

COST ACCOUNTING(THEORY)

(16CCCCM7)

B.COM – IV SEMESTER

1. Definition of Cost Accounting :

Cost Accounting may be defined as According to Wheldon, **costing** is, the classifying, recording and appropriate allocation of expenditure for the determination of the costs of products or services; the relation of these costs to sales values; and the ascertainment of profitability. In general, it is understood as process for determining cost.

2. What are the meaning of Cost Accounting?

Cost Accounting is usually considered as the next step to costing. It involves meticulously accurate analyzing, standardising, forecasting and comparing relevant costing data so as to interpret and report various concern areas to management. Its scope includes preparation of budgets, determination of standard costs based on technical estimates, identifying variances and reasons thereof, etc.

3. Explain the General Principles of Cost Accounting.

The following may be considered as the General Principles of Cost Accounting:

1. A cost should be related to its causes:

Cost should be related as closely as possible to their causes so that cost will be shared only among the cost units that pass through the department of which the expenses are related.

2. A cost should be charged only after it has been incurred:

While determining the cost of individual units those costs which have actually been incurred should be considered. For example, a cost unit should not be charged to the selling costs, while it is still in the factory. Selling costs can be charged with the products which are sold.

3. The convention of prudence should be ignored:

Usually accountants believe in historical costs and while determining cost, they always attach importance to historical cost. In Cost Accounting this convention must be ignored, otherwise, the management appraisal of the profitability of the projects may be vitiated. According to **W.M. Harper**, **“a cost statement should, as far as possible, give facts with no known bias. If a contingency needs to be taken into consideration it should be shown separately and distinctly”**.

4. Abnormal costs should be excluded from cost accounts:

Costs which are of abnormal nature (eg. Accident, negligence etc.) should be ignored while computing the cost, otherwise, it will distort costs figures and mislead management as to working results of their undertaking under normal conditions.

5. Past costs not to be charged to future period:

Costs which could not be recovered or charged in full during the concerned period should not be taken to a future period, for recovery. If past costs are included in the future period, they are likely to influence the future period and future results are likely to be distorted.

6. Principles of double entry should be applied wherever necessary:

Costing requires a greater use of cost sheets and cost statements for the purpose of cost ascertainment and cost control, but cost ledger and cost control accounts should be kept on double entry principle as far as possible.

4.What are the Objectives of Cost Accounting?

Cost accounting aims at systematic recording of expenses and analysis of the same so as to ascertain the cost of each product manufactured or service rendered by an organization. Information regarding cost of each product or service would enable the management to know where to economize on costs, how to fix prices, how to maximize profits and so on. Thus, the main objectives of cost accounting are the following.

1. To analyse and classify all expenditure with reference to the cost of products and operations.
2. To arrive at the cost of production of every unit, job, operation, process, department or service and to develop cost standard.
3. To indicate to the management any inefficiencies and the extent of various forms of waste, whether of materials, time, expenses or in the use of machinery, equipment and tools. Analysis of the causes of unsatisfactory results may indicate remedial measures.
4. To provide data for periodical profit and loss accounts and balance sheets at such intervals, e.g. weekly, monthly or quarterly as may be desired by the management during the financial year, not only for the whole business but also by departments or individual products. Also, to explain in detail the exact reasons for profit or loss revealed in total in the profit and loss accounts.
5. To reveal sources of economies in production having regard to methods, types of equipment, design, output and layout. Daily, Weekly, Monthly or Quarterly information may be necessary to ensure prompt constructive action.
6. To provide actual figures of costs for comparison with estimates and to serve as a guide for future estimates or quotations and to assist the management in their price fixing policy.

5.What are the different between Cost Accounting and Financial Accounting?

Both financial accounting and cost accounting are concerned with systematic recording and presentation of financial data. Financial accounting reveals profits and losses of the business as a whole during a particular period, while cost accounting shows, by analysis and localization, the unit costs and profits and losses of different product lines. The main difference between financial accounting and cost accounting are summarized below.

1. Financial accounting aims at safeguarding the interests of the business and its proprietors and others connected with it. This is done by providing suitable information to various parties, such as shareholders or partners, present or prospective creditors etc. Cost accounting on the other hand, renders information for the guidance of the management for proper planning, operation, control and decision making.

2. Financial accounts are kept in such a way as to meet the requirements of the Companies Act, Income Tax Act and other statutes. On the other hand cost accounts are generally kept voluntarily to meet the requirements of the management. But now the Companies Act has made it obligatory to keep cost records in some manufacturing industries.

3. Financial accounting emphasizes the measurement of profitability, while cost accounting aims at ascertainment of costs and accumulates data for this very purpose.

4. Financial accounts disclose the net profit and loss of the business as a whole, whereas cost accounts disclose profit or loss of each product, job or service. This enables the management to eliminate less profitable product lines and maximize the profits by concentrating on more profitable ones.

5. Financial accounting provides operating results and financial position usually gives information through cost reports to the management as and when desired.

6.What are the Importance of Cost Accounting?

The limitations of financial accounting have made the management to realize the importance of cost accounting.

1. Cost accounting helps in periods of trade depression and trade competition.

2. Cost accounting aids price fixation.

3. Cost accounting helps in making estimates.

4. Cost accounting helps in channelizing production on right lines.

5. Cost accounting eliminates wastages.

6. Cost accounting makes comparisons possible.

7. Cost accounting provides data for periodical Profit and Loss Account.

7. Define of Cost units:

The Chartered Institute of Management Accountants, London, defines a unit of cost as “**A unit of quantity of product, service or time in relation to which costs may be ascertained or expressed**”.

8. Define of Cost centre:

According to Chartered Institute of Management Accountants, London, cost centre means “**A location, person or item of equipment (or group of these) for which costs may be ascertained and used for the purpose of cost control**”.

9. What you mean by Profit centre?

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

10. What are the Difference between Profit centre and Cost centre?

The various points of difference between Profit centre and cost centre are as follows. Cost centre is the smallest unit of activity or area of responsibility for which costs are collected whereas a profit centre is that segment of activity of a business which is responsible for both revenue and expenses.

(i) Cost centres are created for accounting conveniences of costs and their control whereas as a profit centre is created because of decentralization of operations i.e., to delegate responsibility to individuals who have greater knowledge of local conditions etc.

(ii) Cost centers are not autonomous whereas profit centres are autonomous.

(iii) A cost centre does not have target cost but efforts are made to minimize costs, but each profit centre has a profit target and enjoys authority to adopt such policies as are necessary to achieve its targets.

(iv) There may be a number of cost centres in a profit centre in a profit centre as production or service cost centres or personal or impersonal but a profit centre may be a subsidiary company within a group or division in a company.

11. State the classification Cost:

Costs can be classified or grouped according to their common characteristics. Proper classification of costs is very important for identifying the costs with the cost centers or cost units.

The same costs are classified according to different ways of costing depending upon the purpose to be achieved and requirements of a particular concern. The important ways of classification are:

1. By Nature or Elements. According to this classification the costs are classified into three categories i.e., Materials, Labour and Expenses. Materials can further be sub-classified as raw materials components, spare parts, consumable stores, packing materials etc. This helps in finding the total cost of production and the percentage of materials (labour or other expenses) constituted in the total cost. It also helps in valuation of work-in-progress.

2. By Functions: This classification is on the basis of costs incurred in various functions of an organization ie. Production, administration, selling and distribution. According to this classification, costs are divided into Manufacturing and Production Costs and Commercial costs.

Manufacturing and Production Costs are costs involved in manufacture, construction and fabrication of products.

Commercial Costs are

(a) administration costs.

(b) selling and distribution costs.

3. By Degree of Traceability to the Product : According to this, costs are divided into direct costs and indirect costs.

Direct Costs are those costs which are incurred for a particular product and can be identified with a particular cost centre or cost unit. Eg:- Materials, Labour.

Indirect Costs are those costs which are incurred for the benefit of a number of cost centre or cost units and cannot be conveniently identified with a particular cost centre or cost unit. Eg:- Rent of Building, electricity charges, salary of staff etc.

4. By Changes in Activity or Volume: According to this costs are classified according to their behavior in relation to changes in the level of activity or volume of production. They are fixed, variable and semi-variable.

Fixed Costs are those costs which remain fixed in total amount with increase or decrease in the volume of the output or productive activity for a given period of time. Fixed Costs per unit decreases as production increases and vice versa. Eg:- rent, insurance of factory building, factory manager's salary etc.

Variable Costs are those costs which vary in direct proportion to the volume of output. These costs fluctuate in total but remain constant per unit as production activity changes. Eg:- direct material costs, direct labour costs, power, repairs etc.

Semi-variable Costs are those which are partly fixed and partly variable. For example; Depreciation, for two shifts working the total depreciation may be only 50% more than that for single

shift working. They may change with comparatively small changes in output but not in the same proportion.

5. Association with the Product: Cost can be classified as product costs and period costs. Product costs are those which are traceable to the product and included in inventory cost, thus product cost is full factory cost. Period costs are incurred on the basis of time such as rent, salaries etc. thus it includes all selling and administration costs. These costs are incurred for a period and are treated as expenses.

6. By Controllability: The CIMA defines controllable cost as **“A cost which can be influenced by the action of a specified member of an undertaking”** and a non-controllable cost as **“a cost which cannot be influenced by the action of a specified member of an undertaking”**.

7. By Normality: There are normal costs and abnormal costs. Normal costs are the costs which are normally incurred at a given level of output under normal conditions. Abnormal costs are costs incurred under abnormal conditions which are not normally incurred in the normal course of production. Eg:- damaged goods due to machine break down, extra expenses due to disruption of electricity, inefficiency of workers etc.

8. By Relationship with Accounting Period: There are capital and revenue expenses depending on the length of the period for which it is incurred. The cost which is incurred in purchasing an asset either to earn income or increasing the earning capacity of the business is called capital cost, for example, the cost of a machine in a factory. Such cost is incurred at one point of time but the benefits accruing from it are spread over a number of accounting years. The cost which is incurred for maintaining an asset or running a business is revenue expenditure. Eg:- cost of materials, salary and wages paid, depreciation, repairs and maintenance, selling and distribution.

9. By Time..Costs can be classified as

1) Historical cost and

2) Predetermined Costs. The costs which are ascertained and recorded after it

has been incurred is called historical costs.

12. Describe the Types, Methods and Techniques of Costing.

The general fundamental principles of ascertaining costs are the same in every system of cost accounting, but the methods of analysis and presenting the costs vary from industry to industry. Different methods are used because business enterprises vary in their nature and in the type of products or services they produce or render. Basically, there are two principal methods of costing, namely,

(i) Job Costing, and

(ii) Process costing.

1. Job costing: It refers to a system of costing in which costs are ascertained in terms of specific jobs or orders which are not comparable with each other. Industries where this method of costing is generally applied are Printing Process, Automobile Garages, Repair Shops, Shipbuilding, House building, Engine and Machine construction, etc. Job Costing includes the following methods of costing:

(a) Contract Costing:

(b) Batch Costing:

(c) Terminal Costing:

(d) Operation Costing:

2. Process Costing: Where a product passes through distinct stages or processes, the output of one process being the input of the subsequent process, it is frequently desired to ascertain the cost of each stage or process of production. This is known as process costing. This method is used where it is difficult to trace the item of prime cost to a particular order because its identity is lost in volume of continuous production. Process costing is generally adopted in textile industries, chemical industries, oil refineries, soap manufacturing, paper manufacturing, tanneries, etc.

3. Unit or single or output or single output costing: This method is used where a single article is produced or service is rendered by continuous manufacturing activity. The cost of the whole production cycle is ascertained as a process or series of processes and the cost per unit is arrived at by dividing the total cost by the number of units produced. The unit of costing is chosen according to the nature of the product.

4. Operating Costing: This method is applicable where services are rendered rather than goods produced. The procedure is same as in the case of single output costing.

5. Multiple or Complete Costing: Some products are so complex that no single system of costing is applicable. It is used where there are a variety of components separately produced and subsequently assembled in a complex production.

6. Uniform Costing: It is not a distinct method of costing by itself. It is the name given to a common system of costing followed by a number of firms in the same industry. This helps in comparing performance of one firm with that of another.

7. Departmental Costing: When costs are ascertained department by department, the method is called "Departmental Costing". Usually, for ascertaining the cost of various goods or services produced by the department, the total costs will have to be analysed, say, by the use of job costing or unit costing.

13.Explain the Elements of Cost:

The management of an organization needs necessary data to analyze and classify costs for proper control and for taking decisions for future course of action. Hence the total cost is analyzed by elements of costs ie by the nature of expenses. The elements of costs are three and they are materials, labour and other expenses. These can be further analyzed as follows. By grouping the above elements of cost, the following divisions of cost are obtained.

1. Prime cost = Direct Materials + Direct Labour+ Direct Expenses

2. Works or Factory Cost = Prime Cost + Works or Factory Overheads

3. Cost of Production = Works Cost + Administration Overheads

4. Total Cost or Cost of Sales = Cost of Production + Selling and Distribution Overheads.

The difference between the cost of sales and selling price represents profit or loss.

1. Direct Materials are those materials which can be identified in the product and can be conveniently measured and directly charged to the product.

2. Indirect Materials are those materials which cannot be classified as direct materials.

3. Direct Labour is all labour expended in altering the construction, composition, confirmation or condition of the product.

4. Direct Expenses are expenses directly identified to a particular cost centre. Hence expenses incurred for a particular product, job, department etc are direct expenses.

5. Overheads may be defined as the aggregate of the cost of indirect materials, indirect labour and such other expenses including services as cannot conveniently be charged direct ot specific cost units. Overheads may be sub-divided into

- (a) Manufacturing Overheads;**
- (b) Administration Overheads;**
- (c) Selling Overheads;**
- (d) Distribution Overheads;**
- (e) Research and Development Overheads.**

14.What are the meaning of Cost sheet or Statement of Cost?

When costing information is set out in the form of a statement, it is called "Cost Sheet". It is usually adopted when there is only one main product and all costs almost are incurred for that product only. The information incorporated in a cost sheet would depend upon the requirement of management for the purpose of control.

15. Briefly Explain the Materials:

The materials are a major part of the total cost of producing a product and are one of the most important assets in majority of the business enterprises. Hence the total cost of a product can be controlled and reduced by efficiently using materials. The materials are of two types, namely:

(i) Direct materials: The materials which can be easily identified and attributable to the individual units being manufactured are known as direct materials. These materials also form part of finished products. All costs which are incurred to obtain direct materials are known as direct material costs.

(ii) Indirect materials: Indirect materials, on the other hand, are those materials which are of small value such as nuts, pins, screws, etc. and do not physically form part of the finished product. Costs associated with indirect materials are known as indirect material costs. Factory supplies, office supplies and selling supplies are generally termed as stores.

16. Give the meaning of Purchasing Control.

Purchasing is an art. Wrong purchases increase the cost of materials, store equipments and the finished goods. Hence it is imperative that purchases should be effectively, efficiently and economically performed.

17. Definition of Purchasing Control.

Dr. Walters defines scientific purchasing as the **“Procurement by purchase of the proper materials, machinery, equipment and supplies of stores used in the manufacture of a product, adapted to marketing in the proper quantity and quality at the proper time and the lowest price consistent with the quality desired”**.

18. Bring out the Methods of Purchasing.

Purchasing can be broadly classified as centralized and localized purchasing.

(a) Centralized Purchasing: In a large organization, manufacturing units are many. In such cases centralized purchasing is beneficial. The advantages of centralized purchasing are:

1. Specialized and expert knowledge is available.
2. Advantages arise due to bulk purchases.
3. The cost of purchasing can be reduced and selling price can be lowered.

(b) Decentralization of Purchases: The advantages of localized purchasing or decentralization of purchases are:-

1. Each plant may have its own particular need. This can be given special attention.
2. Direct contact can be established with suppliers.

3. The time lag between indenting and receiving materials can be reduced.

4. Technical requirements of each plant can be ascertained.

19. Describe the Purchase Procedure.

The steps usually followed for purchase of materials may be enumerated as follows:-

1. Indenting for materials : The stores department prepares indents for the purchase of materials for replenishment of stocks (regular indents) or for a special job (special indents) and sends it to the purchase department.

2. Issue of tenders to suppliers: The purchase department issue tenders to suppliers or publish them in papers. The suppliers quote their terms of price and delivery/payment.

3. Placing of purchase orders: Normally six copies of purchase order are made. The supplier, stores, inspection department, store accounting section, purchase department and progress department are sent one copy each.

4. Inspection: The supplier delivers goods at the place specified. Two delivery challans are prepared by the supplier one of which is returned. It is a proof of delivery. After receiving the goods, the inspection department or production department or maintenance department (as the case may be) is intimated.

5. Receiving Stores: The stores department prepares a Stores Receipt Note for the quantity of stock accepted in inspection. After issuing of the Stores Receipt, the Storekeeper is responsible for the stocks.

6. Checking and passing of bills for payment: Bills received by the purchase department are forwarded to the stores accounting section to check the authenticity regarding quantity and price and the arithmetical accuracy.

20. Explain the Storekeeping:

Store keeping is a service function. The storekeeper is a custodian of all the items kept in the store. The stores should be maintained properly and cost minimized.

The main objectives of store keeping are:-

- i) To protect stores against losses
- ii) To keep goods ready for delivery/issue
- iii) To provide maximum service at minimum cost.

The duties and functions of Store-keeper can be summarized as follows:

i) Materials should be received, unloaded, inspected and then moved to stores. The materials have to be stored in appropriate places and records the receipts in proper books.

ii) The stores records should be maintained in an efficient and orderly manner so that materials can be easily located and information can be obtained for various departments.

iii) The stores should provide maximum protection and safety and accessibility and utilize minimum space. Suitable storage devices should be installed.

21.What are the meaning of Economic Ordering Quantity? (EOQ)

The quantity of material to be ordered at one time is known as economic ordering quantity. This quantity is fixed in such a manner as to minimize the cost of ordering and carrying the stock. The total costs of a material usually consist of:

Total acquisition cost + total ordering cost + total carrying cost. The only costs to be taken care of are the ordering costs and carrying costs which vary with the quantity ordered.

22.Find out the Carrying Cost:

It is the cost of holding the materials in the store and includes:

1. Cost of storage space which could have been utilized for some other purpose.
2. Cost of bins and racks
3. Cost of maintaining the materials to avoid deterioration.
4. Amount of interest payable on the amount of money locked up in the materials.
5. Cost of spoilage in stores and handling.

23.Find the Ordering Cost:

It is the cost of placing orders for the purchase of materials and includes:

1. Cost of staff posted in the purchasing department, inspection section and stores accounts department.
2. Cost of stationary postage and telephone charges. Thus, this type of costs includes cost of floating tenders, cost of comparative evaluation of quotations, cost of paper work, and postage involved in placing the order, cost of inspection and cost of accounting and making payments. In other words, the cost varies with the number of orders.

24.Define of Inventory System:

The Chartered Institute of Management Accountants, London, defines the perpetual inventory as **“A system of records maintained by the controlling department, which reflects the physical movements of stocks and their current balance”**.

25.What are the Advantages of the Perpetual Inventory System?

The following are the advantages of the perpetual inventory system:

1. It avoids the disruption of production for physical checking of all items of stores at the end of the year.

2. The preparation of Profit and Loss Account and Balance Sheet is possible without physical verification of stock.

3. A detailed and more reliable control on the materials in store is obtained.

4. As the work of recording and continuous stocktaking is carried out systematically and without undue haste, the figures are more reliable.

5. Continuous stocktaking will make the storekeeper and the stores accountant more vigilant in their work and they will try to keep the records accurate and up-to-date.

6. Planning of production can be done without any fear of shortage as the management is constantly informed of the stores position.

26.Explain the ABC Analysis:

- Under ABC Analysis, the materials in stock are divided into three categories for the purpose of control.
- Generally it is seen that the materials which constitute the least percentage of items in stock may contribute to a large percentage of value and a large percentage of items may represent a smaller percentage of value of items consumed. Between these two items are those items, the percentage of which is more or less equal to their value in consumption.
- Items falling in the first category are treated as 'A' items, of the second category as 'B' items and items of the third category are taken as 'C' items. Such an analysis of material is known as ABC analysis.
- This technique of stock control is also known as stock control according to value method or Always Better Control method or Proportional Parts Value Analysis method. Thus, under this technique of material control, materials are listed in 'A', 'B' and 'C' categories in descending order based on money value of consumption.
- ABC analysis measures the cost significance of each item of material. It concentrates on important terms, so it is also known as '**Control by Importance and Exception**' (CIE).

27.Enumerate the method of First in First Out (FIFO).

Under this method material is first issued from the earliest consignment on hand and priced at the cost at which that consignment was placed in the stores. In other words, materials received first are issued first.

The units in the opening stock of materials are treated as if they are issued first, the units from the first purchase issued next, and so on until the units left in the closing stock of materials are valued at the latest cost of purchases.

This method is most suitable in times of falling prices because the issue price of materials to jobs or work order will be high while the cost of replacement of materials will be low.

But in case of rising prices this method is not suitable because the issue price of materials to production will be low while the cost of replacement of materials will be high. The following example will illustrate how issues of materials are valued under this method.

28.Examine the method of Last in First Out Method (LIFO):

It is a method of pricing the issues of materials. This method is based on the assumption that the items of the last batch (lot) purchased are the first to be issued.

Therefore, under this method the price of the last batch (lot) is used for pricing the issues, until it is exhausted, and so on. If however, the quantity of issue is more than the quantity of the latest lot than earlier (lot) and its price will also be taken into consideration.

29.Write a note on Simple Average Method.

In this method, price is calculated by dividing the total of the prices of the materials in the stock from which the material to be priced could be drawn by the number of the prices used in that total. This method may lead to over-recovery or under-recovery of cost of materials from production because quantity purchased in each lot is ignored.

30.Write a note on Weighted Average Methods.

In this method, price is calculated by dividing the total cost of materials in the stock from which the materials to be priced could be drawn by the total quantity of materials in that stock.

31.What is meaning of Labour?

Labour cost is a second major element of cost. The control of labour cost and its accounting is very difficult as it deals with human element. Labour is the most perishable commodity and as such should be effectively utilized immediately.

32.What are the Importance of Labour Cost Control?

Labour is of two types

- (a) Direct labour,*
- (b) Indirect labour.*

Direct Labour is that labour which is directly engaged in the production of goods or services and which can be conveniently allocated to the job, process or commodity or process. For example labour engaged in spinning department can be conveniently allocated to the spinning process.

Indirect Labour is that labour which is not directly engaged in the production of goods and services but which indirectly helps the direct labour engaged in production. The examples of indirect

labour are supervisors, sweepers, cleaners, time-keepers, watchmen etc. The cost of indirect labour cannot be conveniently allocated to a particular job, order, process or article.

33.Explain the Time keeping:

Time-keeping will serve the following purposes:

1. Preparation of Pay Rolls in case of time-paid workers.
2. Meeting the statutory requirements.
3. Ensuring discipline in attendance.
4. Recording of each worker's time 'in' and 'out' of the factory making distinction between normal time, overtime, late attendance, early leaving.
5. For overhead distribution when overheads are absorbed on the basis of labour hours.

34.What are the Methods of Time-keeping?

There are two methods of time-keeping. They are the **manual methods** and the **mechanical methods**. Whichever method is used it should make a correct record of the time and the method should be cost effective and minimize the risk of fraud.

Manual Methods

(1)Attendance Register Method:

This is the traditional method where an attendance register or muster roll is kept at the time office near the factory gate or in each department. The timekeeper records the name of the worker, the worker's number, the department in which he is working, the rate of wages, the time of arrival and departure, normal time and overtime.

(2)Metal Disc Method:

Under this method, each worker is allotted a metal disc or a token with a hole bearing his identification number. A board is kept at the gate with pegs on it and all tokens are hung on this board. These boards can be maintained separately for each department so that the workers can remove the token without delay and put it in a tray or box kept near the board. Immediately after the scheduled time for entering the factory, the box is removed and the latecomers will have to give their tokens to the timekeeper and their exact time of arrival is recorded. The tokens or disc left on the board will represent the absentee workers. Later the timekeeper records the attendance in the attendance register and subsequently it is passed on to the Pay Roll Department.

Mechanical Methods

The mechanical methods that are generally used for the recording of time of workers may be as follows:

(1) Time Recording Clocks:

The time recording clock is a mechanical device which automatically records the time of the workers. Under this method, each worker is given a *Time Card* which is kept in a tray near the factory gate and as the worker enters the gate, he picks up his card from the tray, puts it in the time recording clock which prints the exact time of arrival in the proper space against the particular day.

This procedure is repeated for recording time of departure for lunch, return from lunch and time of leaving the factory in the evening. Late arrivals and overtime are recorded in red to attract the attention of the management.

(2) Dial Time Records:

Under this method, a dial time recorder machine is used. It has a dial with number of holes (usually about 150) and each hole bears a number corresponding to the identification number of the worker concerned. There is one radial arm at the centre of the dial. As a worker enters the factory gate, he is to press the radial arm after placing it at the hole of his number and his time will automatically be recorded on roll of a paper inside the dial time recorder against the number. The sheet on which the time is recorded provides a running account of the worker's time and it can calculate the number of hours and prepare the wage sheets. However, the high installation cost of the dial time recorder and its use for only a limited number of worker are the drawbacks of this method.

35. Describe the Time Booking:

Time booking is the recording of time spent by the worker on different jobs or work orders carried out by him during his period of attendance in the factory.

The objects of time booking are:

1. To ensure that time spent by a worker in a factory is properly utilized on different jobs or work orders.
2. To ascertain the labour cost of each individual job or work order.
3. To provide a basis for the apportionment of overhead expenses over various jobs or work orders when the method for the allocation of overheads depends upon time spent on different jobs.
4. To ascertain unproductive time or idle time so as to make efforts to keep it in limit.
5. To know the time taken to complete a particular job so that bonus can be paid as per the incentive schemes.
6. To know the efficiency of workers, it is necessary to make the comparison of actual time taken with time allowed for completing a particular task.

Following documents are generally used for time booking:

- ✓ Daily Time Sheets,
- ✓ Weekly Time Sheets,
- ✓ Job Tickets or Job Cards.

36. Write note on Idle Time:

There is always a difference between the time booked to different jobs or work orders and the time recorded at the factory gate. This difference is known as idle time. Idle time is of two types.

(a) Normal Idle Time

(b) Abnormal Idle Time

Normal Idle Time: This represents the time, the wastage of which cannot be avoided and, therefore, the employer must bear the labour cost of this time. But every effort should be made to reduce it to the lowest possible level.

Abnormal Idle Time: It is that time the wastage of which can be avoided if proper precautions are taken. Example: time wasted due- to breakdown of machinery on account of inefficiency of the works engineer, failure of the power supply, shortage of materials, waiting for instructions, waiting for tools and raw materials, strikes or lock-outs in the factory. It is a principle of costing that all abnormal expenses and losses should not be included in costs and as such wages paid for abnormal idle time should not form part of the cost of production. Hence it is debited to Costing Profit and Loss Account.

37. Write note on Over Time:

It is the work done beyond the normal working period in a day or week. For overtime done, the workers are given double the wages for the overtime done. The additional amount paid on account of overtime is known as overtime premium.

Overtime increases the cost of production and should not be encouraged as it has the following disadvantages.

1. Overtime is paid at higher rate.
2. Overtime is done at late hours when workers have become tired and efficiency will be as much as during the normal working hours.
3. Workers will develop the habit of working slowly during normal hours and complete the work using overtime to earn more wages.
4. Expenses like lighting, cost of supervision, and wear and tear of machines will increase disproportionately.

38. Write note on System of Wage Payment.

There is no single method of wage payment which is acceptable both to the employers and the workers. The system of wages should result into higher production, improved quality of output and a contented labour force.

There are two principal wage systems:

- (i) Payment on the basis of time spent in the factory irrespective of the amount of work done. This method is known as time wage system.
- (ii) (ii) Payment on the basis of the work done irrespective of the time taken by the worker. This method is called piece rate system.

39. Write note on Time Wage System.

Under this method of wage payment, the worker is paid at an hourly, daily, weekly or monthly rate. This payment is made according to the time worked irrespective of the work done. This method is highly suitable for following types of work:

1. Where highly skilled and apprentices are working.
2. Where quality of goods produced is of extreme importance eg., artistic goods
3. Where the speed of work is beyond the control of the workers.
4. Where close supervision of work is possible.
5. Where output cannot be measured.

40. Write note on Straight piece rate system.

Payment is made as per the number of units produced at a fixed rate per unit. Another method is piece rate with guaranteed time rate in which the worker is given time rate wages if his piece rate wages is less than the time rate.

41. Write note on Taylor's Differential Piece Rate system.

This system was introduced by Taylor, the father of scientific management to encourage the workers to complete the work within or less than the standard time.

42. Write note on Merrick's Multiple Piece Rate System.

This method seeks to make an improvement in the Taylor's differential piece rate system. Under this method, three piece rates are applied for workers with different levels of performance.

43. Write note on Premium and Bonus Plan.

The object of a premium plan is to increase the production by giving an inducement to the workers in the form of higher wages for less time worked. Under a premium plan, a standard time is fixed for the completion of a specific job or operation at an hourly rate plus wages for a certain

fraction of the time saved by way of a bonus. The plan is also known as incentive plan because a worker has the incentive to earn more wages by completing the work in less time.

44. Write note on Halsey Premium Plan.

Under this method, the worker is given wages for the actual time taken and a bonus equal to half of wages for time saved. The standard time for doing each job or operation is fixed. In practice the bonus may vary from $33\frac{1}{3}\%$ to $66\frac{2}{3}\%$ of the wages of the time saved.

45. Write note on Rowan Plan.

The difference between Halsey plan and Rowan Plan is the calculation of the bonus. Under this method also the workers are guaranteed the time wages but the bonus is that proportion of the wages of the time taken which the time saved bears to the standard time allowed.

46. What is Overheads?

Cost related to a cost center or cost unit may be divided into two i.e. Direct and Indirect cost. The Indirect cost is the overhead cost and is the total of indirect material cost, indirect labour cost, indirect expenses.

47. Define of Overheads:

CIMA defines indirect cost as **“Expenditure on labour, materials or services which cannot be economically identified with a specific salable cost per unit”**.

48. Explain the Classification of Overheads.

Overheads can be classified on the following basis:

i) Function-wise classification:

Overheads can be divided into the following categories on functional basis.

(a) Manufacturing or production overheads eg: indirect materials like lubricants, cotton wastes, indirect labour like salaries and wages of supervisors, inspectors, storekeepers, indirect expenses like rent, rates and insurance of factory, power, lighting of factory, welfare expenses like canteen, medical etc.

(b) Administration overheads : indirect materials like office stationery and printing, indirect labour salaries of office clerks, secretaries, accountants, indirect expenses rent, rates and insurance of office, lighting heating and cleaning of office, etc.

(c) Selling and Distribution overheads: indirect materials like catalogues, printing, stationery, price list, indirect salary of salesmen, agents, travellers, sales managers, indirect expenses like rent, rates and insurance of showroom, finished goods, godown etc., advertising expenses, after sales service, discounts, bad debts etc.

ii) Behavior-wise classification:

Overheads can be classified into the following categories as per behavior pattern.

(a) Fixed overheads like managerial remuneration, rent of building, insurance of building, plant etc.

(b) Variable overheads like direct material and direct labour.

(c) Semi-variable overheads like depreciation, telephone charges, repair and maintenance of buildings, machines and equipment etc.

iii) Element-wise classification:

Overheads can be classified into the following categories as per element.

(a) Indirect materials

(b) Indirect labour

(c) Indirect expenses

49.Explain Allocation and Apportionment of Overhead to Cost Centres (or) Departmentalisation of Overhead)

When all the items are collected properly under suitable account headings, the next step is allocation and apportionment of such expenses to cost centres. This is also known as departmentalization or primary distribution of overhead. A factory is administratively divided into different departments like Manufacturing or Producing department, Service department, partly producing departments.

Allocation of Overhead Expenses

Allocation is the process of identification of overheads with cost centres. An expense which is directly identifiable with a specific cost centre is allocated to that centre. Thus it is allotment of a whole item of cost to a cost centre or cost unit. For example the total overtime wages of workers of a department should be charged to that department. The electricity charges of a department if separate meters are there should be charged to that particular department only.

Apportionment of Overhead Expenses

Cost apportionment is the allotment of proportions of cost to cost centres or cost units. If a cost is incurred for two or more divisions or departments then it is to be apportioned to the different departments on the basis of benefit received by them. Common items of overheads are rent and rates, depreciation, repairs and maintenance, lighting, works manager's salary etc.

Basis of Apportionment

Suitable bases have to be found out for apportioning the items of overhead cost to production and service departments and then for reapportionment of service departments costs to other service and production departments. The basis selected should be correlated to the expenses and the expense

should be measurable by the basis. This process of distribution of common expenses over the departments on some equitable basis is known as 'Primary Distribution'.

50.What are the Direct Allocation?

Under direct allocation, overheads are directly allocated to the department for which it is incurred. Example overtime premium of workers engaged in a particular department, power, repairs of a particular department etc.

- (i) Direct Labour/Machine Hours.**
- (ii) Value of materials passing through cost centres.**
- (iii) Direct wages.**

51.What are the Direct re-distribution method?

Under this method, the costs of service departments are directly apportioned to production departments without taking into consideration any service from one service department to another service department.

Thus, proper apportionment cannot be done on the assumption that service departments do not serve each other and as a result the production departments may either be overcharged or undercharged.

The share of each service department cannot be ascertained accurately for control purposes. Budget for each department cannot be prepared thoroughly. Therefore, Department Overhead rates cannot be ascertained correctly.

52.What are the Step Distribution Method?

Under this method, the cost of most serviceable department is first apportioned to other service departments and production departments. The next service department is taken up and its cost is apportioned and this process goes on till the cost of the last service department is apportioned. Thus, the cost of last service department is apportioned only to production departments.

53.What are the Reciprocal Services Method?

In order to avoid the limitation of Step Method, this method is adopted. This method recognizes the fact that if a given department receives service from another department, the department receiving such service should be charged. If two departments provide service to each other, each department should be charged for the cost of services rendered by the other.

54.What are the Simultaneous Equation method?

Under this method, the true cost of the service departments are ascertained first with the help of simultaneous equations; these are then redistributed to production departments on the basis of given percentage. The following illustration may be taken to discuss the application of this method.

55.What are the Repeated Distribution Method?

Under this method, the totals are shown in the departmental distribution summary, are put out in a line, and then the service department totals are exhausted in turn repeatedly according to the agreed percentages until the figures become too small to matter.

56.What are the Trial and Error Method?

Under this method, the cost of one service department is apportioned to another centre. The cost of another centre plus the share received from the first centre is again apportioned to the first cost centre and this process is repeated till the balancing figure becomes negligible.

57.Give the Meaning of Absorption of Overhead.

Absorption means the distribution of the overhead expenses allotted to a particular department over the units produced in that department. Overhead absorption is accomplished by overhead rates.

58.State the Methods of Absorption of Manufacturing Overhead.

The following are the main methods of absorption of manufacturing or factory overheads.

(a) Direct Material Cost Method.

Under this method percentage of factory expenses to value of direct materials consumed in production is calculated to absorb manufacturing overheads. The formula is **Overhead Rate = Production Overhead Expenses (Budgeted) / Anticipated Direct Material Cost.**

(b) Direct Labour Cost (or Direct Wages) Method.

This is a simple and easy method and widely used in most of the concerns. The overhead rate is calculated as under: **Overhead Rate= Production Overhead Expenses / Direct Labour Cost.**

(c) Prime Cost Method.

Under this method the recovery rate is calculated dividing the budgeted overhead expenses by the aggregate of direct materials and direct labour cost of all the products of a cost centre. The formula is **Overhead Recovery Rate = Production Budgeted Overhead Expenses/ Anticipated Direct Materials and Direct Labour Cost.**

(d) Direct Labour (or Production) Hour Method.

This rate is obtained by dividing the overhead expenses by the aggregate of the productive hours of direct workers. The formula is **Overhead rate = Production Overhead Expenses / Direct Labour Hours.**

(e) Machine Hour Rate.

Machine hour rate is the cost of running a machine per hour. It is one of the methods of absorbing factory expenses to production. What is needed for computing the machine hour rate is to divide overhead expenses for a specific machine or group of machines for a period by the operating hours of the machine or the group of machines for the period. It is calculated as follows: **Machine hour rate = Amount of overheads / Machine hours during a given period.**

(f) Rate Per Unit of Production.

This method is simple, direct and easy. It is suitable for mining and other extractive industries, foundries and brick laying industries, where the output is measured in convenient physical units like number, weight, volume etc. the rate is calculated as under: **Overhead Rate= Overhead expenses (budgeted) / Budgeted production.**

(g) Sale Price Method:

Under this method, budgeted overhead expenses are divided by the sale price of units of production in order to calculate the overhead recovery rate. The formula is sale price of units of production in order to calculate the overhead recovery rate, the formula is **Overhead Recovery Rate= Budgeted overhead expenses / Sale value of units of production.**

59.What is mean by Unit Costing?

It is an important method of costing. It is also known as output costing or single costing. It is used to ascertain the cost of producing a unit of output.. This method is called 'unit' costing since every unit of production is identical in all respects and the cost unit is a standard product.

60.Define of by Unit Costing:

According to J.R Batliboi, **"Single or output cost system is used in business where a standard product is turned out and it is desired to find out the cost of a basic unit of production."**

61.State the Features of Unit Costing.

1. It is used where output can be measured in convenient physical unit
2. It is followed in concern s engaged in the production of a single product
3. It is followed in industries where manufacturing process is continuous
4. It is followed where all units of production are identical

62. Give the meaning of Cost sheet.

Cost sheet is a device used to determine and present the cost under unit costing. It is a statement of costs incurred at each level of manufacturing a product or service. In a Cost sheet all the elements of cost is taken into consideration. It includes Prime cost, Factory/manufacturing cost, cost of production, cost of sale Profit/loss etc.

63. State the Treatment of Stock.

While preparing a cost sheet we have to consider the opening and closing stocks of the following three items

- 1. Stock of Raw materials**
- 2. Stock of finished goods**
- 3. Stock of work in progress**

Stock of Raw materials:

In order to get the cost of material consumed, opening stock of material is added to the cost of raw materials purchased and closing stock of raw materials is deducted from it.

Stock of finished goods:

It is adjusted immediately after ascertaining the cost of production.

Stock of Work - in - progress:

The Cost of work in progress are adjusted at the work cost stage.

64. Give the meaning of Tenders or Quotations.

A tender or quotation is an offer made by a person to supply certain goods at a specified price. It is an estimated price which is determined in advance of production. A reasonable margin of profit is added to the estimated cost to get the tender price.

A tender has to be prepared very carefully as the receipts of orders depend upon the acceptance of quotations or tenders supplied by the manufacturers. It requires information regarding Prime cost, works cost, administration and selling overhead cost and profit of the preceding period.

65. Define of Job Costing.

It means ascertaining costs of an individual job, work order or project separately. According to ICMA London, **“Job costing is that form of specific order costing which applies where work is undertaken to customer’s specific requirements and each order is of comparatively of short duration.”**

66. What is Job Costing?

Under this method of costing, each job is considered to be a distinct cost unit. As such, each job is separately identifiable. In the case of a job, work is usually carried out within the factory or

workshop. Sometimes, a job is accomplished even in the customer's premises. This method of costing is applicable to ship , printing, engineering, machine tools, readymade garments, shoes, hats, furniture, musical instruments, interior decorations etc.

67.State the Features of Job Costing.

1. Each job has its own characteristics, depending up on the special order placed by the customer.
2. Each job is treated as a cost unit.
3. A separate job cost sheet is made out for each job on the basis of distinguishing numbers.
4. A separate work in progress ledger is maintained for each job.
5. The duration of the job is normally a short period.
6. Profit or loss is determined for each job independently of others.

68.What are the Requisites of Job costing system?

1. A sound system of production control.
2. An effective time booking system.
3. Clearly defined cost centre.
4. Appropriate overhead absorption rate, and
5. Proper material issue pricing method.

69.State the Procedure for Job order costing system.

The Procedure for job order costing system may be summarized as follows:-

1. Receiving an enquiry from the customer regarding price, quality etc
2. Make an estimation of the price of the job after considering the cost incurred for the execution of similar job in the previous year
3. Receiving an order, if the customer is satisfied with the quotation price and other terms of execution.
4. If the job is accepted, a production order is made by the Planning department.
5. The costs are collected and recorded for each job under separate production order Number, and a Job Cost Sheet is maintained for that purpose.
6. On completion of job, a completion report is sent to costing department.

70.What do you Meaning of Contract Costing?

It is a special form of job costing and it is the most appropriate method to be adopted in such industries as building and construction work, civil engineering, mechanical fabrication and ship building. In other words, it is a form of specific order costing which applies where the work is

undertaken to customer's requirements and each order of long duration as compared to job costing. It is also known as terminal costing.

71. Define of Contract Costing.

The official CIMA terminology defines contract costing as “**A form of specific order costing in which costs are attributed to individual contracts.**”

72. Bring out the features Contract Costing.

1. Each contract itself a cost unit.
2. Work is executed at customers site.
3. The existence of sub contract.
4. Most of the expenses incurred upon the contracts are direct.
5. Cost control is very difficult in contract costing.

73. What are the Types of contracts?

Generally there are three types of contracts:

- 1. Fixed price contracts:** Under these contracts both parties agree to a fixed contract price.
- 2. Fixed price contract:** with Escalation clause
- 3. Cost plus contract:** Under this contract no fixed price could be settled for a contract.

74. What is Contract Account?

A contract account is a nominal account in nature. It is prepared to find out the cost of contract and to know profit or loss made on the contract.

A contractor may undertake a number of contracts at a time. For each contract a separate account is opened. In the contract account all direct cost such as material, labour and other direct expenses incurred during an accounting period are debited and the indirect expenses are apportioned on an equitable basis.

The differences between the two sides are known as Notional profit or notional loss.

75. Explain the special terms in Contract Account?

1. Work in Progress: It is the unfinished contract at the end of the accounting period and it includes amount of work certified and amount of work uncertified. Work in progress is an asset, shown in the balance sheet by deducting there from any advance received from the contractee.

2. Work certified: The sales value of work completed as certified by the architect is known as 'work certified'. In the case of contracts of long duration, the amount payable by the customer to the contractor is based on the sales value of work done as certified by the architect. At the end of the financial year, the total sales value of work done and certified by the architect is credited to the contract account.

3. Work Uncertified: It means work which has been carried out by the contractor but has not been certified by the architect. Sometimes, work which is complete remains uncertified at the end of the financial year. The reasons for the same may be

a. Work not sufficient enough to be certified.

b. Work has not reached the stipulated stage to qualify for certification It is always valued at cost and credited to the contract account.

4. Retention money: Regardless of the amount of work certified, the contractor is paid a specified percentage of the same and the balance is held or retained by the contractee. This is because of the fact that the contractee has to safe guard himself against any contingency arising from the non fulfillment of the terms of the contract by the contractor. The unpaid balance of work certified or the amount held back or retained by the contractee is known as 'retention money'.

5. Sub contract: Sometimes the contractor enters into contracts with another contractor to give a portion of work undertaken by him. In such cases the work performed by the subcontractor s forms a direct charge to the contract concerned. Sub contract cost will be shown on the debit side of the contract account.

6. Escalation clause: This is clause which is provided in the contract to cover up any increase in the price of the contract due to increase in the prices of raw material or labour or in the utilization of any other factors of production. If material and labour utilization exceeds a particular limit, the customer agrees to bear the additional cost occasioned by excessive utilization. Here, the contractor has to satisfy the customer that excessive utilization is not the result of decreased efficiency.

76.What are the Treatment of Plant and Machinery?

One of the distinguishing features of a contract is the use of special plant and machinery.

1. At the time of issue of plant to contract the contract account is debited with the full value of the plant.
2. In the second method, contract account is debited with an hourly rate of depreciation for the number of hours the plant is used on the contract. A cost centre is set up for each machine.

77.What are the Profit on Incomplete Contract?

In the case of a small contract extending over the financial period, profit or loss on the same may be ascertained by crediting it with the contract price due by the contractee. This procedure cannot be adopted in the case of contracts extending beyond the accounting period, and taking a long time for completion. If there is any profit upon the incomplete contract, it cannot be taken as actual profit.

78.What is Process Costing?

Process costing is the method of costing applied in the industries engaged in continuous or mass production. Process costing is a method of costing used to ascertain the cost of a product at each process or stage of manufacturing.

79.Define of Process Costing:

According to ICMA terminology, **“Process Costing is that form of operation costing which applies where standardized goods are produced”.**

80.State the Characteristics of Process Costing.

1. Production is continuous.
2. Products pass through two or more distinct processes of completion.
3. Products are standardized and homogeneous.
4. Products are not distinguishable in processing stage.
5. The finished product of one process becomes the raw material of the subsequent process.
6. Cost of material, labour and overheads are collected for each process and charged accordingly.

81.State the Difference between Process Costing and Job Costing.

Process Costing

Job Costing

1. Production is continuous	1. Production is according to customers' orders
2. Production is for stock	2. Production is not for stock
3. All units produced are identical or homogeneous	3. Each job is different from the other
4. There is regular transfer of cost of one process to subsequent processes	4. There is no regular transfer of cost from one job to another
5. Work in progress always exists	5. Work in progress may or may not exist

82.Describe Procedure for Process Costing.

1. Each process is separately identified. Separate process account is opened for each process.
2. Along with 'Particulars Column', two columns are provided on both sides of the process account – units (quantity) and amount (Rupees).

3. All the expenses are debited in the respective process account.
4. Wastage, sale of scrap, by-products etc are reentered on the credit side of the process account.
5. The difference between debit and credit side shows the cost of production and output of that particular process which is transferred to the next process.
6. The cost per unit in every process is calculated by dividing the net cost by the output.
7. The output of last process is transferred to the Finished Stock Account.
8. Incomplete units at the end of the each period in every process are converted in terms of completed units.

83.List out the Preparation of Process Accounts.

The preparation of Process Account depends upon the following situations,

1. Simple Process Account.
2. Process costing with normal process loss.
3. Process costing with abnormal process loss.
4. Process costing with abnormal process gains.
5. Inter – process profits.

84.What is Simple Process Account?

Under this case it is very easy to prepare process account. A separate account is opened for each process. All costs are debited to the process account. The total cost of the process is transferred to the next process. At the end of each process the cost per unit is obtained by dividing the total cost by the number of units.

85.What is Normal Process Loss?

This is the loss which is unavoidable on account of inherent nature of production process. It arises under normal conditions. It is usually calculated as a certain percentage of input. Normal process loss includes either waste or scrap or both. Waste is unsalable and has no value. Loss in weight is an example of waste. Loss in weight should be credited to the concerned process account.

86.What is Abnormal Gain? or (Abnormal Effective)

Sometimes actual loss or wastage in a process is less than expected normal loss. In this case the difference between actual loss and expected loss is known as abnormal gain or abnormal effective. It is the excess of actual production over normal output. Abnormal gain is valued in the same manner as abnormal loss.

87.What are the Work-in-Progress?

In most of the firms manufacturing is on a continuous basis and the problem of work-in progress is quite common. The work-in-progress consists of direct materials, direct wages and production overhead.

88.What is Operating Costing? or (Service Costing)

It is the costing procedure used for determining the cost of per unit of service rendered. It is a method of costing applied to undertaking which provides service rather than production of commodities. The services may be in the form of transport, supply service, welfare service, etc.

89.What is Transport costing?

Transport industries include Air, Water, Rail and Road. They render services to the community at large. We have to give utmost care while selecting the cost unit. The cost unit of other forms operation costing is quite different from that of a service undertaking. The cost unit of a service organization is a composite unit. The important factors to be considered includes the number of passengers, tonnage carried, distance covered etc.

90.State the Classification of Costs.

Operating costs of a transport undertaking comprising different items, which are classified under the following three groups.

1. Standing or fixed charges: These charges are incurred in spite of the kilometers run. It is fixed in nature. Eg. Insurance, Motor vehicle tax, license fee, rent, salary of operating manager etc.

2. Maintenance charges: It includes semi variable expenses Eg. Tyres and tubes, repairs and paintings etc.

3. Operating and running charges: These charges vary more or less in direct proportion to kilometers. All the variable charges of running vehicles are included in this group.

Generally it includes, petrol, oil,, grease etc., wages of driver, attendant if payment is related to time or distance of trip etc. In the place of the above classification, all expenses can be divided into two fixed cost and variable costs. Here, both maintenance charges and running charges are considered as variable charges.

91.What is Selection of Unit?

In transport costing, a composite unit such as passenger mile or passenger kilometer or tone kilometer is often selected. Such unit takes into account both the number of passengers or weight of goods carried and distance run.