to order for cost audit. This has given impetus to the development of cost accounting in India.

(2) Definition of Cost, Costing, Cost Accounting and Cost Accountancy

Cost : The term 'cost' has to be studied in relation to its purpose and conditions. As per the definition by Institute of Cost and Management Accountants (I.C.M.A.), now known as Chartered Institute of Management Accountants (C.I.M.A.), London, 'cost' is the amount of :

- (a) actual expenditure incurred on a given thing; and
- (b) notional expenditure attributable to a given thing.

W.M. Harper, in his Cost Accountancy defined 'cost' as follows :

"Cost is the value of economic resources used as a result of producing or doing the thing costed".

Ryall, in his Dictionary of Costing, says :

"From a technical point of view, the term cost may be used when referring to the cost of manufacturing only or the cost of selling and distribution of goods, or to indicate the total cost of manufacturing, selling and distribution".

From the above, it is clear that the term 'cost' is perceived by different people differently. In simple terms cost may be described as the total of all expenses incurred, whether paid or due, in the production and sale of a product, or expended in rendering a service.

Costing : The I.C.M.A., London has defined 'costing' as the ascertainment of costs. "It refers to the techniques and processes of ascertaining costs and studies the principles and rules concerning the determination of cost of products and services".

Cost ascertainment is done by various methods and techniques such as job costing, process costing, unit costing, historical or absorption costing, marginal costing, standard costing, uniform costing, etc.

Cost Accounting : It is the method of accounting for cost. The process of recording and accounting for all the elements of cost is called 'cost accounting'. *I.C.M.A. has defined cost accounting as follows :*

"The process of accounting for cost from the point at which expenditure is incurred or committed to the establishment of its ultimate relationship with cost centres and cost units. In its widest usage it embraces the preparation of statistical data, the application of cost control methods and the ascertainment of the profitability of activities carried out or planned".

Cost Accountancy : It is an aid to management for decision making.

I.C.M.A. has defined 'cost accountancy' as follows :

"The application of costing and cost accounting principles, methods and techniques to the science, art and practice of cost control and the ascertainment of profitability. It includes the presentation of information derived therefrom for the purpose of managerial decision making". Thus, the term includes costing, cost accounting, budgetary control, cost control and cost audit.

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Need for Cost Accounting: Intense competition in the market place has made the managements of business and industrial units turn to the accounting departments for accurate and relevant information regarding the 'cost' of products or services. Such cost data is useful in (a) Fixation of selling prices; (b) Control of cost; and (c) Decision making from alternative choices.

(3) Scope and Objectives of Cost Accounting

(i) **Scope of Cost Accounting:** The term 'scope' here refers to field of activity. Cost accounting is concerned with ascertainment and control of costs. The information provided to the management is helpful for cost control and cost reduction through functions of planning, decision making and control.

In the initial stages of evolution, cost accounting confined itself to cost ascertainment and presentation of the same with the main objective of finding the product cost. With the development of business activity and introduction of large scale production, the scope of cost accounting was broadened and providing information for cost control and cost reduction has assumed equal significance along with finding out cost of production.

In addition to enlargement of scope, the area of application of cost accounting has also widened. Initially cost accounting was applied in manufacturing activities only. Now, it is applied in service organisations, government organisations, local authorities, farms, extractive industries, etc.

(ii) **Objectives or Purposes or Functions or Aims of Cost Accounting :** Main objectives or purposes or functions or aims of accounting are:

- (A) Cost finding or cost ascertainment
- (B) Control of cost
- (C) Reduction of cost
- (D) Fixation of selling price
- (E) Providing information for framing business policy

(A) **Cost finding or cost ascertainment :** The primary objective of cost accounting is ascertainment of cost. It is done through the methods and techniques of costing. Costing is the process of collection, classification and analysis of costs or expenses.

(B) **Control of Cost :** A basic function of cost accounting is to control costs. In order to know the efficiency of the organisation and its various Departments and Cost Centres, budgets and standards are fixed for materials, labour and overheads which are compared with the actual performances. The variances reveal whether cost is within control or not. Remedial actions are taken to control the costs which are not within the budgets or standards set.

(C) **Cost Reduction :** Cost reduction is to be understood as the achievement of 'real and permanent' reduction in the unit cost of goods manufactured or services rendered without impairing their suitability for the use intended. Cost

accounting is helpful to management in cost reduction through the techniques of budgetary control, standard costing, material control, labour control and overheads control.

(D) *Fixation of Selling Price* : The price of a product consists of total cost and the margin required. Cost accounts provide detailed information regarding total cost in the form of various components. They also provide information in terms of fixed cost and variable costs, so that the extent of price reduction to be done in case of intensive competition, etc., can be decided.

(E) *Framing business policy* : Cost accounting strives to help the management in formulating business policy and decision making. Break even analysis, cost-volume-profit relationships, differential costing, etc., are helpful to the management in taking decisions regarding :

- (a) Production or discontinuation of a product;
- (b) Utilisation of idle capacity;
- (c) The most profitable sales mix;
- (d) Alternatives based on key-factor;
- (e) Export decisions;
- (f) Make or buy decisions, etc.

(4) Cost Accounting Vs. Financial Accounting and Management Accounting

(a) Meaning and Limitations of Financial Accounting

Financial Accounting records cash and credit transactions of a business on the basis of nature of expenditure so as to prepare the profit and loss account for a specific period and balance sheet as on a specified date. It is helpful in knowing the profit and loss of the business and its state of affairs and financial position on a specified date.

'Financial Accounting' does not answer the following questions :

- (a) Can the profit made by the firm be increased? Is the profit made optimum?
- (b) In case of loss, whether loss can be reduced or converted into profit by means of cost control and cost reduction?
- (c) Which departments are performing well? Which ones are incurring losses and how much is the loss in each case?
- (d) What is the cost of products manufactured?
- (e) How can wastage be reduced?
- (f) Whether selling price can be increased or reduced? and if so, to what extent?
- (g) Can expenses be reduced which results in the reduction of product cost and if so, to what extent and how?

Besides the above, the following areas of weakness of financial accounting find their strength in costing :

- (i) Financial accounting emphasises on reconciliation of cash in hand and with bank with the balance revealed by cash book, but it fails to maintain records regarding, materials, stocks, stores organisation, pricing of materials issues, ascertainment of cost of production, etc.

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- (ii) Labour cost records are not maintained in detail in financial accounts, whereas the hours worked, direct and indirect labour, labour charges incurred are relevant for product pricing and cost control. Financial accounting fails to provide this kind of detailed information.
- (iii) It is not possible to find total cost, cost of work-in-progress and estimation of tender price with the help of financial accounts easily.

Cost accounting provides relevant answers to all these questions and shortcomings.

L.W. Hawkins has rightly said “The ordinary trading account is a locked store house of most valuable information to which a cost system is the key”.

(b) Distinction between Financial Accounting and Cost Accounting

Differences between Financial Accounts and Cost Accounts are listed below:

	<i>Financial Accounting</i>	<i>Cost Accounting</i>
(1) Objective	The main objective of financial accounting is to prepare Profit and Loss A/c and Balance Sheet to report to owners and outsiders.	The main objective of cost accounting is to provide cost information to management for decision making.
(2) Legal requirement	Financial records are maintained as per the requirement of Companies Act and Income Tax Act.	Cost accounts are maintained to fulfil the internal requirements of the management as per conventional guidelines.
(3) Classification of transactions	Financial accounting classifies records and analyses transactions in a subjective manner i.e., according to nature of expenses.	Cost accounting records and analyses expenditure in an objective manner viz., according to purpose for which costs are incurred.
(4) Stock valuation	In financial accounts, stocks are valued at cost or realisable value, whichever is lesser.	In cost accounts stocks are valued at cost.
(5) Analysis of Profit and cost	In financial accounts, the Profit or Loss of the entire enterprise is disclosed in toto.	Cost accounts reveal Profit or Loss of different products, departments separately.
(6) Accounting period	Financial reports are prepared annually.	Cost reports are of continuous process and are prepared as per the requirements of managements, may be daily, weekly, monthly, quarterly, or annually.
(7) Emphasis	Emphasis is laid on the recording of transactions and control aspect is not given importance.	Cost accounting lays emphasis on ascertainment of cost and cost control.
(8) Nature	Financial accounts are maintained on the basis of historical records.	Cost accounts lay emphasis on both historical and predetermined costs.

(c) Management Accounting

Management accounting is a discipline developed to provide information to management to frame policies, take decisions and control operations.

The Anglo American Council on productivity has defined Management Accounting as:

"The presentation of management information in such a way as to assist management in the creation of policy and in the day-to-day operations of an undertaking".

The sources of data for management accounting are the financial accounting and the cost accounting. The scope of management accounting is to provide information to the management for managerial decision making. That is why cost accounting concepts are used in management accounting.

Although there is overlapping of areas between cost accounting and management accounting, there are several differences between them.

(d) Differences between Cost Accounting and Management Accounting

- (i) Cost accounting is concerned with cost ascertainment, determining profitability and control of costs through budgetary control, marginal costing and standard costing.

Management accounting is concerned with providing relevant information to formulate the policies of the organisation and improving its profitability.

- (ii) Cost accounting is developed and improvised out of financial accounting.

Management accounting is conceived out of cost accounting.

- (iii) Cost accounting suggests to the management the best of the alternatives by use of different costing techniques.

Management accounting considers both cost as well as non-cost techniques and information for deciding upon alternatives.

- (iv) Cost Accounting reveals variances to management by using budgets and standard costing techniques.

Management accounting is helpful in suggesting to the management ways and means of deletion of unfavourable variances.

We can conclude by saying that management accounting is an off-shoot of cost accounting with more specialised and specific purposes.

(5) Advantages of Cost Accounting

Deficiencies in financial accounting are compensated by cost accounting. It is immensely useful to the management, to the employees, to the public and to the creditors. The advantages it offers to all the 'stake-holders' are discussed below:

To the Management :

1. Effective decision making
2. Measuring efficiency
3. Cost reduction
4. Fixation of selling price
5. Effective cost control
6. Increase in efficiency
7. Effective inventory control
8. Reduction of wastage
9. Effective utilisation of resources
10. Help in effective budgeting

To the Employees :

1. Stability of tenure
2. Fair wage policy
3. Rewards for higher efficiency through incentive schemes.

To the Creditors

1. Understanding the progress and profitability of the firm and future prospects of the firm.

To the Government

1. Granting of subsidies
2. Planning of resources
3. Utilisation of scarce resources.

To the Public

1. Removal of wastages
2. Fair price for products
3. Employment opportunities

The above advantages are briefly explained below :

(a) To the Management

1. *Effective decision making* : Cost accounting provides information regarding individual products, departments, divisions, and cost centres. This facilitates the management to identify unprofitable operations and improve overall profitability.
2. *Measuring Efficiency* : With the help of cost accounting, the management can set budgets and standards for various elements of cost and compare them with actuals to measure efficiency.
3. *Cost Reduction* : Cost accounting is helpful to management in reduction of cost through its techniques by efficient and effective utilisation of raw materials, labour and optimum production of output.

4. *Fixation of Selling Price* : Cost accounting provides information under various classifications. One of them is on the basis of behaviour of costs. Availability of information in detail regarding variable and fixed costs helps in fixing selling price under different circumstances.
5. *Effective cost control* : The fundamental objective of cost accounting is to ascertain and control costs. The segregation of cost at different stages is helpful in effective control through standard costing and budgetary control.
6. *Increased Efficiency* : Under an efficient cost accounting system, proper inventory control, labour utilisation and proper analysis of expenditure is possible. This results in increased efficiency throughout the organisation.
7. *Effective inventory control* : An efficient cost accounting system helps in effective inventory control through techniques like ABC analysis, Stock verification, VED analysis and Levels of stock.
8. *Reduction of wastages of material and labour* : Cost accounting sets predetermined costs for different elements which are compared with actuals to reveal variances. The unfavourable variances are dealt with and controlled effectively. Moreover, standards indicate the norms beyond which cost is not to be exceeded. This acts as a check on wastages.
9. *Effective Utilisation of Resources* : Marginal costing helps in decision making regarding 'make or buy' of components, profit planning, export decisions, effective utilisation of key factor, sales mix, etc. Standard costing and budgetary control are also helpful in effective utilisation of resources.
10. *Effective Budgeting* : Cost accounting emphasises and records both historical costs and pre-determined costs, which are essential for the technique of budgetary control. Without additional effort, budgetary control can be operated when costing systems are used.

(b) To the employees

- (1) *Stability of Tenure* : A good costing system is helpful to managements in increasing productivity and profitability of firms. This leads to prosperity of industries, better wages for workers and security of job.
- (2) *Fair wage policy and suitable incentive schemes* : Since cost accounting system keeps records for each element of cost, labour hours and labour cost are recorded in full detail. This will be helpful for the management in introducing a good wage system to reward skilled workers and stimulate them to go for higher production.

(c) To the Creditors : Before the creditors offer loans to a firm, they can have better understanding of the progress and profitability of the firm through relevant reports. Estimates and budgets can project the future prospects of a firm.

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(d) **To the Government**: Cost data of specific industries and general trend of costs can influence the government to initiate appropriate changes in granting of subsidies, formulating taxation policies, import and export legislation, etc.

(e) **To the Public**: Good costing system helps in proper utilisation of resources. Cost reduction is helpful in fair price of products and profitability of organisations is helpful in prosperity of the industry through more employment opportunities to the members of the public.

(6) Limitations of Cost Accounting

1. **Lack of uniformity**: There is no uniform system of costing applicable to all industries. Even for the same firm, two different cost accountants may arrive at two different cost figures.

2. **Second hand data**: Costing depends on financial accounts for a lot of information, which is second hand. Any errors or short comings in that data creep into cost accounts also.

3. **Conventions**: Several conventions are routinely applied or used in costing which may not be appropriate in all situations. For ex. classifying overheads into variable and fixed, recovery of overheads on machine hour or labour hour basis etc.

4. **Uncertainty**: Estimates are used in different contexts like Tenders & Quotations, Contracts etc. Different methods of pricing of materials are available. Several methods of absorption and apportionment of overheads can be used. All these factors lead to uncertainty and fluidity in costing. It becomes difficult to derive correct costs. Actual costs may differ from estimated costs, rendering quotations etc. erroneous.

5. **Costly**: The need to observe several formalities to derive benefits of costing makes it costly for small and medium enterprises.

6. **Applicability**: Costing is applicable primarily in manufacturing and service firms. It is not useful for trading firms.

7. Some items of costs and incomes are fully ignored in cost accounts where as they are shown in financial accounts.

(7) Objections to Cost Accounting

Cost accounting has become indispensable tool to management for exercising effective decisions. However, the following are the usual objections raised against cost accounting:

(a) **Cost Accounting is costly to operate** : One of the objections against cost accounting is that it involves heavy expenditure to operate.

No doubt, expenses are involved in introduction and operation of cost accounting system. This is the case with any accounting system; the benefits derived by operating the system are more than the cost. Therefore an organisation need not hesitate to install and operate the system.

(b) **Cost Accounting is unnecessary** : It is felt by a few that cost accounting is of recent origin and an enterprise can survive without cost accounting.

No doubt financial accounting may be helpful to draw P&L Account and Balance Sheet but an enterprise can work efficiently with the help of cost accounting and it is necessary to increase efficiency and profitability in the long run.

(c) **Cost Accounting involves many forms and statements** : It is pointed against cost accounting that it involves usage of many forms and statements which leads to monotony in filling up of forms and increase of paper work.

It is true that cost accounting is operated by introducing many forms and preparation of statements. This will become routine and as time passes the utility of forms is realised and the forms can be reviewed, revised, simplified and minimised.

(d) **Costing may not be applicable in all types of Industries** : Existing methods of cost accounting may not be applicable in all types of industries.

Cost accounting methods can be devised for all types of industries, and services.

(e) **It is based on Estimations** : Some people claim that costing system relies on predetermined data and therefore it is not reliable.

Costing system estimates costs scientifically based on past and present situations and with suitable modifications for the future. This leads to accurate cost figures based on which management can initiate decisions. But for the predetermined costs, cost accounting also becomes another 'Historical Accounting'.

(8) Installation of Costing System

There is no system or method of costing which can fulfill the requirements of all types of Industries.

To instal the most suitable system of costing in a particular organisation, the following should be noted

- (a) Requisites of a good costing system.
- (b) Steps necessary to install the system.
- (c) Problems or practical difficulties in installing a costing system.
- (d) Steps to be adopted to overcome practical difficulties.

(a) **Essentials Requisites of a good costing system** : An ideal cost accounting system provides sufficient and effective information to the management at the right time to exercise correct decisions. Following are the essentials of a good cost accounting system.

1. **Simple to Operate** : The cost accounting system should be simple to understand and operate so that persons involved may not be confused and follow wrong procedures or methods.

2. *Flexibility* : The cost accounting system should be flexible to adopt new requirements based on changes occurring in the enterprise due to external conditions.
3. *Comparability* : The costing system should be able to provide comparable data. Comparison can be between the figures of two or more periods of the same firm or between the figures of the firm and those of the competitors for a particular period or periods.
4. *Economy* : The cost accounting system should justify the cost of operation through resultant benefits. The system should be operated with least cost.
5. *Timeliness* : The system must be capable of providing appropriate information in Time for decisions relating to cost control.
6. *Suitability to the enterprise* : The cost accounting system devised should be suitable to the nature of business done by the enterprise and it should fulfil the requirements of the business.
7. *Minimum changes in current setup* : The existing system of Authority and responsibility, delegation etc. should not be disturbed. Changes in the organisational setup should be minimum possible.
8. *Minimum clerical work* : The clerical work like filling up forms by workers and foremen should be minimum possible so that their basic work rhythm is not disturbed.
9. *Simplicity of forms and their standardisation* : The forms used as part of the costing system should be minimum in number, standardised in format and simple to operate by the personnel so that required information is obtained in time.
10. *Effective system to control materials and wages* : The system relating to purchase, receiving, inspection, storage and issue of materials should be effective. The method of pricing material issues should be appropriate to the situation in the firm.
The procedures for Time recording, Time booking, overtime, payroll preparation, etc. should be systematic and effective.
11. *Procedure for overheads* : The routine prescribed for overheads should lead to proper allocation, apportionment and absorption of overheads.
12. *Reconciliation of cost accounting with financial accounting* is to be facilitated to reveal the reasons for difference in profits.
13. *External Factors* : The costing system should ensure compliance of statutory and legal requirements like cost audit, cost accounting rules etc.
14. *Cost Accountant's role* : The responsibilities and duties of the cost accountant should be clearly defined. He should have access to all the departments and divisions of the firm.

(b) Steps necessary to install the costing system :

The following steps have to be carefully followed to install a costing system successfully.

- (i) *Objectives* : While installing the cost accounting system the objectives of the system have to be finalised, like materials management, fixing selling prices, etc. The approach to install the system will depend on its objectives.
- (ii) *Organisation structure of the business* : Organisation structure of the business determines the scope of authority and responsibility of each individual in the organisation. While installing the system, minor changes, if any, to be made in the structure for the advantage of management may be carried out.
- (iii) *Type and method of Costing* : Nature of business decides the type of costing to be introduced. Examples are job costing, process costing, operating costing, unit costing, etc. For the purpose of cost control appropriate technique is to be introduced i.e., standard costing or budgetary control or any other appropriate technique.
- (iv) *Cost records and books* : It is to be decided whether separate set of cost and financial books are to be maintained or an integrated accounting system is to be followed. This depends on nature and size of the enterprise and the existing accounting system.
- (v) *Technical Aspects* : A detailed study of technical aspects of manufacturing process, operations, material control, labour control, wage disbursement, factory layout, etc. is of great significance. This will be helpful in preventing wastage of labour, material, etc. and designing effective procedures and forms.
- (vi) *Control System* : Cost accounting system would have to be designed to record and control different elements of cost in accordance with costing procedures and principles and the limitations imposed by the type of organisation that exists.
- (vii) *Nature of Product and Business* : Nature of the product and the type of business decide the emphasis of cost control. If the material forms major part of the total cost, emphasis is laid on material control. If labour constitutes major portion of the total cost, labour is to be controlled with special emphasis.
- (viii) *Collection of Data* : Cost data is the basis for decision making. An efficient system of collection and verification of the data is to be devised for prompt collection of cost data.

- (ix) *Cooperation of Staff*: Details of the system should be explained to the staff so that the cost accounting system can work efficiently by cooperation among the staff.
- (x) *Organising the Cost office*: It is preferable to have a separate cost office which has access to the factory. The staff in the cost office should have facilities and access to
 - (a) Stores – to account for receipts, issues & loss of materials
 - (b) Works – to account for labour Time and output.
- (xi) *Relationship of cost office to other departments*: All the departments with which the cost office interacts, like purchasing, production, stores etc., should be instructed by the Top management that appropriate cooperation and coordination with cost office are essential. The cost office should establish smooth working relationship with the departments concerned.

The cost office is expected to record, analyse and finalise all cost data and achieve the desired level of control over costs.

(c) Problems or Practical difficulties in Installing a costing system

In addition to the technical problems, the practical difficulties which usually arise when a costing system is proposed to be introduced are as under:

- (i) *Absence of cost consciousness*: Cost control measures may be adversely affected due to absence of cost consciousness among the employees at all levels.
- (ii) *Lack of support from senior executives and Top management*: Unless thoroughly convinced in advance, some senior executives and even individual members of top management may not welcome introduction of costing system under the impression that it may reduce their importance and freedom.
- (iii) *Suspicion and resistance from workers and employees*: Lower level employees may resist the system and suspect that it is introduced to control and hamper them in their work.
- (iv) *Shortage of Trained staff*: Suitably trained staff may not be readily available in the organisation to take care of different aspects and phases of a costing system.
- (v) *Cost of introduction*: Introduction of an elaborate system of costing may involve huge expenditure which may not be affordable to small and medium sized firms.

(d) Steps to be adopted to overcome practical difficulties

The following measures may be implemented to overcome practical difficulties to introduce a costing system.

- (i) *Top management support* : Support from the Top management should be ensured before the decision to introduce a costing system is made. The decision should not be made by one individual who is at the top. A consensus of the senior directors, executives etc., is essential for successful introduction of a costing system.
- (ii) *Employee Trust and confidence* : A broad outline of the system is to be explained to all employees concerned to gain their confidence and trust. All necessary clarifications and explanations can help to sustain morale of the staff.
- (iii) *Selection of suitable system and minimising forms* : The costing system chosen should be suitable to the requirements of the firm. Minimising paper work by avoiding or eliminating unnecessary forms and procedures is necessary.
- (iv) *Training to the staff* : Existing staff should be trained as per the requirements of the system so that it can be implemented smoothly.

In conclusion, we may say that willing acceptance of both managerial and clerical staff along with the workers ultimately decides the success or failure of a newly introduced costing system.

(9) General principles of Cost Accounting

1. *Cause – effect relationship* : For each item of cost there shall be a relationship established, which is in the form of cause and effect. Each item of cost shall be linked to its cause as minutely as possible and its effect on respective departments is to be ascertained. The units which pass through the departments shall share the cost.
2. *Charging of cost subsequent to incurrence* : Cost of units shall include only those costs which are actually incurred.
3. *Convention of prudence is ignored* : Cost sheet reflects only factual picture of costs and profitability of the project. If contingencies are expected to creep in, it should be shown distinctly.
4. *Past costs not to form part of future costs* : Unrecovered past costs are not recovered as part of future costs since it will distort the results of future period.
5. *Inclusion of normal costs only in cost accounts* : All costs incurred because of normal reasons are taken into account while computing the cost per unit. All abnormal costs incurred due to abnormal reasons like

theft and negligence are not taken into consideration while computing the unit cost, since it will distort the cost figures and mislead the management in exercising decisions.

6. *Double entry for cost ledgers* : Cost ledgers and cost control accounts are to be maintained on double entry principle to avoid mistakes or errors.

(10) Classification of Cost

Cost classification is the process of grouping costs according to their common characteristics. The following are the bases on which costs can be classified.

- (i) According to elements
- (ii) According to functions
- (iii) According to nature or behaviour
- (iv) According to controllability
- (v) According to normality
- (vi) According to relevance to decision making and control.

(I) Cost Classification according to Elements : Based on elements, cost is classified into material, labour and expenses. They are subdivided into direct and indirect material, labour and expenses. The total direct cost is termed as prime cost. Indirect material, indirect labour and indirect expenses, together are termed as indirect cost or ‘overheads’. Overhead is subdivided into factory overhead, office overhead and selling and distribution overhead. A detailed description of these is done in chapter 2 of this book.

(II) Cost Classification according to Functions : Here the classification is under four major functions of the business:

- | | |
|---------------------|-------------------------|
| (a) Production cost | (b) Administration cost |
| (c) Selling cost | (d) Distribution cost |

(a) Production cost is “the cost of sequence of operations which begins with supplying materials, labour and services and ends with primary packing of the product” – I.C.M.A.

It is also known as manufacturing or factory cost incurred in converting raw material into finished product.

(b) Administration cost is “the cost of formulating the policy, directing the organisation and controlling the operations of an undertaking, which is not related directly to a production, selling, distribution, research or development activity or function” – I.C.M.A.

Administration cost is incurred for overall planning, organising and control of the enterprise.

(c) Selling cost is “the cost of seeking to create and stimulate demand (sometimes termed ‘marketing’) and of securing orders” – I.C.M.A.

Selling costs are also known as selling expenses and selling overheads which comprise of all the expenses of selling department including product promotion and advertising.

(d) *Distribution cost* is "the cost of sequence of operations which begin with making the packed product available for despatch and ends with making the reconditioned, returned empty package, if any, available for reuse" – I.C.M.A.

It is also known as distribution expenses or overheads which comprises of packing, warehouse expenses, cost of freight, etc.

The following terms are also defined by I.C.M.A. Terminology:

Research Cost : "This is the cost of searching for new or improved products, new application of materials, or new or improved methods".

Development Cost : "Having made the research the management decides to produce a new or improved product or to employ a new or improved method, the cost of process beginning with the commencement of formal production of that product or by that method, is called the development cost".

(III) Cost Classification according to Nature of Costs : Based on nature or behaviour, cost is classified into fixed, variable and semi-variable costs.

(a) *Fixed cost*: "A cost which tends to be unaffected by variations in volume of output. Fixed costs depend mainly on the affluxion of time and do not vary directly with volume or rate of output. Fixed costs are sometimes referred to as period costs in systems of direct costing" – I.C.M.A.

Thus, fixed costs are those which do not change with increase or decrease in quantum of production but remain static.

(b) *Variable cost* is "A cost which tends to vary directly with volume of output. Variable costs are sometimes referred to as direct costs in systems of direct costing". – I.C.M.A.

Variable costs increase or decrease in direct proportion to increase or decrease in production.

(c) *Semi-fixed or semi-variable cost* is "A cost which is partly variable" - I.C.M.A.

This is a cost which changes but not in direct proportion to the increase or decrease in output.

(IV) Cost Classification according to Controllability : On the basis of controllability, cost can be classified into (a) controllable cost, and (b) uncontrollable cost.

(a) *Controllable cost* : This is the cost which can be influenced by the action of a specified member of an undertaking. E.g., direct material, direct labour, etc.

- (b) *Uncontrollable cost* : This is the cost which cannot be influenced by the action of any specified member of an undertaking. E.g., direct material, direct labour, etc.

(V) *Cost Classification According to Normality* : This is the cost incurred in the conditions in which the output is normally attained. Normal cost is included in cost of production. Abnormal costs are not usually incurred at a given level of output in the conditions in which that level of output is normally produced. Abnormal cost is excluded from cost of production.

(VI) *Cost Classification According to relevance to decision making and control*.

Based on the requirement of decision making the following is the classification:

- (a) *Shut-down Cost* : A cost which is incurred irrespective of plant is in operation or is shutdown, e.g., the cost of rent, rates, depreciation, maintenance expenses, etc.
- (b) *Sunk Cost* : A cost which is incurred in the past and is not relevant to the current decision making. e.g., written down value of plant is irrelevant for replacement of machinery.
- (c) *Opportunity Cost* : "The net selling price, rental value or transfer value which could be obtained at a point-in time if a particular asset or group of assets were to be sold, hired or put to some alternative use available to the owner at that time, is the opportunity cost". – I.C.M.A.
- (d) *Imputed Cost* : It is the notional cost to be considered for making costs comparable. For example rent of own building, interest on own capital, etc., are not actually paid but may be taken as costs notionally.
- (e) *Out-of-Pocket Cost* : This is the cost which is payable in cash as against costs such as depreciation which do not involve cash payment.
- (f) *Replacement Cost* : It is the 'current cost' at which an asset or material can be 'replaced' with identical one from the market. It reflects the present market price of such asset or material.
- (g) *Conversion Cost* : This is the cost of production, excluding cost of direct materials. It is the aggregate of direct wages, direct expenses and overhead costs of converting raw materials into finished product.
- (h) *Product Costs*: Product costs are those which are identified with the product and included in inventory values. They can be charged, allocated or apportioned to the products. They include direct material, direct labour,

direct expenses and manufacturing or production overheads. Product costs become part of inventories like work in progress and finished goods and become part of Balance sheet. Product cost of goods sold is part of the cost of goods sold. Product costs do not affect the income till the product is sold.

- (i) **Period Costs:** Period costs are those costs which are not identified with product or Job. They are incurred and paid for a particular period, like rent, rates, taxes salaries. Their benefit is usually exhausted with the expiry of certain period. They are totally deducted as expenses during the period in which they are incurred. They are not included in the inventory values which are carried forward to the next period.

The period costs are necessary to generate revenue but they cannot be identified with units of product. Selling and administration costs necessary to run a business but cannot be associated with products also come under this category.

Period Costs affect the income irrespective of sales.

(11) Some other important Terms

(a) **Cost Centre:** Cost centre is defined as "A location, person or item of equipment (or group of these) for which costs may be ascertained and used for the purposes of cost control". – I.C.M.A.

Cost Centre is a term which includes various departments – both production and service departments – processes, work orders, operations, machine centres, areas or regions of sales, warehouses, persons, etc., in relation to which costs are ascertained or accumulated.

Cost Centre can be classified into the following four types:

1. Impersonal Cost Centre is one which consists of a location or item of equipment (or a group of these).
2. Personal Cost Centre is one which consists of a person or group of persons.
3. Operation Cost Centre is one which consists of those machines and/or persons carrying out similar operations.
4. Process Cost Centre is one which consists of a specific process or a continuous sequence of operations.

The Cost Centres are very useful for ascertainment, analysis and control of costs.

(b) Cost unit

Definition: The chartered Institute of Management Accountants, London, defines a unit of cost as "a unit of product or service in relation to which costs are ascertained".

A cost unit is a devise for the purpose of breaking up or separating costs into smaller subdivisions.

These smaller subdivisions are attributed to products or services to find product cost or service cost. The forms of measurement used as cost units are usually the units of physical measurements like number, weight, area, length, value, etc.

Purpose of Cost Unit

The main purpose of cost accounting is collection of costs and their allocation to the selected cost units to know the total cost. The cost collection or accumulation necessitates the identification of cost units in terms of which costs can be expressed. Thus, a cost unit is a 'base' for measurement of cost.

Basis for or factors affecting determination of cost units

1. Organisation of the factory
2. Conditions of incidence of cost
3. Requirement of costing system
4. Availability of necessary information
5. Management policy
6. Practicability
7. Adaptable to the industry.

Examples of Cost Unit

Examples of Cost Unit in different Industries are as under:

Industry or Product	Cost Unit
Steel	Tonne
Sugar	Tonne
Chemicals	Litre /gallon
Automobile	Number
Brick works	1000 bricks
Textiles	Metre of Cloth
Fruits, pens, pencils	dozen
Paper	ream
Ice Cream	Kilogram
Paint	Litre
Soft drink	Pack of 24 bottles
Ready Made garments	Numbers
Motor transport	tonne Kilometre
Hospital	Passenger Kilometre
Lodgings	Patient Bed day. Room-day

Types of Cost Unit

Cost Units are of two types (1) Single (2) Composite

(1) **Single Units:** The output is identical and can be expressed in convenient measures like kgs, tons, units, etc.

(2) **Composite Units:** Compound or Composite Units are of combinations of two or more units like "passenger miles", "Ton-Kilometres", "Room-days", "Patient-Bed days".

(c) **Profit Centre :** It is a segment of a business responsible for all activities involved in the production and sales of products and services. Profit centre is responsible for revenues and costs. It is created for evaluating performance of a division. Profit Centre has autonomy for decisions concerned with the Centre.

Differences between Cost Centre and Profit Centre

1. **Responsibility:** Cost Centre is a segment of activity or area of responsibility for which costs are ascertained. Profit Centre is a segment or activity of a business for which both revenue and expenses are identified.
2. **Purpose:** Cost centres are identified for accounting convenience and cost control. Profit centres are created for decentralisation of operations
3. **Autonomy:** Cost centres are not autonomous. Profit centres are autonomous.
4. **Targets:** Cost centres do not have targets. Profit centres have profit targets.
5. **Number of Centres:** There may be many cost centres where as profit centres are few in number.

(d) **Added value:** Added value is the "change in the market value" of a product or service which is caused by alteration in the 'form' or 'location' or 'availability'. The following are to be noted in this respect.

- (a) It reflects only the change in market value and not market value as it is.
- (b) It excludes cost of materials or services purchased from outside.
- (c) It includes profit element also (unlike conversion cost which excludes profit element).

Cost Control

The fundamental objectives of cost accounting are ascertainment of cost, control of cost and reduction of cost.

Meaning of Cost Control

The Chartered Institute of management Accountants, London defines cost control as "The regulation by executive action of the cost of operating an undertaking particularly where such action is guided by cost accounting".

In the present context of business managements facing problems of survival because of severe completion, hold on the market can be maintained if the costs are controlled and reduced to minimum. Cost accounting can be helpful in this regard by eliminating all inefficiencies and wastages by exercising cost control.

Cost control is effected through setting standards and comparing actual performance to ascertain deviations and taking corrective steps to ensure future effective actual performance.

Elements of Cost Control

The major elements of cost control are:

1. Setting up of standards
2. Recording of actual performance
3. Comparison of standards with actual performance to arrive at deviations/variances.
4. Analysing variance and fixing responsibility for variance.
5. Initiation of corrective action to eliminate causes of variance and ensure effective future performance.

Cost Control Techniques

Effective tools of cost control are as under:

1. Material control
2. Labour control
3. Over head control
4. Budgetary control
5. Standard costing
6. Marginal costing and
7. Productivity and accounting ratios.

Cost reduction

Main objective of any business entity is earning profit. Profit is the result of two varying factors viz. Sales and Cost. Profit is larger if the gap between sales and cost is wider. Profit can be maximised either by increasing the sales or by reducing costs. In a competitive market it may not be possible to increase selling price without having an adverse effect on the sales volume which, ultimately reduces profit. Besides increase in prices of products, the prices of raw materials, wages of employees and other expenses also will increase, which results in increase of costs. A business entity, therefore, explores methods to cut down expenditure and reduce the cost of products. Hence cost reduction is the better alternative to maximise profits, instead of increase of selling price.

Meaning of Cost reduction

The chartered Institute of management Accountants, London defines cost reduction as under. "Cost reduction is to be understood as the achievement of real and permanent reduction in the unit cost of goods manufactured or service rendered without impairing their suitability for the use intended or diminution in the quality of the product".

The above definition reveals that cost reduction is concerned with reducing costs without affecting the quality of the product.

Features of Cost Reduction

1. *Genuine and real:* Cost reduction is genuine and real in the course of manufacture of services.
2. *Quality of products:* Reduction in costs of goods manufactured or services rendered without affecting their suitability for the use intended.
3. *Permanent reduction:* The reduction in costs shall be real and permanent. Thus reduction due to windfalls, changes in government policy do not come under the purview of cost reduction.
4. *Ways of Cost reduction:* Cost reduction may be effected in two ways i.e. by reducing expenditure keeping volume constant and by increasing production.

Techniques of Cost reduction

Various techniques and tools used for achieving cost reduction are as follows:

- (a) Budgetary control (b) Standard costing (c) Standardisation of products and tools and equipments (d) Improvement in design (e) Material Control (f) Labour control (g) Overhead control (h) Automation (i) Operations research (j) Market research (k) Value analysis (l) Quality Measurement and research

Advantages of Cost reduction

1. Increase in profit
2. Availability of goods at cheaper rates
3. Helpful in facing competition
4. More revenue to government by way of taxation on profit
5. Increase in exports
6. Increase in productivity

Distinction between Cost control and cost reduction

Cost control refers to maintaining the costs at a specific level whereas cost reduction is the achievement of real reduction in cost of goods manufactured or services rendered. However cost reduction and cost control are two effective tools of management but their procedures widely differ. The main differences between cost control and cost reduction are as follows:

1. Objective:

Objective of cost control is to achieve preset costs, whereas cost reduction aims at reduction of costs to have economy on costs.

2. Procedure:

Cost control is a routine exercise to achieve operational efficiency whereas cost reduction aims at permanent savings in cost by a continuous process.

3. Process:

The process involved in cost control is to lay down targets, find the actual performance to compare with targets and initiate corrective action. Cost reduction, on the other hand is concerned with maintenance of performance according to standards.

4. Function:

Function of cost control is static whereas the function of cost reduction is dynamic.

5. Bearing on the past & present:

Main emphasis of cost control is on past and present whereas main focus of cost reduction is on the present and future.

6. Nature:

Cost control is a preventive function and cost reduction is a corrective function.

Cost Audit

Audit means verification of books of accounts and vouchers to establish their accuracy. Cost audit is a preventive measure. Cost audit is a guide for policy formulation and decision making.

Definition of Cost Audit

Chartered Institute of Management Accountants, London defines cost audit as "the verification of cost accounts and a check on the adherence to the cost accounting plan".

The Institute of Cost and Works Accountants of India defines cost audit as "Cost audit of efficiency of minute details of expenditure while the work is in progress and not a post-mortem examination. Financial Audit is a fait accompli. Cost Audit is mainly a preventive measure, a guide for management policy and decision, in addition to being a barometer of performance."

Thus the term cost audit refers to the following two functions:

1. Verification of cost accounts to find whether they are correctly kept in accordance with the principles of costing.
2. Verification of accuracy of cost accounts, reports and statements to detect errors and prevent frauds.

Cost Manual

The Institute of cost and Management Accountants, London defines cost manual as "A document which sets out the responsibilities of the persons costing in the routine of and the forms and records required for costing and cost accounting". Thus the costing manual lays down all the requirements for successful implementation of costing.

Generally a central body lays down the recommended cost accounting plans and procedures and circulates it to the participating concerns. The manual describes the scheme, method of administration procedure to be followed for collection, analysis, reporting of cost data and their interpretations to the member units. The cost manual also specifies the duties of each person in the costing department.

(12) Methods of Costing

The methods to be used for cost ascertainment depend on nature of industry. Costs of production or service rendered differ from industry to industry. As per I.C.M.A. Terminology costing methods can be grouped into two categories. viz., (i) Specific order costing (or Job/Terminal Costing) and (ii) Operation Costing (or Process or Period Costing)

Specific Order Costing : This method of costing is applicable where the work consists of specific orders or Jobs batches or contracts. Job costing, Batch costing and Contract costing come under this category.

Operation Costing : This method of costing is applicable where standardised goods or services result from a sequence of continuous operations. Process costing, unit costing, operating costing, operation costing fall under this category.

Various methods of costing are discussed below briefly :

- (a) **Job Costing** : It is applicable in industries where goods are made against individual orders from customers. It is defined by the terminology of the definitions committee, I.C.M.A., London as, "that form of specific order costing, where work is undertaken to customers' specific requirements". In job costing direct costs are traced for specific jobs or orders. Each of the jobs involves different operations. Basic object of costing is to ascertain the cost of each job separately and any profit or loss thereon.
- (b) **Contract Costing** : It is applied in concerns involved in construction work, like laying of roads, bridges and buildings, etc. For each of the contracts a separate account is opened and the total cost incurred is identified with it. The contracts may take a long time for completion. It is also known as terminal costing.

- (c) **Batch Costing :** It is applied where orders for identical products are placed in convenient lots or batches. I.C.M.A. defines it as "that form of specific order costing which applies where similar articles are produced in batches either for sale or for use within an undertaking. In most cases, the costing is similar to job costing". Cost per unit is ascertained by dividing the total cost of the batch by number of units of the batch.
- (d) **Process Costing :** This method of cost ascertainment is used where the input is processed through several distinct processes to be converted into a finished product. The processes are carried out in a continuous sequence where the raw material is introduced in the first process and the finished product of each process becomes raw material for the subsequent process until the last process where from the finished product is transferred to finished stock account. In process costing a separate account is maintained for each process.
- (e) **Operating costing :** This method is applicable to service industries where no product is produced but some service is rendered. Examples: Transport, Lodging, Houses, Cinema theatres, Hospitals, etc.
- (f) **Operation Costing :** This method is applicable where there is mass production and several processes are involved with different operations to be carried out to complete the process of production. It is similar to process costing but cost details are maintained for every minute operation and costs are more accurate.
- (g) **Unit or Output Costing :** This method is applicable where output is uniform in all respects and production is continuous. Under this method cost per unit is ascertained by dividing the cost by number of units produced.
- (h) **Multiple Costing :** This is a system where two or more methods of costing like job costing unit costing and operation costing are applied to find the cost of production. It is the application of combination of two or more methods to ascertain the cost of the work done. It is applied in industries where different parts are produced separately and assembled into a final product.
- (i) **Activity Based Costing:** ABC is an accounting methodology that assigns costs to activities rather than products and services. Costs are initially assigned to activities based on their resources. Then the costs are absorbed by products and services based on their use of activities. CIMA defines ABC as "Cost attribution to cost units on the basis of benefit derived from indirect activities e.g., ordering, setting up, assuring quality".

According to Horngren, Foster and Datar, "ABC is not an alternative costing system to Job costing or process costing; rather ABC is an approach to developing the cost numbers used in job or process costing systems."

The distinctive feature of ABC is its focus on activities as the fundamental cost objects. The ABC approach is more expensive than traditional approach. ABC has the potential however, to provide managers with information they find more useful for costing purposes."

Kaplan and Cooper of Harward Business school who have developed ABC approach to ascertain product costs, have classified the costs as 'short term variable costs' and 'long term variable costs'. The approach relates overhead costs to the forces behind them which are named as 'cost drivers'. Thus 'cost drives' are those activities or transactions which are significant determinants of costs.

ABC system is based on the belief that activities caused costs and a link should therefore be made between activities and products by assigning costs of activities to products based on individual product's demand for each activity.

(13) Techniques or types of costing

Costing is the technique and process of ascertaining costs. Costs may be allocated on actual basis or assigned on estimation or standard cost basis. Cost accounting implies a systematic arrangement of cost related details. The following are the various techniques of costing.

- (i) *Historical Costing* : Ascertaining costs after they are actually incurred refers to 'Historical Costing'. According to J. Batty, "Historical costing is ascertaining and recording of actual costs when, or after, they have been incurred, was one of the first stages in the growth of the cost accountant's work". It is known as traditional costing.
- (ii) *Standard Costing* : Standard cost is a predetermined cost. The standard costs are set in advance for different elements of cost. Actuals are ascertained and compared with standards. The differences, termed as "variances" are ascertained, causes are investigated and suitable action is initiated to correct unfavourable variances. Standard costing controls costs and improves performance.
- (iii) *Marginal Costing* : Under marginal costing costs are classified into fixed and variable. Variable costs are treated as product costs and fixed costs are treated as period costs. Marginal costing is helpful in managerial decision making.

(iv) *Uniform Costing* : It is not a different type of costing. It is a policy of different industrial units to follow a specific type of costing, uniformly in all the units to facilitate comparison and assess the comparative performance of each firm to highlight any weakspots. Remedial action taken on the basis of such assessment by the managements of the firms concerned results in overall improvement in performance throughout the industry.

Status of a Cost Accountant

Cost accountant is a specialist, who reads and analyses cost information and sends appropriate reports to the management and informs the management about problems, if any. Cost accountant is mainly concerned with preparation of budgets, setting of standards analysis of variances and ultimately providing information for cost reduction, cost control and cost-volume-profit relationship.

In a large concern, a separate cost accounting department is set up under the control of a full-fledged cost accountant but in a small concern the costing department may be set up as a section of financial accounting department. In a large concern costing department takes care of specialised activities and functions of cost accounting. Thus the status of the cost accountant heading the cost accounting department is equal to other functional managers. The cost accountant has to supervise the work of persons working in cost accounting department and reports directly to CEO of the organisation.

Cost Accounting Department and its relation with Other Departments

Main function of cost accounting department is to record, classify and present cost information. The information is concerned with all the activities of the organisation. In order to provide accurate and effective information, cost accounting department should have proper integration with the other departments of the organisation. All the departments should help mutually to attain the main objective. The relationship of cost accounting department with the other departments is described here.

1. Cost Accounting Department and Production Department

Production department performs the activity of conversion of raw materials into finished product. Cost accounting department helps the production department in estimating material cost, wage cost and other costs involved in producing a product. Cost accounting department helps to find the cost, control the cost and reduce the cost of manufacturing.

2. Cost Accounting Department and Purchase Department

Purchase department has to acquire raw materials of right quality and quantity at a low price at the right time from a right supplier to ensure continuous availability of raw materials. In this regard cost accounting department is helpful in fixing various levels of stock and EOQ.

3. Cost Accounting Department and Personnel Department

Personnel department is concerned with recruitment, selection, training and placement of employees. It is also concerned with records relating to labour turnover, time booking, fixing of wage rate, preparation of pay roll, Idle time and overtime. Cost accounting department works in close coordination with personnel department in effective implementation of policies relating to employees of the organisation. Cost accounting department can be helpful in fixing incentives and maintenance of records relating to employees.

4. Cost Accounting Department and Finance & Accounts Department

In order to control and reduce the cost, there should a proper co-ordination between financial accounting department and cost accounting department. Cost accounting department helps in estimating cost and recording of actual cost relating to material, labour and other expenses. Finance department has to provide required finance for purchase of raw material at the right time. Cost accounting department and finance department are depending on each other for various activities to be independently discharged by them.

5. Cost Accounting Department and Marketing Department

Marketing department has to effectively discharge the function of marketing the products at competitive prices. Cost accounting department provides information relating to cost of various products, alternative methods of marketing, profitability of different markets, effect of change in product mix and variation of selling price etc to the marketing department to take effective decision to derive maximum profits.

Answers to Short Questions

1. Define cost.

Actual expenditure: Spent on providing a thing.

Notional expenses: Attributable to a given thing.

Production and sale: Cost is described as the total of all expenses incurred, in the production and sale of a product, or spent in rendering service.

2. Define the term costing.

ICMA definition:

Ascertainment of costs: Costing is a technique and process of ascertaining costs.

Principles and rules : Costing studies the principles and rules concerning the determination of costs of products and services.

3. Define cost

Method:

Process:

cost: i.e.

4. State the main objectives of cost accounting

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5. What are the main factors influencing cost?

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7. Mention the main functions of management accounting

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3. Define cost accounting:

Method: Cost accounting is the method of accounting for costs.

Process: It is a process of recording and accounting for all the element of cost: i.e. material, labour and expenses.

4. State the functions of cost accounting or scope or objectives of cost accounting.

Main objectives or functions are:

1. Cost finding
2. Control of cost
3. Reduction of cost
4. Fixation of selling price
5. Providing information for framing business policy

5. What are the advantages of cost accounting.

To the management: Effective decision making, measuring efficiency, cost reduction, fixation of selling price, cost control.

To the employees: Stability of tenure, fair wage policy, rewards through incentives.

To the creditors: Understanding the progress and profitability and future prospects of the firm.

To the Government: Granting of subsidies, planning of resources and utilization of resources.

6. What are the limitations of cost accounting.

1. Lack of uniformity
2. Second hand data
3. Conventions
4. Uncertainty
5. Costly

7. Mention any five differences between cost accounting and financial accounting.

1. Objective: The main objective of financial accounting is to prepare profit and loss account and balance sheet.

Main objective of cost accounting is providing information to management to take decisions.

2. Stock valuation: In financial accounts stocks are valued at cost or market value which ever is lesser.

3. Analysis of profit and loss: In financial accounts profit or loss is disclosed.

In cost accounts profit loss of different products or departments is shown separately.

4. Accounting period: Financial reports are prepared annually. Cost reports are of continuous process.

5. Nature: Financial accounts are preparation historical records. Cost accounts lay emphasis on both historical and predetermined costs.

8. What is functional classification of cost?

Here classification is under four major functions of the business:

- | | |
|---------------------|-------------------------|
| (a) Production cost | (b) Administration cost |
| (c) Selling cost | (d) Distribution cost |

9. Define the term 'cost units' and 'cost centres'.

Cost centre:

Cost centre is defined as 'location or person or item of equipment for which costs may be ascertained and used for the purpose of control'.

Cost unit:

A unit of product or service in relation to which costs are ascertained"

Examples: Measurements: Weight, area, length, value etc.

Examples: Tonne, dozen, ream, kilogram, litre.

10. Define profit centre.

Profit centre is segment or activity of a business for which both revenue and expenses are identified.

Segments: Profit centres are segments which are autonomous, have profit targets, profit centre are few in number.

11. List out different methods of costing.

- Job costing
- Contract costing
- Batch costing
- Process costing
- Operating costing
- Unit or output costing

12. Enumerate the techniques or types of costing.

Standard costing, Historical costing, Marginal costing and uniform costing.

(A) Short Ans

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(A) Short Answer Questions :

1. Define 'Cost'.

2. Define the term 'Costing'.

3. Define 'Cost Accounting'.

[Madras, 1st M.Com., April 2005]

[Madras, B.Com., Ap 2007; April 2006;

Ist M.Com. (Semester) Ap 2008; Nov. 2007; Nov. 2004]

4. State the Functions of Cost Accounting.

[Madras, B.Com., April 2008; B.C.S. April 2004; April 2003]

5. State the objectives of Cost Accounting.

[Madras, B.Com., April 2008; B.Com.(CS) April 2007; Ap 2007; April 2006;

B.Com., April 2004]

6. What is the scope of Cost Accounting? [Madras, B.Com (PZSA) Nov. 2007]

7. What are the advantages of cost accounting?

[Madras, B.Com.(CS) Nov. 2008; B.Com., Oct. 2002]

8. What are the limitations of cost accounting?

[Madras, B.C.S. (ICE) Oct. 2002;

B.Com. Oct. 2000]

9. Mention the limitations of cost accounting.

[Madras, B.Com., Nov. 2004, Oct. 2003;

B.C.S. Oct. 2003; B.C.S. (ICE) May 2003]

10. Enumerate the limitations of Financial Accounting. [Madras, B.Com(CS) Ap 2007]

11. Mention any five differences between Cost accounting and Financial accounting.

[Madras, B.Com.(CS) Ap. 2007; B.Com. (ICE) Oct. 2002]

12. What is the significance of cost accounting?

13. Narrate any three basic requirements of a good costing system.

14. List out the methods of classifying cost.

15. What is 'Functional classification' of cost?

[Madras, B.Com. (ICE) May 2001]

16. Write short notes on 'Cost centre' and 'Investment centre'.

[Madras, 1st M.Com. Ap 2007; Ist M.Com.(ICE) May 2003]

17. Define the terms 'Cost units' and 'Cost centres'.

[Madras, B.Com(old) Ap. 2007; B.C.A./B.Sc.(ICE) Oct. 2000]

18. List out the different methods of costing.

[Madras, B.Com.(CS) Ap 2008; April 2006]

19. Enumerate the Techniques or Types of costing.

20. What is historical costing? [Madras, Ist M.Com., Nov. 2004]
 21. Define a 'profit centre'. [Madras, B.Com., Nov. 2007]

(B) Long Answer Questions :

1. Define 'Cost', 'Costing', 'Cost Accounting' and 'Cost Accountancy'.
 2. Explain the limitations of Financial Accounting.

[Madras, B.Com. April 2006]

3. Define cost accounting. What are its basic purposes?

[Madras, B.C.A./B.Sc.(ICE) Oct. 2001; May 2001]

4. Explain the nature and scope of cost accounting.

[Madras, B.C.S.(ICE) Oct. 2003; Oct. 2004]

6. Define cost accounting. What are its objectives?

[Madras, BCA/BSC Ap 2007; B.C.S. (ICE) Oct. 2007]

B.C.A./B.Sc. April 2004

April 2003: B.Com (old) Question Paper

6. State the meaning and objectives of cost accounting.

[Madras, B.Com. (old) (ICE) Oct. 2004]

B.C.S., Oct. 2004;

7. Explain the scope and objectives of cost accounting.

[Madras, B.Com(CS) Nov. 2007; B.Com, April 2008]

8. Discuss the objectives of cost accounting.

[Madras, B.Com., Ap. 2007; 1st M.Com., 2nd Semester Nov. 2004;
B.C.A./B.Sc. Oct. 2002]

9. Discuss the purposes and functions of cost accounting.

[Madras, 2nd M.Com.(ICE) Oct. 2002;
M.Com., April 2002]

10. Explain the Functions of cost accounting.

[Madras, B.Com. (ICE) Oct. 2001]

11. What is meant by cost accounting? Explain its functions.

J.Madras, B.CS, Nov.2007; BCS (old) Ap. 2007; B.Com. April 2000;
B.Com. (old) April 2000

12. Explain the significance of cost accounting.

[Madras B.Com. Oct. 2001]

13. Explain the importance of cost accounting.

J Madras BCA/B.Sc., Nov. 2007; B.Com. (ICE) Oct. 2004

14. What is cost accounting? Explain its advantages.

[Madras, Ist M.Com., Ap 2005; B.C.A./B.Sc.(ICE) May 2002;
B.C.S.(ICE) Oct. 2001]

Cost Accounting – Introduction

1.33

15. Discuss the Chief uses of cost data.

[Madras, 2nd M.com.(ICE) May 2002]

16. Discuss the advantages of cost accounting.

[Madras, BCA/B.Sc., Nov. 2007; B.Com(CS) Ap 2007; B.C.A./B.Sc.(ICE) Oct. 2004]

17. Explain the limitations of cost accounting.

[Madras, B.Com(CS) Nov. 2007; Nov. 2006; B.Com.(CS)

Nov. 2006; B.C.S. Oct. 2000]

18. Explain the advantages and disadvantages of cost accounting.

[Madras, B.C.A./B.Sc.(ICE) May 2003;

B.Com. Oct. 2002; B.C.S.(ICE) May 2001; B.Com.(ICE) Oct. 1999]

19. Enumerate the advantages of cost accounting to the management and to the employees.

[Madras, B.Com(old) Nov. 2007; B.Com. Nov. 2006; B.C.S. April 2003]

20. Explain the advantages of cost accounting to different 'Stake holders' in business firms.

[Madras, B.Com., April 2007]

21. "A good system of costing is an invaluable aid to the management". Discuss.

[Madras, B.Com.(ICE) Oct. 2000]

22. "Price fixing is the only advantage of costing data" Do you agree?

[Madras, 2nd M.Com. Oct. 2002]

23. Give an account of Objectives, Functions, and Limitations of Cost Accounting.

[Madras, B.Com(opd) Nov. 2007; B.Com. April 1999]

24. Discuss the main objections raised against cost accounting.

[Madras, B.Com(CS) April 2007; B.C.A./B.Sc. Oct. 1999]

25. Distinguish between Financial Accounting and cost accounting.

[Madras, B.Com, April 2008; April 2007; B.Com.(CS) April 2006; B.Com. April

2004; Oct. 2003; B.C.S.(ICE) Oct. 2003;

B.C.S. April 2002; April 2000; B.C.A./B.Sc.(ICE) May 2003;

B.C.A./B.Sc. Oct. 2003; Oct. 2001; April 2001]

26. What are the differences between management accounting and cost accounting?

[Madras, BBA April 2008]

27. What are the essentials of a good costing system?

[Madras, B.Com. Nov. 2004;

I.M.Com. 2nd Semester Nov. 2004;

2nd M.Com. April 2002]

27a. Describe briefly the characteristics which an ideal costing system should possess.

[Madras, 1st M.Com., Nov. 2005]

28. What are the requisites of a good costing system?

29. State the factors to be considered while installing a costing system.

[Madras, B.Com.(CS) April 2006]

30. Explain the steps to be taken for the installation of a costing system.
[Madras, 2nd M.Com. April 2003; April 2001]
31. What are the problems of installing a costing system? How do you overcome them?
32. "Money spent on installing a costing system is not an expenditure but an investment" Comment.
[Madras, 2nd M.Com.(ICE) (old) Oct. 2004]
33. Describe the 'Classification of cost'.
*[Madras, B.Com.(ICE) May 2003;
B.C.A./B.Sc. April 2001]*
34. Explain the methods of cost classification.
[Madras, B.C.S.(ICE) May 2002]
35. Explain the "Functional classification" of cost.
[Madras, B.Com.(ICE) May 2001]
36. Explain 'Cost Types' by variability.
[Madras, B.Com. April 1999]
37. Explain the different Types of costing.
[Madras, B.Com. April 2002, April 1999]
38. Explain 'Cost' and 'Profit' centres.
[Madras, B.Com., May 2005 (ICE) B.Com. Oct. 1999]
39. Explain historical and replacement costs.
[Madras, BBA, April 2008]
40. Describe briefly the different methods of costing and state the particular industries to which they can be specified.
*[Madras, B.Com.(CS) April 2006;
B.Com. April 2005; B.C.A./B.Sc. April 2009]*
41. What are 'Techniques of costing'? Explain them briefly.
42. Explain 'Activity Based Costing'.
43. Write short notes on
 - (a) Research & development cost
 - (b) Controllable cost
 - (c) Uncontrollable cost
 - (d) Sunk cost
 - (e) Shutdown cost
 - (f) Opportunity cost
 - (g) Inputted cost
 - (h) Out of pocket cost
 - (i) Conversion cost
 - (j) Cost centre
 - (k) Profit centre
 - (l) Cost unit
 - (m) Historical cost
 - (n) Normal and Abnormal costs.
44. Explain the 'Status' of 'Cost Accountant'.
45. Describe the relations of costing department with other departments in an organisation.

1. Basic c
(a)
(c)2. Cost it
(a)
(c)3. Overh
(a)
(c)4. Conv
(a)
(c)5. Impu
(a)
(c)6. Sunl
(a)
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(a)
(c)8. Mu
(a)
(c)9. Pro
(a)
(c)10. Co
(a)
(c)

Objective Type Questions**I. Multiple Choice :***Choose the correct answer to the following :*

1. Basic objective of cost accounting is
 - (a) Tax compliance
 - (b) Financial Audit
 - (c) Cost Ascertainment
 - (d) None of these.
2. Cost incurred is identified with
 - (a) Each Executive
 - (b) Each unit of output
 - (c) Each month
 - (d) None of these.
3. Overhead cost is the Total of
 - (a) All Indirect costs
 - (b) All direct costs
 - (c) Direct and Indirect costs
 - (d) Specific costs.
4. Conversion cost excludes
 - (a) Labour cost
 - (b) Factory overheads
 - (c) Direct expenses
 - (d) Direct material cost.
5. Imputed cost is a
 - (a) Notional cost
 - (b) Real cost
 - (c) Abnormal cost
 - (d) Variable cost.
6. Sunk cost is a cost relating to
 - (a) The present
 - (b) Future
 - (c) Past
 - (d) Tax.
7. Operating costing is suitable for
 - (a) Job order businesses
 - (b) Contractors
 - (c) Sugar Industry
 - (d) Service Industries.
8. Multiple costing is, using in the same firm
 - (a) A single costing method
 - (b) Several methods of costing
 - (c) Tax saving measures
 - (d) None of these.
9. Process costing is suitable for
 - (a) Hospitals
 - (b) Transport firms
 - (c) Oil refining firms
 - (d) Brick laying firms.
10. Cost classification can be done in
 - (a) Two ways
 - (b) Three ways
 - (c) Four ways
 - (d) Several ways.

[Ans : 1. (c); 2. (b); 3. (a); 4. (d); 5. (a); 6. (c);
 7. (d); 8. (b); 9. (c); 10. (d)]

"A classification of production orders can be found without being obtained by

Simple analysis of decision making can be provided on the objective, cost elements of costs.

The above

Dire
mater

II. Fill in the blanks :

Fill the blanks in the following with suitable words :

1. Costing refers to the Techniques and processes of _____ costs.
2. Cost accounting was developed because of the _____ of Financial accounting.
3. Cost accounting deals partly with facts and figures and partly with _____.
4. Cost accounting provides data to managerial _____.
5. Variable cost increases or _____ in proportion to the output.
6. An uncontrollable cost cannot be _____ by any specific member of a firm.
7. A cost centre may be a location, person or item of equipment for which costs may be _____.
8. Operating costing is more suitable for _____ industries.
9. All costing methods can be grouped into two categories (a) Specific order costing and (b) _____ costing.
10. _____ cost is to be incurred even when a business unit is closed.

[Ans : 1. Ascertaining; 2. Limitations; 3. Estimates; 4. Decisions;
5. Decreases; 6. Influenced; 7. Ascertained; 8. Service;
9. Operation; 10. Shutdown]

IV. True or False :

Indicate whether the following statements are True or False :

1. Cost Accounting is a branch of accounting.
2. Financial information is provided by cost accounts.
3. Cost Accounting provides information for cost control and cost reduction.
4. Sunk costs are important for decision making.
5. Imputed costs are notional costs.
6. Profit centre is a segment of a business, responsible for all activities involved in purchasing and sales in that segment.
7. Unit costing is also known as operating costing.
8. Job costing is one of the methods under specific order costing.
9. Cost control has no effect on profits.
10. Marginal costing is a Technique of costing.

[Ans : 1. True; 2. False; 3. True; 4. False; 5. True;
6. True; 7. False; 8. True; 9. False; 10. True]

Chapter 2

Cost Sheet, Tenders and Quotations

1. ELEMENTS OF COST

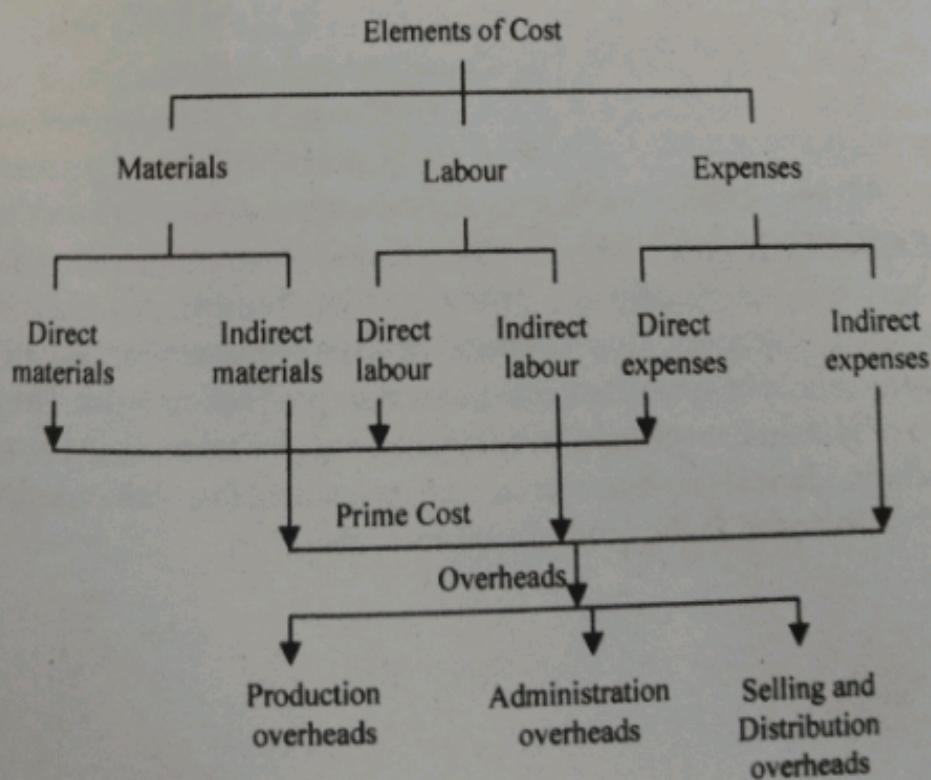
"A classification has to be made to arrive at the detailed costs of departments, production orders, jobs or other cost units. The total cost of production can be found without such analysis, and in many instances an average unit cost could be obtained but none of the advantages of an analysed cost would be available".

— Harold. J. Wheldon.

Simple ascertainment of total cost cannot satisfy the various requirements of decision making. For effective control and managerial decision making, data is to be provided on the basis of analysed and classified costs. In order to satisfy this objective, cost is analysed by elements of cost i.e., by nature of expenditure. The elements of cost are:

1. Materials
2. Labour and
3. Expenses

The above elements of cost are analysed in the chart given below:



The above elements of cost are explained below:

1. Materials

"The material cost is the cost of commodities supplied to an undertaking" – I.C.M.A.

Materials cost is of two types, viz., (i) Direct materials cost and (ii) Indirect materials cost.

(i) **Direct Materials Cost** : Direct material cost is "The cost of materials entering into and becoming constituent elements of a product or saleable service". Thus, materials which can be identified with units of output or service are known as *direct materials*.

Cotton used in production of cloth, leather used in the case of production of leather goods and lime in the production of chalk, etc., are the examples of direct materials. Any materials purchased and used for a specific job are also *direct materials*.

(ii) **Indirect materials** : "Materials used for the product other than the direct materials are called indirect materials. In other words, materials cost which cannot be identified with a specific product, job, process is known as *indirect material cost*.

Small tools, stationery used in works, office stationery, advertising posters, and materials used in maintenance of plant and machinery are a few examples of indirect materials.

2. Labour

Labour is the remuneration paid for physical or mental effort expended in production and distribution.

"The labour cost is the cost of remuneration (wages, salaries, commissions, bonus, etc.) of the employees of an undertaking" – I.C.M.A.

Labour cost is also divided into direct and indirect portions.

(i) **Direct labour cost** : It is also called 'Direct-wages'. Direct labour cost is the cost of labour directly engaged in production operations. E.g., workmen engaged in assembling parts, carpenters engaged in furniture making, etc.

(ii) **Indirect labour cost** : Indirect labour cost is the remuneration paid for labour engaged to help the production operations, e.g., inspectors, watchmen, sweepers, store keepers, etc. The remuneration paid to these persons cannot be traced to a job, process or production order. The labour costs of idle time, overtime, holidays, etc. are also taken as indirect costs. Similarly, clerical and managerial staff, salesmen, distribution employees are also included in the orbit of 'indirect labour'.

3. Expenses

Expenditure other than material and labour is the third element of cost.

It is defined by I.C.M.A. as 'The cost of service provided to an undertaking and the notional cost of the use of owned assets'.

Expenses are of two types – (i) Direct expenses and (ii) Indirect expenses.

(i) **Direct Expenses:** These are the expenses which can be directly identified with a unit of output, job, process or operation. They are specifically incurred for a job, or unit or process and in no way they are connected with other jobs or processes. The direct expenses are also known as *chargeable expenses*. Some examples are:

- (a) Hire charges of special plant used for a job.
- (b) Royalty on products
- (c) Cost of special patterns, designs or plans for a particular job or work order, etc.

(ii) **Indirect expenses :** Indirect expenses are expenses other than indirect material and indirect labour, which cannot be directly identified with units of output, job, process or operation. These expenses are incurred commonly for jobs and processes. E.g., rent, power, lighting, depreciation, bank charges, advertising, etc.

Direct and Indirect Costs

Direct cost or prime cost: The aggregate of all the direct costs i.e., Direct Materials, Direct Labour or wages and Direct expenses is termed as 'Prime Cost' or 'Direct cost'. Thus prime cost or direct cost is the sum of all the elements of costs which can be specifically identified with particular products or jobs and allocated to such output.

Indirect cost or 'Overhead' or 'On cost' or 'Burden'

The aggregate of all the Indirect costs i.e., Indirect Material, Indirect labour and Indirect expenses is variously termed as 'oncost' or 'overhead' or 'Burden'. Over heads or oncost or indirect cost can not be identified with specific products or jobs. So it is apportioned to the output on some reasonable basis.

I.C.M.A., defines overheads as follows: "The aggregate of indirect materials cost, indirect wages cost (indirect labour cost) and indirect expenses". I.C.M.A. has stated in the note appended to this definition – 'on cost' and "Burden" as synonymous terms which are not recommended.

Classification of Overhead

On the basis of functions overhead is classified as (i) Factory overhead
(ii) Administration or office overhead (iii) Selling and Distribution overhead.

- (i) **Factory Overhead:** This is the aggregate of indirect material, indirect wages and indirect expenses incurred in the factory. The examples of indirect materials and indirect wages are discussed earlier. Examples of indirect factory expenses are rent, power, depreciation lighting and heating incurred in the factory.
- (ii) **Administration or Office Overhead :** All the indirect administration expenses, come under this category. Salaries of office staff, accountants, directors' fees, rent of office building, stationery expenses incurred in the office lighting and bank charges, etc., are the examples.
- (iii) **Selling and Distribution overhead :** This includes indirect selling and distribution expenses. Examples are salaries of salesmen, selling commission, advertising, warehouse rent, maintenance of delivery vans, warehouse staff expenses, warehouse lighting, etc.

Expenses excluded from costing

The following items are excluded from computation of total cost.

- (a) **Capital costs and capital losses:** Purchase of fixed assets, plant and machinery, building, etc. Loss on sale of fixed assets, abnormal losses, preliminary expenses, patents written off, etc.
- (b) Transfer to reserves, income tax, dividend, bonus to shareholders, etc.
- (c) Financial items like, cash discount, interest on debentures, interest on loans, interest on own capital, etc.

II. COST SHEET OR STATEMENT OF COST

Meaning and Definition

The expenses of a product are analysed under different heads in the form of statement. This statement is called cost sheet. Walter & Bigg define, Cost sheet as follows:

"The expenditure which has been incurred upon production for a period is extracted from the financial books and the stores records, and set out in a memorandum or a statement. If this statement is confined to the disclosure of the cost of the units produced during the period, it is termed as a cost sheet". In other words cost sheet is a statement showing the total cost under proper classifications in a logical order:

Importance, advantages, objectives or purpose of cost sheet

Cost sheet is very important because it acts as the basis or foundation to ascertain costs and determine selling price of the output.

1. It provides details of total cost under logical classification.
2. It provides cost per unit in different stages.
3. It helps in comparison and control of cost.

(i) Factory overhead
distribution overhead,
material, indirect wages
expenses of indirect materials
indirect factory expenses
incurred in the factory,
indirect administration
expenses incurred in the
factory.

es indirect selling and
of salesmen, selling
ance of delivery vans,

total cost.

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sets, abnormal losses,

o shareholders, etc.
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COST

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Cost Sheet, Tenders and Quotations

4. Cost sheet is helpful in estimation of cost for preparation of tenders and quotations.
5. It acts as basis for fixation of selling price.

Cost Sheet and Production Account

Cost sheet is a statement of total cost under different classifications of cost. The classification of cost is done on the basis of elements of cost, functions and behaviour of cost. The total cost in the form of cost of sales and cost per unit is revealed.

On the otherhand, the cost, sales, and profits presented in the form of a ledger account is known as production account or manufacturing account. The debit side of the account is shown with opening stock, expenses and the credit side is shown with closing stock and sales. The balancing figure is either profit or loss.

Cost sheet Vs. Production Statement

The cost of output can be ascertained from the statement known as cost sheet. The items of various costs are extracted from financial books and presented in logical order. Thus, total cost of a cost centre or cost unit is shown in the cost sheet.

When sales, stocks and profits are included in the cost sheet it is called production statement. Bigg has defined it as "The expenditure which has been incurred upon production for a period is extracted from the financial books and stores records and set out in a memorandum statement. If the statement is confined in the disclosure of the cost of the units produced during the period it is termed as cost sheet, but where the statement records, both cost, sales and profit it is usually known as production or output statement or account". **However the modern practice is to extend the cost sheet to show profit and sales also and call it "statement of cost and profit".**

Specimen of Cost sheet

Cost sheet of for the month of January 2011

Particulars	Total cost		Cost per unit Rs.
	Rs.	Rs.	
Direct material	xxx		
Direct labour	xxx		
Direct expenses	xxx		
	—		
Prime cost		xxx	xxx
Add : Works overhead :			
Indirect materials	xxx		
Indirect wages	xxx		
Factory rent and rates	xxx		
Factory lighting and heating	xxx		
Power and fuel	xxx		
Repairs and maintenance	xxx		

Drawing office expenses
 Depreciation of plant and machinery
 Factory Stationery
 Insurance of factory
 Factory/works manager salary
 Water consumption in factory

*Total Works Overhead***Works cost /Factory cost /Manufacturing cost**

Add : Office or Administration overheads:

Office rent and rates
 Office lighting
 Office stationery
 Office furniture depreciation and repairs
 Office salaries
 Legal charges
 Bank commission
 Telephone and postages
 Office cleaning

*Total Administration O.H.***Cost of Production**

Add : Selling and Distribution overheads

Salesmen's salaries
 Salesmen' commission
 Showroom rent
 Showroom expenses
 Advertisement
 Sales office rent
 Travelling expenses
 Warehouse rent and rates
 Warehouse staff salaries
 Repairs and depreciation of delivery vans
 Carriage outward

*Total Selling & Distribution O.H.***Cost of sales****Profit / Loss****Sales**

Prime cost : This is also called direct cost. It is the aggregate of direct materials, direct labour and direct expenses, which are easily identifiable with the product.

Works cost : It consists of the total of all items of expenses incurred in the manufacturing of a product, viz., prime cost plus factory expenses. It is also known as factory cost or manufacturing cost.

Cost of Production : This includes works cost and administration expenses. Production is not deemed to be complete without the managerial and facilitating costs.

Cost of Sales : It represents cost of production plus selling and distribution cost incurred. Thus, the cost of sales is the aggregate of all the direct and indirect costs connected to the goods sold.

When profit is added to the cost of sales, sales can be found. Usually, selling prices are fixed on the basis of the cost of sales. It ensures that all the costs are recovered and any desired profit is also obtained.

Treatment of Stocks or Inventories

Stocks of Raw materials

When opening stock of raw materials, purchase of raw materials and closing stock of raw materials are given, raw materials consumed can be calculated as follows :

	Rs.
Opening stock of raw materials	XXX
Add : Purchase of raw materials	XXX
Add : Carriage inwards	XXX
Add : Other direct materials used	XXX
Add : Taxes and duties on the material purchased	XXX
	—
	XXXX
Less : Closing stock of raw materials	XXX
Less : Sale of unsuitable raw materials	XXX
Less : Sale of scrap of raw materials	XXX
	—
	XXXX
Cost of raw materials consumed	XXXX

Stocks of Work-in-progress

'Work-in-progress' means units of production on which work has been done but are not yet completely finished. Work-in-progress is valued on prime cost or works cost basis but the latter is preferred. The opening and closing work-in-progress are adjusted as given below:

Cost Accounting

Prime cost
Add: Factory overhead
Add: Opening work-in-progress
Less: Closing work-in-progress

Works cost

Stocks of Finished Goods

If opening and closing stocks of finished goods are given they are to be adjusted to find out cost of production of goods sold.

Cost of production <i>Add:</i> Opening stock of finished goods <i>Less:</i> Closing stock of finished goods Cost of production of goods sold	Rs. xxx xxx — xxx xxx — xxxx
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SPECIMEN OF COST SHEET, WITH INVENTORIES

Statement of Cost and Profit (with stocks)

Particulars	Rs.	Rs.
Opening stock of direct materials	xxx	
<i>Add:</i> Purchase of direct materials	xxx	
· Expenses, taxes and duties on materials purchased	xxx	
	—	xxx
<i>Less:</i> Closing stock of direct materials	xxx	
Direct material scrap sold	xxx	xxx
	—	—
Cost of direct material consumed	xxx	
Direct wages	xxx	
Direct or chargeable expenses	xxx	
	—	—
Prime cost		
<i>Add:</i> Factory overhead		

xxx

xxx

xxx

xxx

xxx

xxx

xxx

are to be

Cost Sheet, Tenders and Quotations

2.9

Add : Opening work-in-progress

xxx

—

xxx

xxx

—

*Less : Closing work-in-progress***Works cost (or) Factory cost***Add : Administration overheads***Cost of production***Add : Opening stock of finished goods**Less : Closing stock of finished goods***Cost of production of goods sold***Add : Selling and distribution overheads***Cost of goods sold (or) cost of sales***Add : Profit / Less : Loss***Sales****Tenders and Quotations**

Frequently the manufacturers of consumer durables and capital goods are asked to quote the price at which they can supply their output. The price at which the items of output are offered for sale is known as 'tender' or 'quotation' price. The tender has to be prepared carefully since it may be accepted and goods have to be supplied in future at the quoted rate.

In order to prepare the tender the following items are to be analysed.

1. Raw materials
2. Direct labour
3. Chargeable expenses
4. Works overhead
5. Office overhead
6. Selling overhead
7. Estimated profit

Estimation of different elements of cost has to be made. The following are the accepted norms :

(A) Direct material and direct labour costs are generally estimated on the basis of 'cost per unit' of preceding period, subject to fluctuations in the market price of materials and labour rates.

(B) Overhead is estimated on the basis of past experience as a percentage, as given below:

1. Percentage of factory overheads to direct wages

$$= \frac{\text{Factory Overheads}}{\text{Direct Wages}} \times 100$$

2. Percentage of office overheads to works cost

$$= \frac{\text{Office Overheads}}{\text{Works cost}} \times 100$$

3. Percentage of selling and distribution overheads to works cost

$$= \frac{\text{Selling and Distribution overheads}}{\text{Works cost}} \times 100$$

(or)

The percentage may be calculated on cost of production

$$= \frac{\text{Selling and Distribution overheads}}{\text{Cost of Production}} \times 100$$

The above overhead percentages obtained on the basis of preceding period's cost sheet are used for preparation of tender, after giving due regard to likely changes anticipated.

(C) Estimation of Profit for a Tender or Quotation

Sometimes profit is given as percentage of cost. In that case profit for the tender is ascertained as given below:

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

If profit is to be ascertained as a percentage of selling price of the tender, the profit is to be calculated as given below:

$$\text{Profit} = \frac{\text{Cost of sales} \times \text{Rate of profit on sales}}{100 - \text{Rate percentage on sales}}$$

POINTS TO BE REMEMBERED

- (1) Alternative terms are used for many items in cost sheet. The following are some of them.
- (a) Direct labour
 - Direct wages, Production wages, Productive wages, Productive labour
 - (b) Direct expenses
 - Chargeable expenses
 - (c) Overhead
 - 'On-cost', 'Burden'
 - (d) Factory overhead
 - Works-overhead, production overhead, manufacturing overhead
 - (e) Factory cost
 - Works cost, Manufacturing cost
 - (f) Administrative overhead
 - Office overhead

(2) *Valuation of Stocks of Finished Goods*

When details of units produced and sold are available, the closing stock of finished units can be valued at 'current cost of production'.

$$\text{Value of closing stock units} = \frac{\text{Cost of production}}{\text{Units produced}} \times \text{Closing stock units}$$

If value of opening stock units is not given, they can also be valued on the current cost basis, assuming that costs in the previous period were similar to the current period.

(3) *Sale of Material Scrap*

It can be direct material scrap and can be shown as a deduction from direct material cost. It may also be indirect material scrap in which case it has to be reduced from the factory overhead cost.

When there is no indication, either method can be followed by stating the assumption.

(4) *Items excluded from cost accounts*

- (a) Purely financial expenses and losses like interest on loans and debentures, loss on sale of investments and fixed assets, cash discount.
- (b) Provisions like provision for income tax, provision for doubtful debts.
- (c) Capital expenses and losses written off like goodwill, preliminary expenses, discount on issue of shares, etc.
- (d) Appropriations like dividends paid, transfer to reserves.

(5) *Profit given as percentage of selling price*

Usually profit is added to the cost of sales to ascertain the sale price. If profit percentage is given on sales, it must be converted to percentage on cost.

For example if profit is 20% on sale.

Sale is 100; profit 20 ∴ Cost = $100 - 20 = 80$

$$\text{Profit to cost } \frac{20}{80} = \frac{1}{4} \text{ (or) } 25\%$$

(6) Standard Assumptions

In the context of tenders or quotations, the following assumptions can be made if nothing contrary is given in the problem.

- Factory overhead to direct wages ratio of the previous period holds good for current period also.
- Administrative overhead to works cost ratio of the previous period is applicable in current period also.

ILLUSTRATIONS

(A) Simple Cost Sheet

Illustration 1

Prepare a Cost Sheet from the following data:

Particulars	Rs.	Rs.
Direct material consumed		50,000
Direct wages paid		40,000
Chargeable expenses		10,000
<i>Indirect materials:</i>		
Used in factory	8,000	
Used in office	12,000	
Used in selling	6,000	
Used in distribution	4,000	
		30,000
<i>Indirect labour:</i>		
In factory	15,000	
In office	20,000	
In selling	18,000	
In distribution	12,000	
		65,000
<i>Indirect expenses:</i>		
Relating to factory	6,000	
Relating to office	3,000	
Relating to selling	1,000	
		10,000

[Madras, B.Com., BBA etc. Nov. 2008 $\frac{1}{2}$ Figs]

Cost Sheet, Tenders and Quotations

Solution :

2.13

Cost Sheet

Particulars	Rs.	Rs.
Direct material consumed		50,000
Direct wages		40,000
Chargeable expenses		10,000
Prime cost		1,00,000
<i>Add: Factory overheads:</i>		
Indirect material used in factory	8,000	
Indirect labour used in factory	15,000	
Indirect expenses relating to factory	6,000	
	<u> </u>	<u>29,000</u>
Factory cost		1,29,000
<i>Add: Administration overheads:</i>		
Indirect materials used in office	12,000	
Indirect labour in office	20,000	
Indirect expenses of office	3,000	
	<u> </u>	<u>35,000</u>
Cost of production		1,64,000
<i>Add: Selling and Distribution overheads:</i>		
Indirect material used in selling	6,000	
Indirect labour in selling	18,000	
Indirect expenses for selling	1,000	
	<u> </u>	<u>25,000</u>
Indirect material used for distribution	4,000	
Indirect wages for distribution	12,000	
	<u> </u>	<u>16,000</u>
Cost of sales		2,05,000

Note: 'Chargeable expenses' is an alternative term for 'direct expenses'.

Illustration 2

You are required to compile a statement showing cost and profit from the information given, showing clearly: (a) Material consumed (b) Prime cost (c) Works cost (d) Cost of Production (e) Cost of Sales (f) Profit and (g) Sales.

Materials purchased	Rs.
Wages	2,00,000
Direct expenses	1,00,000
Opening stock of materials	20,000
Closing stock of materials	40,000
	<u> </u>
	<u>60,000</u>

Factory overhead is absorbed at 20% on wages. Administration overhead is 25% on the works cost. Selling and distribution overheads are 20% on the cost of production. Profit is 20% on sales.

[Bharathidasan April 2019]

[Madras, 1st M.Com(KCA2A) April 2009]

Cost Sheet, Test
Illustration 3
During the year
were the expen

Solution :

Statement of Cost and Profit

Particulars	Rs.	Rs.
Opening stock of materials	40,000	
Add: Purchase of materials	2,00,000	
	<hr/>	
	2,40,000	
Less: Closing stock of materials	60,000	
	<hr/>	
(A) Cost of materials consumed	1,80,000	
Direct wages	1,00,000	
Direct expenses	20,000	
	<hr/>	
(B) Prime cost	3,00,000	
Add: Factory overheads:		
20% of wages: $1,00,000 \times 20\%$	20,000	
	<hr/>	
(C) Works cost	3,20,000	
Add: Administration overheads:		
25% on works cost : $3,20,000 \times 25\%$	80,000	
	<hr/>	
(D) Cost of production	4,00,000	
Add: Selling and Distribution overheads:		
20% on cost of production: $4,00,000 \times 20\%$	80,000	
	<hr/>	
(E) Cost of sales	4,80,000	
Add: (F) Profit:		
20% on sales or 25% on cost of sales	1,20,000	
$4,80,000 \times 25\%$	<hr/>	
(G) Sales	6,00,000	
	<hr/>	

Solution :

You are req
at each stage.

Solution :

P

Opening

Add: Purchase

Less: Closing s

Raw mat

Direct wa

Direct ex

Add: Factory

Add: Office ov

Add: Selling ov

COST

Illustration 3

During the year 2008, X Ltd., produced 50,000 units of a product. The following were the expenses :

	Rs.
Stock of raw materials on 1.1.2008	10,000
Stock of raw materials on 31.12.2008	20,000
Purchases	1,60,000
Direct wages	75,000
Direct expenses	25,000
Factory expenses	37,500
Office expenses	62,500
Selling expenses	25,000

You are required to prepare a Cost sheet showing cost per unit and total cost at each stage.

*(Madras B.Com (G&AF) April 2013)
[Madras, 1st M.Com(KCA2A) Nov. 2009]*

Solution :

**Cost sheet of X Ltd.
for the year ending 31.12.2008**

(Output 50,000 units)

	Particulars	Total Rs.	Per unit Rs.P.
	Opening stock of raw materials	10,000	
80,000	Add: Purchase of raw materials	1,60,000	
		1,70,000	
4,00,000	Less: Closing stock of raw materials	20,000	
		1,50,000	3.00
80,000	Raw materials consumed	75,000	1.50
	Direct wages	25,000	0.50
4,80,000	Direct expenses	2,50,000	5.00
		37,500	0.75
1,20,000	<i>Prime cost</i>	2,87,500	5.75
	Add: Factory overheads	62,500	1.25
		3,50,000	7.00
6,00,000	<i>Factory cost</i>	25,000	0.50
	Add: Office overheads:	3,75,000	7.50
	<i>Cost of production</i>		
	Add: Selling overhead		
	<i>Cost of sales</i>		

(B) Cost Sheet – With details of Overheads

Illustration 4

The following details have been obtained from the cost records of Raja Sekhar Ltd.

	Rs.
Stock of raw materials on 1st Dec. 2010	75,000
Stock of raw materials on 31st Dec. 2010	91,500
Direct wages	52,500
Indirect wages	2,750
Sales	2,11,000
Work-in-progress 1st Dec. 2010	28,000
Work-in-progress 31st Dec. 2010	35,000
Purchases of raw materials	66,000
Factory rent, rates and power	15,000
Depreciation of plant and machinery	3,500
Expenses on purchases	1,500
Carriage outwards	2,500
Advertising	3,500
Office rent and taxes	2,500
Traveller's wages and commission	6,500
Stock of finished goods (1st Dec. 2010)	54,000
Stock of finished goods (31st Dec. 2010)	31,000

Prepare a Cost sheet giving the maximum possible break up of costs and profit.

[Delhi, B.Com.(Hons.) adapted]

[Madras BCA(PK4B) Nov. 2007]

Solution :

Raja Sekhar Ltd.

**Statement of Cost and Profit
for the month ended 31.12.2010**

Particulars	Rs.	Rs.
Opening stock of raw materials	75,000	
Add: Purchases of raw materials	66,000	
Add: Expenses on purchases	1,500	
<i>Less:</i> Closing stock of raw materials	<u>1,42,500</u>	
Raw materials consumed	91,500	
Direct wages		51,000
Prime cost		<u>52,500</u>
		<u>1,03,500</u>

75,000

91,500

52,500

2,750

,11,000

28,000

35,000

66,000

15,000

3,500

1,500

2,500

3,500

2,500

54,000

31,000

Costs and profit.

Ans.) adapted]

B) Nov. 2007]

Rs.

51,000

52,500

1,03,500

Cost Sheet, Tenders and Quotations

2.17

<i>Add:</i>	<i>Factory overheads:</i>		
	Indirect wages	2,750	
	Factory rent, rates and power	15,000	
	Depreciation of plant and machinery	3,500	
			21,250
	Gross factory cost		
<i>Add:</i>	Opening work-in-progress		
			1,24,750
			28,000
<i>Less:</i>	Closing work-in-progress		
			1,52,750
			35,000
	Factory cost		
<i>Add:</i>	<i>Administration overheads:</i>		
	Office rent and taxes	2,500	
			2,500
	Cost of production		
<i>Add:</i>	Opening stock of finished goods		
			1,20,250
			54,000
<i>Less:</i>	Closing stock of finished goods		
			1,74,250
			31,000
	Cost of production of goods sold		
<i>Add:</i>	<i>Selling and Distribution overheads:</i>		
	Carriage outwards	2,500	
	Advertising	3,500	
	Travellers wages and commission	6,500	
			12,500
	Cost of sales		
	Profit (Bal. fig.)		
			1,55,750
			55,250
	Sales		
			2,11,000

Illustration 5

The following particulars have been extracted from the books of a manufacturing company.

	Rs.
Stock of material on 1st Jan. 2010	47,000
Stock of material on 31st Dec. 2010	50,000
Materials purchased	2,08,000
Office salaries (drawing)	9,600
Counting house salaries	14,000
Carriage inwards	8,200
Carriage outwards	5,100
Cash discount allowed	3,400
Bad debts written off	4,700
Repairs to plant and machinery	10,600
Rent, rates, etc. – Factory	3,000

Rent, rates, etc. - Office	1,600
Travelling expenses	3,100
Travelling commission	8,400
Production wages	1,40,000
Depreciation - Plant and machinery	7,100
Depreciation - Office furniture	600
Directors' fees	6,000
Gas and water charges - Factory	1,500
Gas and water charges - Office	300
General charges	5,000
Manager's salary	12,000

Out of 48 hours in a week, the time devoted by the manager to the factory and to the office was on average 40 hours and 8 hours respectively, throughout the accounting year.

Prepare a statement giving the following information (a) Prime cost (b) Factory on cost as a percentage of production wages (c) Factory cost (d) General on cost as a percentage of factory cost and (e) Total cost.

[Delhi, B.Com]

Solution :

Statement of Cost
For the year ending 31st Dec. 2010

Particulars	Rs.	Rs.
Opening stock of materials	47,000	
Add: Materials purchased	2,08,000	
Add: Carriage inwards	8,200	
	2,63,200	
Less: Closing stock of materials	50,000	
		2,13,200
Cost of materials consumed		1,40,000
Production wages		
(A) Prime cost		3,53,200
Add: Factory overheads (or) Factory on cost:		
Repairs to plant and machinery	10,600	
Rent, Rates, etc. Factory	3,000	
Depreciation - Plant and machinery	7,100	
Gas and water - Factory	1,500	
Office salaries (drawing)	9,600	

Note: (1)

(2)

(3)

(4)

Rent, rates, etc. - Office	1,600
Travelling expenses	3,100
Travelling commission	8,400
Production wages	1,40,000
Depreciation - Plant and machinery	7,100
Depreciation - Office furniture	600
Directors' fees	6,000
Gas and water charges - Factory	1,500
Gas and water charges - Office	300
General charges	5,000
Manager's salary	12,000

Out of 48 hours in a week, the time devoted by the manager to the factory and to the office was on average 40 hours and 8 hours respectively, throughout the accounting year.

Prepare a statement giving the following information (a) Prime cost (b) Factory on cost as a percentage of production wages (c) Factory cost (d) General on cost as a percentage of factory cost and (e) Total cost.

[Delhi, B.Com.]

Solution :

Statement of Cost
For the year ending 31st Dec. 2010

Particulars	Rs.	Rs.
Opening stock of materials	47,000	
Add: Materials purchased	2,08,000	
Add: Carriage inwards	8,200	
	2,63,200	
Less: Closing stock of materials	50,000	
	2,13,200	
Cost of materials consumed		1,40,000
Production wages		3,53,200
(A) Prime cost		(1)
Add: Factory overheads (or) Factory on cost:		(2)
Repairs to plant and machinery	10,600	
Rent, Rates, etc. Factory	3,000	
Depreciation - Plant and machinery	7,100	
Gas and water - Factory	1,500	
Office salaries (drawing)	9,600	

Cost Sheet, Tenders and Quotations

2.19

$$\text{Manager's salary } \left(12,000 \times \frac{40}{48} \right)$$

10,000

Factory overheads or on cost

$$(B) 41,800 + 1,40,000 = 29.857\% \text{ on production wages}$$

41,800

(C) Factory cost

*General on cost (or) Administration, selling
and distribution overheads:*

Administration overheads:

Counting house salaries

14,000

Rent, Rates, etc. - office

1,600

Depreciation - Office furniture

600

Director's fees

6,000

Gas and water, office

300

General charges

5,000

$$\text{Manager's salary } \left(12,000 \times \frac{8}{48} \right)$$

2,000

29,500

Selling and distribution overheads:

5,100

Carriage outwards

4,700

Bad debts written off

3,100

Travelling expenses

8,400

Travelling commission

50,800

General on cost

$$(D) \frac{50,800}{3,95,000} \times 100 = 12.861\% \text{ on factory cost}$$

(E) Total cost

4,45,800

- Note:* (1) General on cost is assumed to be the total of all other overheads except the factory overhead.
- (2) Cash discount is usually excluded from cost accounts because it is a result of financial policy.
- (3) Drawing office is a part of factory, consisting of draftsmen who prepare product and machinery drawings.
- (4) 'Travelling' is assumed to be for the purpose of sales.

Illustration 6

From the details given below, prepare a comparative cost sheet for the first and second half of the year 2010, showing cost per unit in each case, at all stages.

	Half year ended	
	30.6.2010	31.12.2010
Direct materials Consumed	50,000	70,000
Wages	60,000	80,000
Chargeable expenses	10,000	12,000
Depreciation of factory machines	16,000	20,000
Indirect wages in Factory	20,000	30,000
Rent:		
Factory	5,000	4,000
Office	8,000	8,000
Repairs:		
Factory	6,000	4,000
Office	9,000	2,000
Sundry office expenses	16,000	20,000
Output during the period in units	20,000 units	25,000 units

Solution:**Cost Sheet for the year ended 31.12.2010**

Half year ended 30.6.2010 20,000 units		Half year ended 31.12.2010 25,000 units		
Total Rs.	Per unit Rs.	Particulars	Total Rs.	Per unit Rs.
50,000	2.50	Direct Material Consumed	70,000	2.80
60,000	3.00	Wages	80,000	3.20
10,000	0.50	Chargeable expenses	12,000	0.48
1,20,000	6.00	<i>PRIME COST</i>	1,62,000	6.48
		<i>Factory Overheads:</i>		
16,000	0.80	Depreciation of Factory Machines	20,000	0.80
20,000	1.00	Indirect Factory Wages	30,000	1.20
5,000	0.25	Factory Rent	4,000	0.16
6,000	0.30	Factory Repairs	4,000	0.16
1,67,000	8.35	<i>WORKS COST (OR) FACTORY COST</i>	2,20,000	8.80
		<i>Administration Expenses</i>		
8,000	0.40	Office Rent	8,000	0.32
9,000	0.45	Office Repairs	2,000	0.08
16,000	0.80	Sundry Office Expenses	20,000	0.80
2,00,000	10.00	Cost of Production	2,50,000	10.00

Cost Sheet, Ten
Note: Comparativ
or half year
comparativ
Comparativ
periods.

(C) Cost sheet -
Illustration 7 (C)

M/s. Indu L
following data i

Raw ma

Direct v

Machin

Machin

Office e

Selling

Units p

Units s

Prepare C
profit earned.

Solution :

Raw ma
Direct v

Add: Factor
Machin

Add: Office

Less: Closing
(units p
(20,000)

Add: Selling

Profit (Sales)

Illustration 8

	Stock on hand – 1st Dec. 2020:	Stock on hand – 31st Dec. 2020:	Cost Sheet, Tel Less: Closing
Raw materials	Rs. 25,000	Rs. 17,300	Add: Adminis
Finished goods	26,200	15,700	Add: Opening
Raw materials	21,900	1,100	Less: Closing
Finished goods	72,300	8,200	Add: Selling
Purchase of raw materials	17,200	9,100	
Carriage on purchases	800	72,300	
Work-in-progress 1.12.2020 at works cost	1,200	17,200	
Work-in-progress 31.12.2020 at works cost	8,300	800	
Sale of finished goods	3,200	8,300	
Direct wages	4,200	3,200	
Non productive wages	1,200	4,200	
Direct expenses	3,200	1,200	
Factory overheads	8,300	3,200	
Administrative overheads	9,100	8,300	
Selling and distribution overheads	72,300	9,100	

[Periyar B.com April 2019] [Madras B.Com (G & AF) Nov 2015]

[Madras, M.Com. April 1987]

Solution :**Statement of cost and profit for the month of December 2020**

Particulars	Rs.	
Opening stock of raw materials	25,000	
Add: Purchase of raw materials	21,900	
Add: Carriage on purchases	1,100	
	<hr/>	
<i>Less: Closing stock of raw materials</i>	26,200	
	<hr/>	
Raw materials consumed	21,800	
Direct wages	17,200	
Direct expenses	1,200	
	<hr/>	
Prime cost	40,200	
Add: Factory overheads: Non productive wages	800	
Other factory overheads	8,300	
	<hr/>	
Gross works cost	49,300	
Opening work-in-progress	8,200	
	<hr/>	
	57,500	

Cost Sheet, Tenders and Quotations		2.23
<i>Less:</i>	Closing work-in-progress	9,100
	Networks cost	48,400
<i>Add:</i>	Administration overheads:	3,200
	Cost of production of goods produced	51,600
<i>Add:</i>	Opening stock of finished goods	17,300
		68,900
<i>Less:</i>	Closing stock of finished goods	15,700
	Cost of production of goods sold	53,200
<i>Add:</i>	Selling and distribution overheads	4,200
	Cost of sales	57,400
	Profit (Bal. fig.)	14,900
	Sales	72,300

Illustration 9

From the following details extracted from the Trial Balance of New Era Ltd for the financial year ending 31.3.2010, you are required to prepare:

- (a) A statement of cost showing various elements of cost in detail.
 - (b) A separate statement of profit.

<i>Credit Balances</i>		<i>Debit Balances (Continued)</i>	
	Rs.		Rs.
Sales	8,00,000	Power	50,000
Returns of Materials	10,000	Indirect Materials infactory	10,000
Sale of scrap of Raw material	8,000	Sundry factory expenses	20,000
		Selling Expenses	60,000
		Distribution Expenses	20,000
		Interest on Bank Loan	10,000
<i>Debit Balances</i>		<i>Additional Information</i>	
<i>Opening Stocks:</i>		<i>(A) Closing Stock:</i>	
Raw material	30,000	Raw material	40,000
W.I.P.	40,000	W.I.P.	25,000
Finished goods	60,000	Finished goods	50,000
Plant & Machinery	1,00,000	<i>(B) Depreciation on Plant & Machinery at 10% P.A;</i>	
Buildings	8,00,000		
Returns inwards	20,000		

Raw material purchased	2,00,000	on buildings (50% factory and 50% office) at 5% P.A.
Carriage on material	10,000	
Direct Wages	1,20,000	
Indirect Wages	40,000	
Factory expenses	30,000	
Sundry Office expenses	83,000	

Solution:**Statement of cost for the Financial Year ending 31.3.2010**

Particulars	Rs.	Rs.	Rs.
Opening Stock of Raw Materials	30,000		
Add: Raw materials Purchased	2,00,000		
Add: Carriage on Material	10,000		
<i>Less: Closing Stock of Raw Material</i>	<i>40,000</i>	<i>2,40,000</i>	
Sale of Raw material scrap	8,000		
Returns of Material	<u>10,000</u>	<u>58,000</u>	
Raw Materials Consumed		1,82,000	
Direct Wages		1,20,000	
Prime Cost			3,02,000
Add: Factory Overheads:			
Indirect Wages		40,000	
Factory Wages		30,000	
Power		50,000	
Indirect Materials in factory		10,000	
Sundry Factory Expenses		20,000	
Depreciation on plant & machinery		10,000	
$(1,00,000 \times 10\%)$			
Depreciation on Buildings		<u>20,000</u>	<u>1,80,000</u>
$\left(8,00,000 \times \frac{5}{100} \times \frac{50}{100}\right)$			
Gross works cost			4,82,000
Add: Opening Stock of W.I.P.			40,000
			<u>5,22,000</u>

Cost Sheet, Tender
Less: Closing Stock

Works Costs

Add: Administration

Sundry office

Depreciation

(8,00,000)

Cost of Production

Add: Opening Stock

Less: Closing Stock

Cost of Sales

Add: Selling Expenses

Add: Distribution

Cost of Sales

Add: Profit Margin

Profit Margin

Sales

Less: Returns

Less: Cost of Sales

Op. Profit

Less: Interest

Interest

Net Profit

Note: Interest

statement

all non

Cost Sheet, Tenders and Quotations 2.25

Less: Closing Stock of W.I.P. 25,000

Works Cost or Factory Cost

<i>Add:</i> Administration Overheads:	4,97,000
Sundry office Expenses	83,000
Depreciation on Buildings	<u>20,000</u> 1,03,000

$$\left(8,00,000 \times \frac{5}{100} \times \frac{50}{100} \right)$$

Cost of Production

<i>Add:</i> Opening Stock of Finished goods	6,00,000
	<u>60,000</u>
<i>Less:</i> Closing Stock of Finished goods	6,60,000
	<u>50,000</u>

Cost of Production of goods sold

<i>Add:</i> Selling Expenses	6,10,000
<i>Add:</i> Distribution Expenses	60,000
	<u>20,000</u> 80,000

Cost of Sales

6,90,000

Statement of Profit

Particulars	Rs.	Rs.
Sales	8,00,000	
<i>Less:</i> Returns Inwards	20,000	
	7,80,000	
<i>Less:</i> Cost of Sales	6,90,000	
	90,000	
<i>Less:</i> Interest on Bank Loan	10,000	
	80,000	
Net Profit		

Note: Interest on Bank Loan is usually not recorded in Cost Accounting. In such case, statement of profit in cost accounts ends with ascertaining operating profit, ignoring all non operating expenses, losses, incomes and gains.

Illustration 10 (Production Statement)

The following extracts on costing information relate to commodity 'A' for the year ending 31-3-2009.

	Rs.	Cost S Add:
Purchase of raw material	48,000	Less:
Direct wages	40,000	Add:
Stock on 1-4-2008 of raw materials	8,000	Add:
finished goods 1,600 units	6,400	Less:
Stock on 31-3-2009 of raw materials	8,800	Add:
finished goods 3,200 units	—	Less:
Works on cost	16,800	
<i>Work-in-progress:</i>		
1st April 2008	1,920	
31st March 2009	6,400	Add:
Office and administrative overheads	3,200	
Sales (finished product)	1,20,000	

Advertising discount allowed and selling cost are Re. 0.40 per unit. During the year, 25,600 units of commodity were produced.

Calculate cost of production and extend the cost sheet to include profit also so that it may also be called production statement.

[Madras, MBA (GMAID) April 2009; B.C.S. Oct. 2003;

B.Com. April 1985]

Solution :

**Statement of cost and profit (or) production statement
for the year ending 31-3-2009**

Particulars	Units	Total Rs.	Per unit Rs.P.
Opening stock of raw materials		8,000	
Add: Purchase of raw materials		48,000	
		<hr/> 56,000	
Less: Closing stock of raw materials		8,800	
		<hr/> 47,200	1.844
Raw materials consumed		40,000	1.563
Direct wages		<hr/> 87,200	3.407
Prime cost		16,800	0.656
Add: Factory overheads (or) works on cost		<hr/> 1,04,000	4.063
Gross works Cost			

Cost Sheet, Tenders and Quotations

Add:	Opening work-in-progress		1,920	0.075
			<u>1,05,920</u>	<u>4.138</u>
Less:	Closing work-in-progress		6,400	0.250
	Works cost		<u>99,520</u>	<u>3.888</u>
Add:	Office and administration overheads		3,200	0.125
	Cost of production	25,600	1,02,720	4.013
Add:	Opening stock of finished goods	1,600	6,400	—
		<u>27,200</u>	<u>1,09,120</u>	<u>—</u>
Less:	Closing stock of finished goods	3,200	12,840	—
	$\frac{\text{Cost of production}}{\text{Output}} \times \text{Closing units} = \frac{1,02,720}{25,600} \times 3,200$			
	Cost of production of goods sold	24,000	96,280	4.012
Add:	Selling and distribution overheads			
	$24,000 \times 0.40$		9,600	0.400
	Cost of sales	24,000	1,05,880	4.412
	Profit (Bal. fig.)		14,120	0.588
	Sales	24,000	1,20,000	5.000

Note: 'On cost' is an alternative term for 'overhead'.

(D) Cost sheet – With sale price computation

Illustration 11

The cost accounts department of a company has supplied the following data for the supply of 2,000 units of product.

Direct materials : 40,000 tons at Rs. 5 per ton.

Direct wages : 8,000 labour hours at Rs. 50 per hour

Overheads :

Variable : Factory Rs. 10 per labour hour

Selling Rs. 20 per unit

Fixed : Factory Rs. 1,00,000

Office Rs. 2,00,000

Prepare a statement showing the price to be fixed which will fetch a profit of 25% on cost.

[Madras, 1st M.Com(CA2A) and (KCA2A) April 2009]

1.844
1.563

3.407
0.656
4.063

Solution :
**Statement of cost and profit
for the year ended**

		(Output 2,000 units)	
	Particulars	Total Rs.	Per unit Rs.
	Direct materials $40,000 \times 5$	2,00,000	100
	Direct wages $8,000 \times 50$	4,00,000	200
	Prime cost	6,00,000	300
Add:	Factory overheads:		
	Variable $8,000 \times 10$	80,000	
	Fixed	1,00,000	90
	Works cost	7,80,000	390
Add:	Administration overheads	2,00,000	100
	Cost of production	9,80,000	490
Add:	Selling and distribution overheads $2,000 \times 20$	40,000	20
	Cost of sales	10,20,000	510
Add:	Profit $10,20,000 \times 25\%$	2,55,000	127.50
	Sales	12,75,000	637.50

Illustration 12

The cost structure of an article, the selling price of which is Rs. 500 is as follows:

Direct materials : 50% of the total cost

Direct labour : 30% of the total cost

Overhead : Balance amount

Due to anticipated increase in existing material price by 20% and in the existing labour rate by 10%, the existing profit would come down by 30%, if the selling price remains unchanged.

Prepare a comparative statement showing the cost, profit and sale price under the present conditions and with the increase expected for future, assuming the same percentage of profit on cost as at present had to be earned.
(Calculations may be made to the nearest rupee).

[I.C.W.A.]

Solution :

Comparative statement of cost and profit

Particulars	Present conditions Rs.	Future estimates with current selling price Rs.	Future estimates to maintain current profit Rs.
Direct material	174	209	209
Direct labour	105	116	116
Prime cost	279	325	325
Overhead	70	70	70
Total cost	349	395	395
Profit	151	105	171
Sales	500	500	566

Note: All calculations are made to the nearest rupee as per instruction in the question.**Working note: Present and future costs and profits**

If total present cost is Rs. 100,

	Present Rs.	Future Rs
Material $100 \times 50\%$	50 $50 \times \frac{120}{100}$	60
Labour $100 \times 30\%$	30 $30 \times \frac{110}{100}$	33
Overhead $100 \times 20\%$	20 20	20
	100	113

$$\text{Increase in cost} = 113 - 100 = 13\%$$

$$\text{Decrease in profit expected} = 30\% \text{ (as given)}$$

$$\therefore \text{The ratio of cost to profit} = 30 : 13$$

$$\text{If sale value is Rs. 43, cost} = \text{Rs. 30 and profit} = \text{Rs. 13}$$

$$\text{Present sale price} = \text{Rs. 500}$$

$$\text{Present total cost} = 500 \times \frac{30}{43} = \text{Rs. 349}$$

$$\text{Present profit} = 500 \times \frac{13}{43} = \text{Rs. 151}$$

$$\text{Profit to sales ratio} = \frac{151}{500} \times 100 = 30.2\%$$

$$\text{Profit to cost ratio} = \frac{151}{349} \times 100 = 43.266\%$$

II.C.W.A

	Present Rs.		Future Rs.
Material $349 \times 50\% = 174$		$174 \times \frac{120}{100} = 209$	
Labour $349 \times 30\% = 105$		$105 \times \frac{110}{100} = 116$	
Overhead $349 \times 20\% = 70$			70
Total cost	<u>349</u>		<u>395</u>

Future profit :

If there is no change in sale price: $500 - 395 = \text{Rs. } 105$.

If current rate of profit at 30.2% on sale or 43.266% on cost is to be maintained:

$$\text{Sale price} = 395 \times \frac{143.266}{100} = \text{Rs. } 566$$

(E) Cost Sheet – Estimated Costs for Next Period**Illustration 13**

The following is the manufacturing and Profit and Loss Account of Raj Manufacturing Co. for the year ended 31.3.2020, output 850 units.

Particulars	Rs.	Particulars	Rs.
To Materials	64,000	By Sales	3,20,000
To Wages	96,000		
To Works expenses	40,000		
To Salaries	48,000		
To Office expenses	8,000		
To General expenses	24,000		
To Selling expenses	16,000		
To Net profit	24,000		
	<u>3,20,000</u>		<u>3,20,000</u>

For the year ending 31.3.2021, it is estimated that:

- (i) Output and sales will be 1,000 units.
- (ii) Material price will increase by 25%
- (iii) Wage cost will increase by 12.5%
- (iv) Works expenses will increase in proportion to the combined cost of materials and wages.
- (v) Selling expenses per unit will remain constant.

(vi) Other expenses remain constant.

(vii) Profit of 12.5% on sales is to be made.

Prepare a statement of cost and profit for the year and estimated costs and profit for the next year.

[Mangalore, B.Com. April 1994]

Solution :

Raj Manufacturing Company

**Statement of cost and profit
for the year ending 31.3.2020**

(Output 850 units)

Particulars	Rs.	Total Rs.	Per unit Rs.
Materials		64,000	75.2941
Wages		96,000	112.9412
Prime cost		1,60,000	188.2353
Add: Works overhead		40,000	47.0588
Works cost		2,00,000	235.2941
Add: Administration overheads:			
Salaries	48,000		
Office expenses	8,000		
General expenses	24,000	80,000	94.1176
Cost of production		2,80,000	329.4117
Add: Selling and Distribution overheads:		16,000	18.8235
Cost of sales		2,96,000	348.2352
Profit		24,000	28.2353
Sales		3,20,000	376.4705

Note:

Works expenses to 'combined cost of materials and wages' (prime cost)

$$= \frac{40,000}{1,60,000} \times 100 = 25\%$$

Cost Accounting
 Estimated cost and profit for 1,000 units during 2020-21

Particulars	Per unit Rs.P.	Total Rs.
Materials $64,000 \times \frac{1,000}{850} \times \frac{125}{100}$	94.1180	94,118
Wages $96,000 \times \frac{1,000}{850} \times \frac{112.5}{100}$	127.0590	1,27,059
Prime cost	221.1770	2,21,177
Add: Works overhead $2,21,177 \times \frac{25}{100}$	55.2940	55,294
Works cost	276.4710	2,76,471
Add: Administrative overheads	80.0000	80,000
Cost of production	356.4710	3,56,471
Add: Selling overhead $16,000 \times \frac{1,000}{850}$	18.8230	18,823
Cost of sales	375.2940	3,75,294
Profit at 12.5% on sales		
(or) $\frac{12.5}{87.5}$ on cost of sales	53.6130	53,613
Sales	428.9070	4,28,907

- Note:** (1) Works overhead is calculated as a percentage of 'combined cost of materials and wages' (prime cost) as instructed.
 (2) Selling expenses are constant per unit. So, they increase proportionately with units.
 (3) Other expenses (all the salaries, office expenses and general expenses), remain constant. So, they are fully fixed.

Add:

Illustration 14

The cost of manufacturing 5,000 units of a commodity comprises:

- (a) Materials Rs. 20,000
- (b) Wages Rs. 25,000
- (c) Chargeable expenses Rs. 400
- (d) Fixed factory overheads Rs. 16,000
- (e) Variable factory overheads Rs. 4,000

For manufacturing every 1,000 extra units of the commodity the cost of production increases as follows:

Factor

- (a) Materials : Proportionately
- (b) Wages : 10% less than proportionately
- (c) Chargeable expenses : No extra cost
- (d) Fixed overheads : Rs. 200 extra
- (e) Variable overheads : 25% less than proportionately.

Calculate the estimated cost of producing 8,000 units of the commodity and show by how much it would differ if a flat rate of factory overhead based on wages were charged.

[Madurai, B.Com., April 2007]

[Madurai, B.Com.]

Solution :

Statement showing current and estimated cost of production

	Particulars	5,000 units Rs.	Additional 3,000 units Rs.	Total 8,000 units Rs.
	Materials			
	For 3,000 = $20,000 \times \frac{3,000}{5,000}$	20,000	12,000	32,000
	Wages			
	For 3,000 = $25,000 \times \frac{3,000}{5,000} \times \frac{90}{100}$	25,000	13,500	38,500
	Chargeable expenses	400	-	400
	Prime cost	45,400	25,500	70,900
Add:	<i>Factory overheads:</i>			
	Fixed			
	For 3,000 = $200 \times 3 = 600$	16,000	600	16,600
	Variable			
	For 3,000 = $4,000 \times \frac{3,000}{5,000} \times \frac{75}{100}$	4,000	1,800	5,800
	Total cost	65,400	27,900	93,300

Factory overhead to wages ratio at 5,000 units level

$$\frac{16,000 + 4,000}{25,000} \times 100 = \frac{20,000}{25,000} \times 100 = 80\%$$

Cost Accounting

Estimated cost of production when factory overheads are absorbed as a percentage of wages:

	<i>For 8,000 units</i>
Materials	Rs. 32,000
Wages	38,500
Chargeable expenses	400
Prime cost	70,900
Factory overhead $38,500 \times \frac{80}{100}$	30,800
Total cost	1,01,700

$$\text{Difference in estimated cost} = 1,01,700 - 93,300 = \text{Rs. } 8,400$$

(F) Cost Sheet – Tenders and Quotations

Illustration 15

The accounts of a machine manufacturing company disclose the following information for six months ending 31st December 2019.

	Rs.
Materials used	1,50,000
Direct wages	1,20,000
Factory overheads	30,000
Administrative expenses	15,000

Prepare cost sheet for the half year and calculate the price which the company should quote for the manufacture of a machine requiring materials valued at Rs. 1,250 and expenditure in productive wages Rs. 750, so that the price might yield a profit of 20% on the selling price. (*Madras B.Com (G & AF) Nov. 2011*)

(*Bharathiyan B.Com Nov. 2012*)/*[Madras, B.Com. April 1983]*

Solution :

**Statement of Cost
For Six months ending 31-12-2019**

<i>Particulars</i>	<i>Rs.</i>
Materials used	1,50,000
Direct wages	1,20,000
Prime cost	2,70,000
Add: Factory overheads	30,000
Works cost	3,00,000
Add: Administrative overheads	15,000
Cost of production	3,15,000

Percentage of factory overheads to wages = $\frac{30,000}{1,20,000} \times 100 = 25\%$

Percentage of administrative overheads to works cost = $\frac{15,000}{3,00,000} \times 100 = 5\%$

Statement showing price to be quoted for a machine

Particulars	Rs.P.
Materials	
Productive wages	1,250.00
Prime cost	<u>750.00</u>
Add: Factory overheads (25% of wages) $750 \times \frac{25}{100}$	187.50
Works cost	<u>2,000.00</u>
Add: Administrative overheads : 5% of works cost $2,187.5 \times \frac{5}{100}$	109.38
Cost of production	<u>2,296.88</u>
Add: Profit 20% on sales or 25% on cost $2,296.88 \times \frac{25}{100}$	574.22
Sale price to be quoted	<u>2,871.10</u>

Illustration 16

The particulars of a factory for the year 2018 are given below:

	Rs.
Raw Materials	3,00,000
Direct Wages	1,68,000
Works overhead	1,50,000
Office overhead	1,68,000
Selling overhead	1,12,000
Distribution overhead	70,000
Net profit	1,10,000

In 2019, the expenses incurred on the execution of a work order:

Raw materials Rs. 12,000; Wages Rs. 7,000; Assuming that in 2019 works overhead went up 20% distribution overhead went down by 10% and selling and office overheads went up by $12\frac{1}{2}\%$, at what rate of price should the product be quoted so as to earn the rate of profit on the selling price same as in 2018?

[Madurai, B.Com., Nov. 2008]

Solution:

<i>Particulars</i>	<i>Rs.</i>	<i>Rs.</i>
Raw Materials	3,00,000	
Direct Wages	1,68,000	
		4,68,000
Prime Cost		1,50,000
Works overhead		
		6,18,000
Works cost		
Office overheads		1,68,000
Cost of production		7,86,000
Selling overheads	11,200	
Distribution overheads	70,000	1,82,000
Cost of Sales		9,68,000
Net Profit		1,10,000
Sales		10,78,000

Working Note:**Computation of standard Assumption Ratios**

1. Works overhead to direct wages Ratio $= \frac{1,50,000}{1,68,000} \times 100 = 89.286\%$

2. Office Overhead to works cost Ratio $= \frac{1,68,000}{6,18,000} \times 100 = 27.184\%$

3. Selling overhead to works cost Ratio $= \frac{1,12,000}{6,18,000} \times 100 = 18.12\%$

4. Distribution overhead to work cost Ratio $= \frac{70,000}{6,18,000} \times 100 = 11.33\%$

5. Profit to Sales Ratio in 2006 $= \frac{11,000}{10,78,000} \times 100 = 10.204\%$

Rs.	Particulars	Rs.
	Raw material	12,000
	Wages	7,000
	Prime Cost	<u>19,000</u>
	Add: Works overhead $7,000 \times \frac{89.286}{100} \times \frac{120}{100}$	$7,500$
		<u>26,500</u>
	Add: Office overhead $26,500 \times \frac{27.184}{100} \times \frac{112.5}{100}$	$8,104$
		<u>34,604</u>
	Cost of Production	
	Add: Selling overhead $26,500 \times \frac{18.12}{100} \times \frac{112.5}{100}$	5,402
	Add: Distribution overhead $26,500 \times \frac{11.33}{100} \times \frac{90}{100}$	2,702
		<u>8,104</u>
	Cost of Sales	42,708
	Add: Profit of 10.2.4% on sales or	4,853
		<u>47,561</u>
	$\frac{10.204}{89.796}$ on cost Quotation for work order	

Illustration 17

On August 15, 2016 a manufacturer Soman desired to quote for a contract for the supply of 500 radio sets. From the following details prepare a statement showing the price to be quoted to give the same percentage of net profit on turnover as was realised during 6 months ending on 30th June 2016:

$$= 18.12\%$$

$$= 11.33\%$$

$$= 10.204\%$$

Rs.
Stock of material as on 1st Jan. 2016
Stock of material as on 30th June 2016
Purchase of materials during 6 months
Factory wages during 6 months
Indirect charges during 6 months

Opening stock of completed sets
 Closing stock of completed sets
 Sales during 6 months

The number of radio sets manufactured during these six months was 1450 sets including those sold and those stocked at the end of the period. The radios to be quoted are of uniform quality and size as were manufactured during the six months to 30th June 2016. As from August 1, the cost of factory labour has gone up by 10%.

[Bharathidasan, M.Com. April 1992]

Solution :

**Statement of cost and profit of radio sets
for six months ending 30th June 2016**

(Output 1,450 radios)

Particulars	Total Rs.	Per unit Rs. P.
Opening stock of material	20,000	
Add: Purchase of material	1,50,000	
	<u>1,70,000</u>	
Less: Closing stock of material	25,000	
	<u>1,45,000</u>	100.00
Cost of materials consumed	1,20,000	82.76
	<u>2,65,000</u>	182.76
Prime cost	25,000	17.24
Add: Indirect charges	<u>2,90,000</u>	<u>200.00</u>
Cost of production	20,000	-
Less: Closing stock of finished radios (100 × 200)	<u>2,70,000</u>	<u>200.00</u>
Cost of sales	54,000	40.00
Profit (Bal. fig.)	<u>3,24,000</u>	<u>240.00</u>
Sales (1,450 - 100 = 1,350 radios)		

Note: (1) Indirect charges are assumed to include all overheads.
 (2) Closing stock of 100 units are valued at the cost of production rate of Rs. 200 each.

Working notes:

$$(1) \text{ Profit percentage: On sales} = \frac{54,000}{3,24,000} \times 100 = 16\frac{2}{3}\%$$

$$\text{or on cost} = \frac{54,000}{2,70,000} \times 100 = 20\%$$

Cost Sheet, Tenders and Quotations	
(2) Factory wages per unit	82.76
Add: 10% in increase	8.28 (approx)
Wages per unit for quotation	91.04

Statement showing quotation for 500 radio sets

Particulars	Total Rs.	Per unit Rs. P.
Material	50,000	100.00
Factory wages	45,520	91.04
Prime cost	95,520	191.04
Add: Indirect charges	8,620	17.24
Cost of production (or) cost of sales	1,04,140	208.28
Profit at $16\frac{2}{3}\%$ on sale or 20% on cost	20,828	41.656
Selling price (or) quotation	1,24,968	249.936

- Note:* (1) Material and indirect charges are calculated on the basis of cost per unit as shown in the cost sheet for 30th June 2016.
(2) Factory wages are shown at 10% higher than the previous period.
(3) Profit is calculated at the same percentage as in the previous period as per instruction.

Illustration 18

From the following particulars you are required to prepare a statement showing (a) the cost of materials consumed (b) the prime cost (c) the works cost (d) the total cost (e) the percentage of works overhead to productive wages and (f) the percentage of general overhead to works cost.

	Rs.
Stock of finished goods on 1-1-2016	72,800
Stock of raw materials on 1-1-2016	33,280
Purchases of raw materials	7,59,200
Productive wages	5,16,880
Sales of finished goods	15,39,200
Stock of finished goods on 31-12-2016	78,000
Stock of raw materials on 31-12-2016	35,360
Works overhead charges	1,29,220
Office and general expenses	70,161

The company is about to send a tender for a large plant. The costing department has estimated that the materials required would cost Rs. 52,000 and

the wages to workmen for making the plant would cost Rs. 31,200. The tender is to be made at a net profit of 20% on the selling price. Show what the amount of tender would be, if it is based on the above percentages.

[*Madras B.Com (G & AF) April 2011*]

[*Madras, B.Com. (ICE) May 2009 (Old)*]

Madras, B.A. Corp., Sep. 1988

Solution :

**Statement showing Cost and Profit
for the year ended 31st Dec. 2016**

Particulars	Rs.	Rs.
Opening stock of raw materials	33,280	
<i>Add:</i> Purchase of raw materials	7,59,200	
	<u>7,92,480</u>	
<i>Less:</i> Closing stock of raw materials	35,360	
	<u>7,57,120</u>	
(a) Cost of materials consumed	5,16,880	
Productive wages		
(b) Prime cost	12,74,000	
Works overheads	1,29,220	
(c) Works cost	14,03,220	
Office and general expenses	70,161	
(d) Total cost	14,73,381	
<i>Add:</i> Opening stock of finished goods	72,800	
	<u>15,46,181</u>	
<i>Less:</i> Closing stock of finished goods	78,000	
	<u>14,68,181</u>	
Cost of goods sold	71,019	
Profit (Bal. fig.)		
Sales	15,39,200	

(e) Percentage of works overhead to productive wages = $\frac{1,29,220}{5,16,880} \times 100 = 25\%$

(f) Percentage of general overhead to works cost = $\frac{70,161}{14,03,220} \times 100 = 5\%$

Tender for Large Plant

Particulars	Rs.
Materials	52,000
Wages	31,200
Prime cost	83,200
Add: Works overheads	
25% of wages – $31,200 \times \frac{25}{100}$	7,800
Works cost	91,000
Add: Office and general overheads	
5% of works cost – $91,000 \times \frac{5}{100}$	4,550
Total cost	95,550
Profit, at 20% on selling price (or) 25% on cost = $95,550 \times \frac{25}{100}$	23,888
Tender price of plant	1,19,438

Note: Since, selling and distribution overheads are not separately given, office and general overheads are taken as the total of all the overheads except works overhead. So, the total after adding the office and general overheads is 'Total cost'.

(G) Cost Sheet – With Hidden Information

Illustration 19

From the following information, prepare a cost sheet for the month of December 2010.

	Rs.
Stock on hand – 1st Dec. 2010:	
Raw materials	25,000
Work-in-progress	8,200
Finished goods	17,300
Raw materials consumed during Dec. 2010	21,800
Works cost for the month (after adjusting work-in-progress)	48,400
Cost of production of goods sold	53,200
Purchase of raw materials	21,900
Carriage on purchases	1,100
Sale of finished goods	72,300
Direct wages	17,200
Direct expenses	1,200
Factory overheads	9,100
Administration overheads	3,200
Selling and distribution overheads	4,200

[Madurai, M.Com. (adapt)]

Solution :**Cost sheet for the month of Dec. 2010**

<i>Particulars</i>	<i>Rs.</i>
Opening stock of raw materials	25,000
<i>Add:</i> Purchase of raw materials	21,900
<i>Add:</i> Carriage on purchases	1,100
	<u>48,000</u>
<i>Less:</i> Closing stock of raw materials (Bal. fig.) (48,000 - 21,800)	<u>26,200</u>
Cost of raw materials consumed	21,300
Direct wages	17,200
Direct expenses	1,200
Prime cost	<u>40,200</u>
<i>Add:</i> Factory overheads	9,100
Gross works cost	<u>49,300</u>
<i>Add:</i> Opening work-in-progress	8,200
	<u>57,500</u>
<i>Less:</i> Closing work-in-progress (Bal. fig. (57,500 - 48,400)	9,100
Works cost	48,400
<i>Add:</i> Administrative overheads	3,200
Cost of production	<u>51,600</u>
<i>Add:</i> Opening stock of finished goods	17,300
	<u>68,900</u>
<i>Less:</i> Closing stock of finished goods (Bal. fig.) (68,900 - 53,200)	15,700
Cost of production of goods sold	<u>53,200</u>
<i>Add:</i> Selling and distribution overheads	4,200
Cost of sales	<u>57,400</u>
Profit (Bal. fig.)	<u>14,900</u>
Sales	<u>72,300</u>

Note: Since closing stock of raw materials, work-in-progress and finished goods are not given in the question, they must be found as, 'Balancing figures' at the respective stages in the cost sheet, using the extra information given like material consumed, works cost and cost of production of goods sold.

Answers to Short Questions

1. What are elements of cost?

The elements of cost are:

1. Material 2. Labour 3. Expenses

Material : Direct material

Indirect material

Labour: Direct labour

Indirect labour

Expenses: Direct expenses

Indirect expenses

2. What are direct material.

Identified with units: Direct material cost is "The cost of materials entering into and becoming constituent elements of a product or saleable service". Thus materials which can be identified with units of output or service are known as direct materials.

Examples: Cotton used in production of cloth, lime in the production of chalk.

3. Explain the meaning of prime cost.

Direct cost: Prime cost is also called direct cost. It is the aggregate of direct materials, direct labour and direct expenses, which are easily identifiable with the product.

4. What do you understand by 'overhead'?

Indirect cost or overhead or on cost or burden:

The aggregate of all indirect costs i.e. Indirect material, indirect labour, and indirect expenses is called 'on cost' or overhead or burden. These overhead can not be identified with specific units of products or units of jobs.

5. What is a 'cost sheet'?

Different heads: The expenses of a product are analysed under different heads in the form of statement. This statement is called cost sheet.

Total cost: Cost sheet is a statement showing the total cost under proper clarification in a logical order as prime cost, works cost, cost of production, cost of sales and finally profit and sales.

6. Write a note on tenders?

Quote the price: The manufacturers of consumer durable and capital goods are to quote the price at which they can supply their output.

Offer for sale: The price at which the items of output are offered for sale in known as 'tender' or quotation price.

Cost analysed: Raw materials, direct labour, direct expenses and overhead. It analyses finally the profit.

Theory Questions

(A) Short answer Questions :

1. What are "elements of cost"? [Madras, B.Com., Nov. 2007; MBA Ap 2007]
2. What are Direct Material? [Madras, B.Com(Gen) April 2008]
3. Differentiate between Direct Material and Indirect Material.
4. How does Indirect labour differ from direct Labour?
5. What is the difference between direct expenses and Indirect expenses?
6. Explain the meaning of "Prime cost".

[Madras, B.Com., Ap 2007; B.C.S. (ICE) Oct. 1999]

7. What do you understand by 'Overhead'?
8. What is a 'Cost Sheet'? [Madras, B.Com(CS) Ap. 2008; Nov. 2007]
9. What is work-in-progress? How do you show it in a 'Cost Sheet'?
10. How do you value the 'Closing stock of finished goods'?
11. What are the 'Standard Assumptions' usually made for the purpose of Tenders and Quotations?
12. Write short notes on (a) Chargeable expenses (b) Prime cost (c) Works cost (d) Work-in-progress (e) Cost of production (f) Cost of sales.
13. Write a note on Tenders. [B.Com.(CS) Nov. 2006]

(B) Long answer Questions :

1. Define cost sheet. Explain the purposes of cost sheet.

[Madras, B.Com., Nov. 2006; B.C.S.(ICE) May 2003]

2. What is a cost sheet? Give the proforma of cost sheet using imaginary figures.

[Bharathiar, B.Sc., Nov. 2007; Madras, B.C.A./B.Sc. April 2007]

3. Explain the Various elements of cost.

[Madras, B.Com(CS) (old) Ap 2008; BBA April 2008]

4. What are the various elements of cost of production?

[Madras, BCS (old) No. 2007; B.C.S.(ICE) May 2004]

5. Explain the meaning and purposes of a cost sheet.

[Madras, B.Com(Gen) April 2008; B.Com(PZSA) April 2008]

6. Explain the meaning and purposes of a cost sheet.

7. Distinguish between cost sheet and production statement.

8. How are 'Tenders' and 'Quotations' prepared?

9. Write a simple format of cost sheet.

[Madras, B.Com., (Gen) April 2008]

Objective Type Questions**L Multiple choice:***Choose the correct answer to each of the following:*

1. Classification of cost is useful to
 - (a) Find gross profit
 - (b) Find net profit
 - (c) To Identify costs
 - (d) none of these
2. Elements of cost are
 - (a) Three Types
 - (b) Two Types
 - (c) Four Types
 - (d) Five Types
3. Direct Expenses are also called
 - (a) Major expenses
 - (b) Sundry expenses
 - (c) Over Head expenses
 - (d) Chargeable expenses
4. Factory overhead is also termed as Manufacturing overhead or
 - (a) Office overhead
 - (b) Selling overhead
 - (c) Distribution overhead
 - (d) Production overhead
5. Warehouse rent is a part of
 - (a) Prime cost
 - (b) Distribution overhead
 - (c) Selling overhead
 - (d) Factory overhead
6. Indirect Material Scrap is adjusted along with
 - (a) Prime cost
 - (b) Works cost
 - (c) In P&L A/c
 - (d) In Trading account
7. Goodwill written off is a part of
 - (a) Prime cost
 - (b) Factory overhead
 - (c) Office overhead
 - (d) None of these
8. Sale of defectives is reduced from
 - (a) Prime cost
 - (b) Works cost
 - (c) Cost of production
 - (d) Cost of sales
9. Tender is an
 - (a) Estimation of cost only
 - (b) Estimation of profit only
 - (c) Estimation of selling price
 - (d) None of these
10. Cost of sales plus profit is
 - (a) Selling price
 - (b) Value of finished goods
 - (c) Value of goods produced
 - (d) Value of stocks

[Ans : 1. (c); 2. (a); 3. (d); 4. (d); 5. (b); 6. (b);
 7.(d); 8.(b); 9.(c); 10.(a)]

II. Fill in the blanks :

Fill the blanks in the following with suitable words :

1. Prime cost includes Direct Material, Direct Labour and Direct _____.
2. Total of Direct costs is termed as _____ cost.
3. Works cost is the total of prime cost and _____ overhead.
4. Work-in-progress is adjusted before ascertaining _____ cost.
5. Finished goods stocks are adjusted after finding cost of _____.
6. Overheads is the total of all _____ costs.
7. Depreciation of Plant & Machinery is a part of _____ overhead.
8. Audit fees is a part of _____ overhead.
9. Bad Debts written off is a part of _____ overhead.
10. Warehouse rent is a part of _____ overhead.

[Ans : 1. Expenses; 2. Prime; 3. Factory or works or production;
4. Works or Factory; 5. Production; 6. Indirect;
7. Factory; 8. Administration; 9. Selling; 10. Distribution.]

III True or False :

Indicate whether the following statements are True or False :

1. Prime cost includes direct material consumed, direct wages and other direct expenses.
2. Sale of Raw Material scrap is reduced from works cost.
3. Sale of Factory scrap is reduced from works cost.
4. Counting house salaries are a part of Factory overhead.
5. Material handling expenses are shown as a part of factory overhead.
6. Bad Debts are excluded from cost Accounts.
7. Preliminary expenses written off are excluded from cost Accounts.
8. Stocks of Raw Material are adjusted before finding prime cost.
9. Finished goods stocks are adjusted before finding works cost.
10. Cost of sales and Total cost are used Interchangeably.

[Ans : 1. True; 2. False; 3. True; 4. True; 5. True;
6. False; 7. True; 8. True; 9. False; 10. True]

Exercises**(A) Short answer problems :**

1. Calculate the Raw Material Consumed from the following details:

	Rs.
Raw Materials purchased	80,000
Sale of Material scrap	1,000
Opening stock of Raw Materials	12,000
Closing stock of Raw Materials	21,000

[Madras B.Com (G & AF) April 2013]

[Ans : Rs. 70,000]

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2. Ascertain the value of Raw Materials purchased:

	Rs.
Materials consumed	5,00,000
Opening stock of Materials	50,000
Closing stock of Materials	25,000

[Thiruvalluvar BBA Nov/Dec. 2009]

[Ans : Rs. 4,75,000]

3. The following details are obtained from the books of Ganesh Ltd., for the quarter ended 31-3-2010. Ascertain the direct material consumed for the period:

	Rs.
Materials purchased	4,48,000
Import duty on material purchased	38,000
Stock of materials on 1-1-2010	1,62,000
Carriage on the material purchased	40,000
Stock of material on 31-3-2010	1,46,000
Realisation from material scrap	14,000

[Ans : Material consumed : Rs. 5,28,000]

Hint: Material scrap is assumed as direct material scrap. Any indirect material scrap realised has to be reduced from factory overhead.

4. From the following information calculate the cost of direct materials consumed:

	Rs.
Direct materials purchased	80,000
Cost of materials sold (due to unsuitability)	1,000
Materials returned to suppliers (Defective materials)	2,000
Sale of direct material scrap	1,000
Closing stock of materials	10,000
Opening stock of materials	8,000
Octroi and customs duties on materials purchased	6,000
Carriage inwards	2,000

[Madras, B.com., Nov. 2006]

[Ans : Direct materials consumed : Rs. 82,000]

5. Compute the prime cost:

	Rs.
Direct Material used	82,000
Productive wages	17,000
Royalty paid	11,000
Hire charge of special Machines for the job	13,000

[Ans : Rs. 1,23,000]

Hint: Royalty and Hirecharge are to be taken as Direct expenses.

2.48

6. Calculate Prime Cost: Factory Expenses - Rs. 10,000; Selling Expenses - Rs. 5,000, Direct Material - Rs. 20,000; Office overhead - Rs. 7,000; Direct Labour - Rs. 15,000 and Direct Expenses - Rs. 3,000.

*[Madras, B.Com(PZ5A) Nov. 2008]**[Ans: Prime cost Rs.: 38,000]*

Hints: Ignore Selling Expenses, Factory Expenses and office overhead

7. Ascertain the prime cost from the following :

	Rs.
Direct wages	50,000
Chargeable expenses	5,000
Opening stock of raw materials	10,000
Raw materials bought during the period	60,000
Closing stock of raw materials	20,000
Carriage inward	1,500
Carriage outwards	2,000
Raw materials returned to supplier	1,500

*[Osmania, B.Com April 1995]**[Ans : Prime cost : Rs. 1,05,000]*

Hints: Ignore carriage outwards.

8. Calculate works cost:

	Rs.
Factory expenses	700
Office expenses	300
Selling expenses	900
Material consumed	3,400

*[Madras B.Com (G) & AF Nov 2011]**[Madras, B.Com. (PZ5A) April 2008]**[Ans: Rs. 4,100]*

Hints: Ignore office and selling expenses.

9. Find out the amount of production overhead:

	Rs.
Office stationery	5,000
Factory lighting	10,000
Works Manager's Salary	22,000
Indirect Materials	9,000
Audit fees	13,000
Foreman's Salary	13,000

[Ans : Rs. 54,000]

Hints: Ignore office stationery and audit fees

Hints: Ignore

13. Ascertain

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Cost Accounting
Senses - Rs. 5,000;
Direct Labour -
PZ5A) Nov. 2008
cost Rs.: 38,000]

Cost Sheet, Tenders and Quotations

10. Find out the Net works cost:

2.49

Gross works cost	Rs.
Opening stock of work-in-progress	25,000
Closing stock of work-in-progress	5,000
	7,000

[Ans : Rs. 23,000]

11. Calculate works cost from the following:

Materials	Rs.
Labour	60,000
Direct expenses	40,000
Factory overheads	10,000
Work-in progress:	50,000
Opening stock	10,000
Closing stock	8,000

[Madras, B.Com (CS) April 2008]

[Ans: Rs. 1,62,000]

12. Compute the amount of office overhead

Office salaries	Rs.
Stationary	10,000
Audit fees	5,000
Advertising	2,000
Depreciation of office fittings	9,000
	3,000

[Ans : Rs. 20,000]

Hint: Ignore Advertising.

13. Ascertain the cost of goods sold:

Net works cost	Rs.
Office overhead	2,00,000
Selling overhead	40,000
Opening stock of finished goods	30,000
Closing stock of finished goods	8,000
	10,000

[Ans : Rs. 2,68,000]

14. Compute the amount of selling and distribution overhead:

Bad debts written off	Rs.
Provision for Doubtful Debts	10,000
Advertising	12,000
Selling expenses	81,000
Salesmens salaries	12,000
Office salaries	23,000
	31,000

[Ans : Rs. 1,26,000]

Hint: Ignore provision for doubtful debts and office salaries.

15. Ascertain the profit for 2010:

Cost of Sales Rs. 3,00,000

Profit at 20% of sales

[Ans : Profit : Rs. 75,000]

16. A Product is sold for Rs. 5,00,000 so as to show a profit of 33.33% on cost price.

Find out the profit on sales in rupees and in %.

[Madras B.Com(CS) (SYSA) Nov. 2009]

[Ans: Profit Rs. 1,25,000; 25% on sales]

17. Prepare Cost Sheet from the following:

Direct Material Consumed Rs. 10,000; Labour Rs. 5,000; Direct Expenses Rs. 5,000; Factory Overheads 10% of Prime Cost.

[Thiruvalluvar B.Com., Nov./Dec. 2009]

[Ans: Works cost: Rs. 22,500]

18. Prepare a cost sheet from the following:

Direct materials

Rs.

50,000

Direct wages

15,000

Factory expenses

5,000

Office expenses

1,000

Selling expenses

500

[MS Univ. B.Com April 2010]

(Periyar B.Com & CA Nov 2014 & April 2015)

[Madras, B.C.S. April 2002; B.C.S.(ICE) Oct. 2008]

[Ans : Prime cost : Rs. 65,000; Works cost: Rs. 70,000]

Cost of production Rs. 71,000 Cost of sales : Rs. 71,500

19. Calculate prime cost, Factory cost, Cost of production, Cost of sales and profit from the following details:

Direct materials

Rs.

10,000

Direct labour

4,000

Direct expenses

500

Factory expenses

1,500

Administrative expenses

1,000

Selling expenses

300

Sales

20,000

(Periyar B.Com April 2010)

[Madras, B.Com(Gen&AF) April 2009 (Modified)]

B.C.S.(NYE) April 2007; B.C.A./B.Sc. April 2008]

[Ans : Prime cost : Rs. 14,500; Factory cost : Rs. 16,000]

Cost of production : Rs. 17,500

Costs of sales : Rs. 17,300; Profit : Rs. 2,700

Cost Sheet, Tender

20. The accounts of

for the six months

Materials used

Direct wages

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20. The accounts of a machine manufacturing company disclose the following information for the six month ending 31st December 2018:
- Materials used - Rs. 1,50,000
 Direct wages - Rs. 1,20,000
 Percentage of factory overheads to direct wages - 25%
 Percentage of administrative expenses to works cost - 5%
 Prepare the cost sheet

[Madras, B.Com(Gen & Af) Nov. 2007]

[Ans: Cost of production: Rs. 3,15,000]

21. Prepare a cost sheet from the following details:

	Rs.
Raw materials consumed	80,000
Wages	20,000

Works expenses are charged at 100% of wages. Office overhead is charged at 25% on works cost and selling overhead at 10% on works cost.

[Madras B.Com(CS) April 2019 & April 2014]

[MS Univ. B.Com Nov 2013]

[Madras B.Com (G & A&F) April 2012 & Nov. 2012]

[Madras, B.Com., Nov. 2006; Madurai B.Com., Nov. 2008; 1½ Times]

Bharathidasan, B.Com. April 1994]

[Ans : Cost of sales : Rs. 1,62,000]

22. Ascertain the cost and selling price from the following:

Materials consumed	Rs. 6,000
Wages paid	Rs. 9,000
Works on cost 50% on wages	
Office on cost 20% on works cost	
Selling on cost 10% on works cost	
Profit 20% on cost.	

[Madras, B.Com(Gen & AF) April 2010; B.Com(CS) (SYSA) Nov. 2007;

B.Com.(ICE) May 2001]

[Ans : Total cost : Rs. 25,350; Sales : Rs. 30,420]

Hint: 'On cost' is an alternative term for overheads.

23. In a factory a standard product is manufactured. From the following particulars prepare a cost sheet.

Materials consumed	Rs. 30,000
Wages	Rs. 60,000

Works overhead is charged at 40% of prime cost and office overhead is taken at 20% on works cost. Units produced and sold are 180 units at Rs. 1,200 each.

[Madras, B.Com., Nov. 2004]

[Ans: Profit: Rs. 64,800; Cost of sales: Rs. 1,51,200]

24. The following are the estimated costs for producing 1000 units.

	Rs.
Raw materials	10,000
Wages	8,000
Direct Expenses	2,000
Machine hours needed	2,000 hours
Machine hour rate	Rs. 2
Fixed overheads @ 10% of work cost	
Calculate the cost per unit.	

[Madras, B.C.S.(ICE) May 2001]
 [Ans : Cost per unit : Rs. 26.4]

(B) Other Exercises

(A) Simple Cost Sheet

1. Show the treatment of the following items in cost statement:

	Rs.
Raw material consumed	80,000
Direct wages	60,000
Direct expenses	23,000
Factory overhead	45,000
Opening work-in-progress	8,000
Closing work-in-progress	6,000

[Madras, B.Com(CS) (SYSE) April 2001]

[Ans: Raw materials consumed, direct wages and direct expenses are parts of prime cost. Factory overhead and opening work-in-progress are added to prime cost and closing work in progress reduced to ascertain works cost]

2. In a factory 20,000 units of product 'A' were manufactured in the month of July 2009. From the following figures obtained from the costing records, prepare a cost sheet showing cost per unit:

	Rs.
Opening stock of raw material	5,000
Purchases	55,000
Closing stock of raw material	10,000
Direct wages	25,000
Factory overheads	40,000
Office and administration overheads	20,000

[Madras, BCA(PK4B) Nov. 2009; B.Com.(ICE) Oct. 2005]

[B.C.S.(ICE) May 2003; B.Com.(ICE) Oct. 2001]

[Calicut, B.Com. Oct. 1991]

[Ans : Cost per unit : Rs. 6.75]
 Cost of production : Rs. 1,35,000

Cost Sheet, Tenders and Quotations

2.54

3. The following cost data are available from the books for the year ended 31.12.2001.

	Rs.
Direct material	9,00,000
Direct wages	7,50,000
Profit	6,00,000
Selling and distribution overheads	5,25,000
Administrative overheads	4,20,000
Factory overheads	4,50,000

Prepare a cost sheet indicating the prime cost, works cost, production cost, cost of sales and sales value.

[*Madras, B.A. Corp., Sep. 1997*]

Production cost : Rs. 25,20,000; Cost of sales :
Rs. 30,45,000; Sales value : Rs. 36,54,000]

4. A manufacturing concern requires a statement showing the result of its production operations for September, 2017. Cost records give the following information:

	Rs.
Purchase of Raw materials	88,000
Direct wages	70,000
Indirect wages	2,500
Works expenses	37,000
Administrative expenses	13,000
Sale of factory scrap	2,000
Selling and distribution expenses	15,000
Sales	2,84,000

Prepare cost sheet

[*Thiruvalluvar B.Com 2011 & B.Com Nov. 2017*]

[*Madras, B.Com(gen & A.F) Nov. 2007*]

[Ans: Profit Rs. 60,500]

5. The following information relates to Toy Gun Manufacturing Company for the 3 months ending 31st March 2021.

	Rs.
Direct materials consumed	18,000
Direct labour paid	12,000
Direct expenses	4,000
Factory overheads	6,000
Administrative overheads	4,500
Selling and distribution overheads	2,500

1,000 units of toy gun produced during the period and all the units produced are sold at Rs. 53 per unit. Prepare a cost sheet.

[*Madras B.Com (gen & AF) April 2008*]

[Ans: Total Cost: Rs. 47,000; Profit: Rs. 6,000]

2.54

6. From the following information prepare a cost sheet for the month of January.

	Rs.
Stock of raw materials on 1st January	25,000
Stock of raw materials on 31st January	26,200
Purchase of raw materials	21,900
Carriage on purchases	1,100
Sale of finished goods	72,300
Direct wages	17,200
Non-productive wages	800
Direct expenses	1,200
Factory overheads	8,300
Administrative overheads	3,200
Selling overheads	4,200

[Bharathiyar B.Com April 2017 & 2021] [Madras, B.A. Corp. April 1998]
 [Ans : Raw materials consumed : Rs. 21,800; Prime cost : Rs. 40,200;
 Works cost : Rs. 49,300; Cost of production : Rs. 52,500;
 Cost of sales : Rs. 56,700; Profit : Rs. 15,600]

7. A factory produces 100 units of a commodity. The cost of production is:

	Rs.
Direct materials	10,000
Direct wages	5,000
Direct expenses	1,000
Factory overheads	6,500
Administrative overheads	3,480

If profit of 25% on sales is to be realised what would be the selling price of each unit of the commodity?

Prepare the cost sheet.

[Bharathiyar B.com April 2021]

[Madras, B.Com (PZH) April 2007]

B.Com.(Sem – PZ5A) Nov. 2005; B.Com. March 1997]

[Ans : Selling price per unit : Rs. 346.40; Prime cost : Rs. 16,000;
 Works cost : Rs. 22,500; Cost of production : Rs. 25,980; Sales : Rs. 34,640]

Profit : Rs. 8,660; Profit is 25% on sales or $\frac{25}{75} = \frac{1}{3}$ on cost

8. Prepare a cost sheet showing prime cost, works cost, cost of production and cost of sales from the following particulars:

	Rs.
Opening Stock of raw materials	4,00,000
Closing stock of raw materials	2,00,000
Purchase of raw materials	2,00,000
Wages	1,00,000

Factory overhead	20,000
Administrative overhead	32,000
Selling overhead	26,000

You are also required to calculate (a) the percentage of factory overhead to wages; (b) the percentage of administrative overhead to works cost and (c) percentage of selling overhead to works cost.

[Madras, BCA(PK4B) April 2009]

[Ans: P.C: Rs. 5,00,000; W.C: Rs. 5,20,000;

C.O.P: Rs. 5,52,000; COS: Rs. 5,78,000

(a) 20%; (b) 6.15%; (c) 5%]

9. Prepare a statement of cost from the following particulars for the year 2006 showing the percentage that each individual item of cost bears to the total cost.

	Rs.
Opening Stock of Raw material	30,000
Purchase of Raw material	40,000
Closing Stock of Raw material	20,000
Direct wages	20,000
Factory overheads	10,000
Office and Administration overheads	8,000
Selling and Distribution overheads	2,000
Sales value	1,00,000

[Madras, B.Com(CS) Nov. 2008]

[Ans: Cost of Sales: Rs. 90,000; Profit: Rs. 10,000]

10. A factory produces 100 units of a commodity. The cost of production is:

	Rs.
Materials	10,000
Wages	5,000
Direct expenses	1,000

Factory overhead 125% on wages; office overhead 20% on works cost. Expected profit 25% on sales.

Calculate the price to be fixed per unit.

[Madras, B.Com. March 1987]

[Ans : Price to be fixed per unit : Rs. 356; Prime cost : Rs. 16,000;

Profit : Rs. 8,900; Sales : Rs. 35,600; Profit is 25% on sales or $\frac{1}{3}$ on cost]

2.56

11. You are given below the Trading Account of Rathi Devi, Ltd.

Trading Account			
	Rs.	Rs.	Rs.
To stock:		By Sales	Rs.
Raw materials	61,000	Closing Stock:	6,72,000
Finished Products	19,200	Raw materials	22,400
Purchases		Finished product	56,000
Wages			78,400
Carriage			
Gross Profit	1,37,400		7,50,400
	7,50,400		

Find out the cost of materials consumed, the total cost of manufacture and the percentage of gross profit on sales.

[Madras, B.Com(CS) (SYSE) Nov. 2007]

[Ans: Cost of materials consumed: Rs. 2,47,400; Total cost of manufacture: Rs. 5,71,400; Percentage of gross profit on sales: 20.446%]

12. You are required to compile a statement showing cost and profit from the information given, showing clearly, (a) Material consumed (b) prime cost (c) Works cost (d) Cost of production (e) Cost of sales (f) Profit and (g) sales.

	Rs.
Materials purchased	2,00,000
Wages	1,00,000
Direct Expenses	20,000
Opening stock of materials	40,000
Closing stock of materials	60,000

Factory overhead is absorbed at 20% on wages. Administration overhead is 25% on the works cost. Selling and distribution overheads are 20% on the cost of production. Profit is 20% on sales.

[Madras, 1st M.Com(KCA2A) April 2009]

[Ans: (a) Rs. 1,80,000; (b) Rs. 3,00,000; (c) Rs. 3,20,000

(d) Rs. 4,00,000; (e) Rs. 4,80,000; (f) Rs. 1,20,000; (g) Rs. 6,00,000]

13. From the following particulars, prepare a cost sheet showing the selling price per unit.

	Rs.
Raw materials	9,100
Labour and other direct expenses	4,000
Factory expenses 80% of the labour and other direct expenses.	
Office overheads 10% of works cost.	
Selling and distribution expenses Rs. 2 per unit sold.	
Units produced and sold - 10,000	
Percentage of profit - 20% on selling price.	

[Madras, B.com(CS) April 2021]

[Madras, B.A. Corp., Sep. 1993]

Cost Sheet, Tende
[Ans : Sell

Sales : Rs.

14. From the following information calculate the selling price per unit.

Selling Price

Sales Revenue

Cost of Materials

Materi

Wages

Manufactur

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15. In a factory, the cost of raw materials is Rs. 1,00,000. Prepare a cost sheet.

Work over of total cost each.

Hint : 40% of

is the sam

[Ans : Selling price per unit : Rs. 4.741 (or) 4.74; Prime cost : Rs. 13,100;
 Works cost : Rs. 16,300; Cost of production : Rs. 17,930;

Cost of sales : Rs. 37,930; Profit : Rs. 9,482.5;

- Sales : Rs. 47,412.5; Profit – 20% on selling price or 25% on cost of sales]
14. From the following information you are asked to prepare a cost sheet and to ascertain cost and profit per unit with the help of the following data:

Units produced	1200 units
Selling price per unit	Rs. 6
Sales Revenue	Rs. 7,200
Cost of production :	
Materials	Rs. 1,320
Wages	Rs. 750.

Manufacturing expenses 40 paise per rupee of labour cost.

Administrative expenses 10% of works cost. It has been found from the records that

the selling and distribution expenses amounted to $7\frac{1}{2}\%$ on sales.

[Thiruvalluvar B.Com., April/May 2009]

[Madras, B.C.A./B.Sc. April 2001]

[Ans : Cost : Rs. 3,147; Per unit : Rs. 2.6225 (or) 2.62

Profit : Rs. 4,053;

Per unit : Rs. 3.377 (or) 3.38]

15. In a factory a standard product is manufactured. From the following particulars prepare a cost sheet showing total cost and profit made.

	Rs.
Raw material consumed	30,000
Labour	60,000

Work overheads is charged at 40% of works cost and office overhead is taken at 20% of total cost. The standard product sold during the period is 180 units at Rs. 1,200 each.

[Madras B.com(CS) April 2021]

[Bharathidasan, B.Com. April 1991]

[Ans : Total cost : Rs. 1,87,500; Profit made : Rs. 28,500;

Cost per unit : Rs. 1,041.67; Profit per unit : Rs. 158.33]

Hint : 40% of works cost is the same as $\frac{40}{60}$ on prime cost. Similarly 20% of total cost

is the same as $\frac{20}{80}$ on works cost here.

2.58

16. In a factory two types of articles are manufactured - No. 1 and No. 2. From the following particulars, prepare a statement of cost showing total cost of each variety and ascertain the total profit.

	No. 1 Rs.	No. 2 Rs.
Materials	20,000	50,000
Wages	40,000	70,000

Works on cost is charged at 40% of works cost and office on cost is taken at 20% on total cost. No. 1 article is sold 180 units at Rs. 1,200 each and No. 2 article 200 units at Rs. 1,500 each.

[Kakatiya, B.Com., April 1993 adapted]

[Ans : Total cost - Article 1 : Rs. 1,25,000; Article 2 : Rs. 2,50,000;
 Total cost per unit : Article 1 : Rs. 694.44; Article 2 : Rs. 1,250;
 Profit - Total : Rs. 1,41,000; Article A : Rs. 91,000; B : Rs. 50,000]

17. In a factory two types of radios are manufactured, viz., Orient and Usha models. From the following particulars prepare a statement showing cost and profit per radio sold. There is no opening or closing stock.

	Orient Rs.	Usha Rs.
Materials	27,300	1,08,680
Labour	15,600	62,920

Works overhead is charged at 80% on labour and office overhead is taken at 15% on work cost. The selling price of both radios is Rs. 1,000. 78 orient radios and 286 usha radios were sold.

[Madras, B.Com., (old) April 2000]

[Ans : Orient : Profit : Rs. 14,313 - Rs. 183.5 per unit;
 Cost : Rs. 63,687 - Rs. 816.5 per unit;
 Usha : Profit : Rs. 30,774 - Rs. 107.6 per unit;
 Cost : Rs. 2,55,226 - Rs. 892.4 per unit]

Hint: Ign

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(B) Cost Sheet - With details of overheads

18. Calculate (1) Prime cost (2) Factory cost (3) Cost of production (4) Cost of sales and (5) Profit from the following particulars.

	Rs.
Direct materials	1,00,000
Direct wages	25,000
Direct expenses	5,000
Wages of foremen	2,500
Electric power	500
Lighting:	
Factory	1,500
Office	500
Rent:	
Factory	5,000
Office	2,500
Salaries to salesmen	1,250
Advertising	1,250
Income tax	10,000
Sales	1,89,500

[Madras, B.C.S.(ICE) Oct. 2003;

Bharathidasan, B.Com. Nov. 1993]

[Ans : (1) Rs. 1,30,000; (2) Rs. 1,39,500; (3) Rs. 1,42,500;
 (4) Rs. 1,45,000; (5) 44,500]

Hint: Ignore Income tax which is excluded from cost accounts.

19. A manufacturing company submits to you the following details about the various expenses incurred by it during the year ended 31st December 2018:

	Rs.
Cost of raw materials consumed	25,000
Advertising	1,000
Depreciation on plant and machinery	1,500
Factory office salaries	6,000
Legal expenses	300
Supervisor's salary	5,500
Factory rates and insurance	1,000
Carriage outwards	1,500
Direct labour	20,000
Bad debts	300
Office stationery	200
Rent of factory	2,500
Office salaries	10,000

	Cost Account
Commission on sales	4,000
Audit fees	300
Income tax	1,500
Donation to charitable institutions	500
Purchase of new plant	10,000

Classify the above expenses under the various heads of cost, showing separately the total expenditure under each head. Also show separately those expenses which shall not be included in calculating the cost.

[Madras, B.Com., March 1978]

[Ans : Prime cost : Rs. 45,000; Factory overhead : Rs. 16,500;
Works cost : Rs. 61,500; Administration overhead : Rs. 10,800]

Cost of production : Rs. 72,300; Selling and distribution overhead : Rs. 6,800

Total cost : Rs. 79,100; Expenses which shall not be included

(1) Income tax (2) Donation (3) Purchase of plant

20. A manufacturer presents the following details about the various expenses incurred by him.

	Rs.
Raw materials consumed	70,000
Carriage inwards	2,000
Factory rent	2,400
Bad debts	440
Printing and stationery	620
Legal expenses	350
Carriage outwards	1,540
Indirect materials	560
Power	4,600
Depreciation of furniture	160
Postage expenses	465
Repairs of plant and machinery	1,200
Salesmen's expenses	3,400
Advertising	500
Direct wages	85,000
General manager's salary	36,000
Factory manager's salary	18,000
Depreciation on plant and machinery	1,240
Audit fees	350

Classify the above expenses under the various elements of cost showing separately the total expenditure under each element.

[Madras, B.Com.]

[Ans : Prime cost : Rs. 1,57,000; Factory cost : Rs. 1,85,000]

Cost of production : Rs. 2,22,945; Total cost : Rs. 2,28,825

Overheads : Factory : Rs. 28,000; Administration : Rs. 37,940

Selling and distribution : Rs. 5,880

Cost Sheet, Tend
21. Prepare a statement showing (a) P
(e) Profit.

Particulars
Direct wages
Power
Storekeeper
Factory rent
Office rent
Repairs :
 Factory
 Office b
Goodwill v
Consumable
Directors' t
Telephone
Salesmen's
Advertising
Income tax
Sales

Hint: Excluded
paid.

Assume
office

22. Followin

O
C
P
C
W
V
C
R
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21. Prepare a statement showing cost and profit from the following details, clearly showing (a) Prime cost (b) Works cost (c) Cost of production (d) Cost of sales and (e) Profit.

<i>Particulars</i>	<i>Rs.</i>	<i>Particulars</i>	<i>Rs.</i>
Direct wages	1,50,000	Direct materials	5,00,000
Power	2,500	Oil and water	2,500
Storekeeper's wages	5,000	Transfer to general reserve	5,000
Factory rent	25,000	Foremen's salary	12,500
Office rent	12,500	Factory lighting	7,500
Repairs :		Office lighting	2,500
Factory plant	17,500	Depreciation:	
Office building	2,500	Factory plant	2,500
Goodwill written off	2,500	Office building	6,250
Consumable stores	12,500	Manager's salary	25,000
Directors' fees	6,250	Office stationery	2,500
Telephone rent	625	Postage	1,250
Salesmen's salaries	6,250	Travelling expenses	2,500
Advertising	6,250	Warehouse rent	2,500
Income tax	50,000	Dividend paid	10,000
Sales	9,47,500		

[Ans : (a) Prime cost : Rs. 6,50,000; (b) Works cost : Rs. 7,37,500 –

Factory O.H. : Rs. 87,500; (c) Cost of production : Rs. 7,96,875 –

Administration O.H. – Rs. 59,375;

(d) Cost of sales : Rs. 8,14,375 – Selling and distribution overhead – Rs. 17,500; (e) Profit : Rs. 1,33,125]

Hint: Exclude goodwill written off, income tax, transfer to general reserve and dividend paid.

Assume travelling expenses are for sales. Telephone and manager's salary are for office only.

22. Following data are extracted from the books of Pavan Kishore for the year 2020:

	<i>Rs.</i>
Opening stock of raw materials	25,000
Closing stock of raw materials	40,000
Purchase of raw materials	85,000
Carriage inwards	5,000
Wages direct	75,000
Wages indirect	10,000
Other direct charges	15,000
Rent and rates – Factory	5,000
Office	500
Indirect consumption of material	500

Depreciation, plant	1,500
Depreciation, office furniture	100
Salary, office	2,500
Salary, salesmen	2,000
Other office expenses	900
Other factory expenses	5,700
Managing director's Remuneration	12,000
Other selling expenses	1,000
Travelling expenses	1,100
Carriage outwards	1,000
Sales	2,50,000
Advance income tax paid	15,000
Advertisement	2,000

Managing director's remuneration is allocated as Rs. 4,000 to the factory, Rs. 2,000 to the office and Rs. 6,000 to the selling department.

From the above information find out:

- (a) Prime cost (b) Works cost (c) Cost of production (d) Cost of sales (e) Net profit.

[Madras, B.Com(CS) Nov. 2007; Periyar, B.Com., B.Com(CA) May 2006]

[Andhra, B.Com., Sep. 1992]

[Ans : (a) Rs. 1,65,000; (b) Rs. 1,91,700; (c) Rs. 1,97,700;

(d) Rs. 2,10,800; (e) Rs. 39,200]

Hint: Exclude advance income tax paid.

23. The following details relating to a factory are available for the month of March 2010.

Particulars	Rs.	Particulars	Rs.
Materials used:		Labour used:	
In Manufacturing	80,000	For production	25,000
In Primary packing	20,000	For factory supervision	5,000
In the factory	2,000	Office salaries	6,000
In the office	4,000	Salesmen's salaries	8,000
In selling	5,000	Expenses:	
In secondary packing	6,000	Direct	2,000
Depreciation:		Factory	6,000
Factory	4,000	Office	4,000
Office	3,000	Selling	5,000
Distribution vans	2,000	Distribution	2,000

It is customary to fix selling price by adding 20% to the total cost.
Prepare a cost sheet, showing profit for the month.