

AMIT TALDA CLASSES

CS EXECUTIVE

OLD SYLLABUS

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THEORY NOTES

OF

COST & MANAGEMENT ACCOUNTING

By

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TARGET OF PREPARING THESE NOTES: 60+ MARKS

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CHAPTER 1: INTRODUCTION

DEFINITION OF COSTING, COST ACCOUNTING AND COST ACCOUNTANCY:

COST	(a) The amount of expenditure (actual or notional) incurred on or attributable to a specified article, product or activity. (here the word cost is used as a noun) (b) To ascertain the cost of a given thing. (here the word cost is used as a verb)
COSTING	Costing is defined as “the technique and process of ascertaining costs”. Costing involves in classification, recording, allocation, appropriation of expenses incurred to facilitate the determination of cost of the product or service. Costing is the classifying, recording and appropriate allocation of expenditure for the determination of cost of products or services and for the presentation of suitably arranged data for purposes of control and guidance of management. It includes the ascertainment of cost of every order, job, contract process, service units as may be appropriate.
COST ACCOUNTING	Cost Accounting is defined as "the process of accounting for cost which begins with the recording of income and expenditure or the bases on which they are calculated and ends with the preparation of periodical statements and reports for ascertaining and controlling costs."
COST ACCOUNTANCY	Cost Accountancy has been defined as “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 there from for the purpose of managerial decision making.”

OBJECTIVES OF COST ACCOUNTING

The main objectives of Cost Accounting are as follows:

Ascertainment Of Cost	There are two methods of ascertaining costs, viz., Post Costing and Continuous Costing. <u>Post Costing</u> means, analysis of actual information as recorded in financial books. It is accurate and is useful in the case of “Cost plus Contracts” where price is to be determined finally on the basis of actual cost. <u>Continuous Costing</u> , aims at collecting information about cost as and when the activity takes place so that as soon as a job is completed the cost of completion would be known. This involves careful estimates being prepared of overheads. In order to be of any use, costing must be a continuous process.
Determination Of Selling	Though the selling price of a product is influenced by market conditions, which are beyond the control of any business, it is still

Price	possible to determine the selling price within the market constraints. For this purpose, it is necessary to rely upon cost data supplied by Cost Accountants.
Cost Control	To exercise cost control, broadly speaking the following steps should be observed: (i) Determine clearly the objective, i.e., pre-determine the desired results; (ii) Measure the actual performance; (iii) Investigate into the causes of failure to perform according to plan; and (iv) Institute corrective action.
Cost Reduction	The three-fold assumptions involved in the definition of cost reduction may be summarized as under : (a) There is a saving in unit cost. (b) Such saving is of permanent nature. (c) The utility and quality of the goods and services remain unaffected, if not improved.
Ascertaining The Profit Of Each Activity	The profit of any activity can be ascertained by matching cost with the revenue of that activity. The purpose under this step is to determine costing profit or loss of any activity on an objective basis.
Assisting Management In Decision Making	Decision making is defined as a process of selecting a course of action out of two or more alternative courses. For making a choice between different courses of action, it is necessary to make a comparison of the outcomes, which may be arrived under different alternatives. Such a comparison has only been made possible with the help of Cost Accounting information.

ADVANTAGES OF A COST ACCOUNTING SYSTEM:

Identify Unprofitable Activities or Products	A good Cost Accounting System helps in identifying unprofitable activities, losses or inefficiencies in any form.
Reduces Cost	The application of cost reduction techniques, operations research techniques and value analysis technique helps in achieving the objective of economy in concern's operations.
Identification of Root Causes	Cost Accounting is useful for identifying the exact causes for decrease or increase in the profit/loss of the business. It also helps in identifying unprofitable products or product lines so that these may be eliminated or alternative measures may be taken.
Helps in Decision Making	It provides information and data to the management to serve as guides in making decisions involving financial considerations. Guidance may also be given by the Cost Accountant on a host of problems such as, whether to purchase or manufacture a given component, whether to accept orders below cost, which machine to purchase when a number of choices are available.

Helps in Price Fixation	Cost Accounting is quite useful for price fixation. It serves as a guide to test the adequacy of selling prices. The price determined may be useful for preparing estimates or filling tenders.
Helps in Compliances	A system of costing provides figures for the use of Government, Wage Tribunals and other bodies for dealing with a variety of problems. Some such problems include price fixation, price control, tariff protection, wage level fixation, etc.
Identification of Idle Capacity Cost	The cost of idle capacity can be easily worked out, when a concern is not working to full capacity.

LIMITATIONS OF COST ACCOUNTING:

The cost accounting is subject to the following limitations:

- (1) It presents the base for taking the best decisions, but it does not give outright solution to the problem.
- (2) Cost varies with purpose. Therefore, cost called for a certain purpose will not be suitable for other purposes.
- (3) Cost accounting is not an exact science. It involves inherent elements of judgment.
- (4) It lacks a uniform procedure
- (5) A suitable system is to be devised for each individual concern and it would be time consuming and expensive.
- (6) Existence of numerous methods for apportionment and absorption of overheads, segregation of fixed and variable costs, division of costs into controllable and non – controllable costs, classification of costs into normal and abnormal costs, valuation of stocks, provision for depreciation etc. may lead to cost differences and it is difficult to ascertain true cost of product or service.
- (7) Most of cost accounting techniques are based on some presumed notions.
- (8) Different views are held for inclusion of certain items of cost in ascertainment of total cost.
- (9) Many formalities are to be observed to obtain benefit from costing system. Small and medium concerns may not be in a position to install a costing system.
- (10) If the system is not revised as per the changing circumstances, it will become a matter of routine forms and statements.

VARIOUS REPORTS PROVIDED BY COST ACCOUNTING DEPARTMENT

Various reports provided by cost accounting department:

- ◆ Cost sheets
- ◆ Consumption of material statements
- ◆ Labour utilization statements
- ◆ Labour turnover statements

- ♦ Overheads incurred compared with the budget
- ♦ Sales effected compared with budgets
- ♦ Reconciliation of actual profits earned with budgeted profits
- ♦ The total cost of abnormally spoiled work in factory and abnormal losses
- ♦ Expenses incurred on R & D as compared with those budgeted profits

COST ACCOUNTING VS. FINANCIAL ACCOUNTING:

Basis	Financial Accounting	Cost Accounting
Objective	It provides information about the financial performance	It provides information of ascertainment of cost for the purpose of cost control and decision making
Nature	It classifies records, presents and interprets transactions in terms of money	It classifies, records, presents, and interprets in a significant manner the material, labour and overhead costs
Recording of data	It records historical data	It makes use of both the historical cost and pre-determined cost
Users of information	The users of financial accounting statements are shareholders, creditors, financial analysts and government and its agencies, etc	The cost accounting information is used by internal management
Analysis of cost and profits	It shows either profit & loss of organisation	It provides the details of cost and profit of each product, process, job, contracts, etc
Time period	Financial Statements are prepared usually for a year	Its reports and statements are prepared as and when required
Presentation of Information	A set format is used for presenting financial information	There are no set formats for presenting cost information.

RELATIONSHIP OF COST DEPARTMENT WITH OTHER DEPARTMENT

Manufacturing Department	The factory superintendents and engineers design, plan and control products till their finished stage. The scheduling, producing and inspecting processes of jobs and products are measured for efficiency with respect to costs incurred.
Research & Design Department	Cost estimates for material, labour and overhead and process are needed before deciding about accepting or rejecting a design.
Personnel Department	The personnel records, wage – rates agreed upon etc., forms the basis for computing the pay – rolls.
Finance Department	This department relies on the cost department for accounting, budgeting, cash – flow statements, valuation of stocks etc.
Marketing Department	It needs a good product with a competitive price. While costs do not determine the price, they do indicate, what the price should be. Costs data helps to distinguish profitable and non-profitable products.
Public Relations Department	It establishes good relation between the company and its customers, shareholders and employees. The cost department provides

	information regarding prices, wages, etc.
Legal Department	The affairs of the company should adhere to the law, for example, taxes, maintenance of books etc.

ESSENTIAL OF A GOOD COSTING ACCOUNTING SYSTEM

The essential features, which a good Cost Accounting System should possess, are as follows:

- (i) Cost Accounting System should be **TAILOR-MADE**, practical, simple and capable of meeting the requirements of a business concern.
- (ii) The data to be used by the Cost Accounting System should be **ACCURATE**; otherwise it may distort the output of the system.
- (iii) Necessary **COOPERATION** and participation of executives from various departments of the concern is essential for developing a good system of Cost Accounting.
- (iv) The Cost of installing and operating the system should **JUSTIFY THE RESULTS**.
- (v) The system of costing should not sacrifice the utility by introducing meticulous and unnecessary details.
- (vi) A **CAREFULLY PHASED PROGRAMME** should be prepared by using network analysis for the introduction of the system.
- (vii) Management should have a faith in the Costing System and should also provide a helping hand for its development and success.

PRACTICAL DIFFICULTIES FACED IN INSTALLATION:

The practical difficulties with which a Cost Accountant is usually confronted with while installing a costing system in a manufacturing company are as follows:

- (i) Lack of top management support: Installation of a costing system does not receive the support of top management. They consider it as interference in their work. They believe that such, a system will involve additional paperwork. They also have a misconception in their minds that the system is meant for keeping a check on their activities.
- (ii) Resistance from cost accounting departmental staff: The staff resists because of fear of losing their jobs and importance after the implementation of the new system.
- (iii) Non-cooperation from user departments: The foremen, supervisor and other staff members may not cooperate in providing requisite data, as this would not only add to their responsibilities but will also increase paper work of the entire team as well.
- (iv) Shortage of trained staff: Since cost accounting system's installation involves specialized work, there may be a shortage of trained staff.

To overcome these practical difficulties, necessary steps required are:

- To sell the idea to top management – To convince them of the utility of the system.

- Resistance and non-cooperation can be overcome by behavioral approach. To deal with the staff concerned effectively. Proper training should be given to the staff at each level.
- Regular meetings should be held with the cost accounting staff, user departments, staff and top management to clarify their doubts / misgivings.

AMIT TALDA CLASSES

CLASSIFICATION OF COST AS PER NATURE:

Cost Object – Anything for which a separate measurement of cost is desired. Examples of cost objects include a product, a service, a project, a customer, a brand category, an activity, a department, a programme.

Cost Unit - It is a unit of product, service or time (or combination of these) in relation to which costs may be ascertained or expressed. Cost units are usually the units of physical measurement like number, weight, area, volume, length, time and value.

A **Cost driver** is a factor or variable which effect level of cost. Generally it is an activity which is responsible for cost incurrence. Level of activity or volume of production is the example of a cost driver. An activity may be an event, task, or unit of work etc.

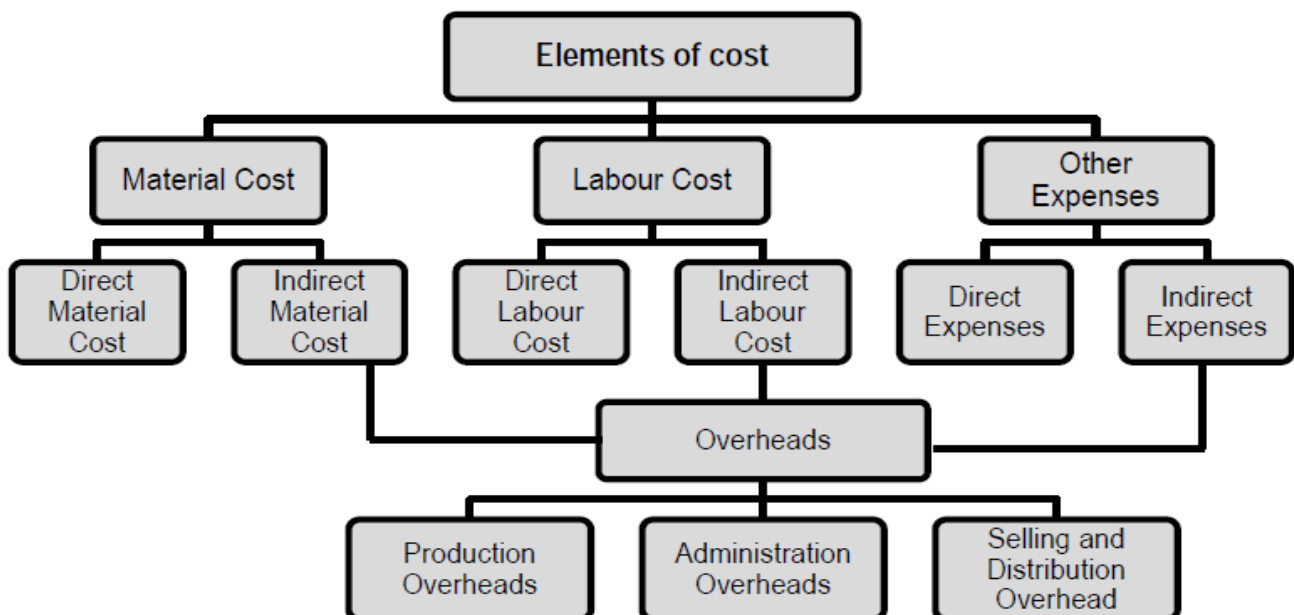
CIMA Official terminology defines cost driver as “Factor influencing the level of cost. Often used in the context of ABC to denote the factor which links activity resource consumption to product outputs, for example the number of purchase orders would be a cost driver for procurement cost.”

TRACEABILITY OF AN OBJECT:

Direct Costs – Costs that are related to the cost object and can be traced in an economically feasible way.

Indirect Costs – Costs that are related to the cost object but cannot be traced to it in an economically feasible way.

ELEMENTS OF COST:



- (i) **Direct Materials:** Materials which are present in the finished product(cost object) or can be economically identified in the product are called direct materials. For example, cloth in dress making; materials purchased for a specific job etc.

- (ii) **Direct Labour** : Labour which can be economically identified or attributed wholly to a cost object is called direct labour. For example, labour engaged on the actual production of the product or in carrying out the necessary operations for converting the raw materials into finished product.
- (iii) **Direct Expenses** : It includes all expenses other than direct material or direct labour which are specially incurred for a particular cost object and can be identified in an economically feasible way.
- (iv) **Indirect Materials**: Materials which do not normally form part of the finished product (cost object) are known as indirect materials. These are —
Stores used for maintaining machines and buildings (lubricants, cotton waste, bricks etc.) Stores used by service departments like power house, boiler house, canteen etc.
- (v) **Indirect Labour** : Labour costs which cannot be allocated but can be apportioned to or absorbed by cost units or cost centres is known as indirect labour. Examples of indirect labour includes - charge hands and supervisors; maintenance workers; etc.
- (vi) **Indirect expenses** : Expenses other than direct expenses are known as indirect expenses. Factory rent and rates, insurance of plant and machinery, power, light, heating, repairing, telephone etc., are some examples of indirect expenses.
- (vii) **Overheads** : It is the aggregate of indirect material costs, indirect labour costs and indirect expenses. The main groups into which overheads may be subdivided are the following :
 - a. Production or Works overheads
 - b. Administration overheads
 - c. Selling overheads
 - d. Distribution overheads

ON THE BASIS OF CASH OUTFLOWS:

Explicit Costs –

- Other name: These costs are also known as “Out of pocket costs” or “Accounting Costs”
- Meaning: Refer to costs involving immediate payment of cash.
- Examples: Salaries, wages, postage, telegram, printing and stationery, interest on loan etc. are some examples of explicit costs involving immediate cash payment.

Implicit Costs –

- These costs do not involve any immediate cash payment.
- They are not recorded in the books of account.
- They are also known as “Economic Costs” or “Notional Cost”
- Example: Interest on Internally Generated Funds, Salary to Owner, Notional Rent, etc

ON THE BASIS OF CONTROL:

Controllable:

- These are the costs which can be influenced by the action of a specified person in an organisation.
- In every organisation, there are a number of departments which are called responsibility centres, each under the charge of a specified level of management.

- Cost incurred by these responsibility centres are influenced by the action of the incharge of the responsibility centre.
- Thus, any cost that an organizational unit has the authority to incur may be identified as controllable cost.

Non-Controllable Cost:

- These are the cost which cannot be influenced by the action of a specified member of an undertaking.
- For example, expenditure incurred by “Tool Room” is controllable by the Tool Room Manager but the share of Tool Room Expenditure, which is apportioned to the Machine Shop cannot be controlled by the manager of the Machine Shop.
- However, the distinction between the controllable and non-controllable cost is not very sharp and is sometimes left to individual judgment to specify a cost as controllable or non-controllable in relation to a particular individual manager.

Cost Allocation - It is defined as the **assignment** of the indirect costs to the chosen cost object.

Cost Absorption –

- Definition: It is defined as the process of absorbing all indirect costs allocated to or apportioned over a particular cost centre or production department by the units produced.
- Hence, while allocating, the relevant cost objects would be the concerned cost centre or the concerned department, while, the process of absorption would consider the units produced as the relevant cost object.
- For example, the overhead costs of a lathe centre may be absorbed by using a rate per lathe hour.
- Cost absorption can take place only after cost allocation.
- In other words, the overhead costs are either allocated or apportioned over different cost centres and afterwards they are absorbed on equitable basis by the output of the same cost centres.

Cost Apportionment: Apportionment refers to the distribution of overheads among departments or cost centres on an equitable basis. In other words, apportionment involves charging a share of the overheads to a cost centre or cost unit.

Responsibility Centre –

- It is defined as an activity centre of a business organisation entrusted with a special task.
- Under modern budgeting and control, financial executives tend to develop responsibility centres for the purpose of control. Responsibility centres can broadly be classified into three categories.
- They are :
 - (a) Cost Centres ;
 - (b) Profit Centres ; and
 - (c) Investment Centres ;

Cost Centre –

- Definition: It is defined as a location, person or an item of equipment (or group of these)

for which cost may be ascertained and used for the purpose of Cost Control.

- Cost Centres are of two types, viz., Personal and Impersonal.
- A Personal cost centre consists of a person or group of persons and an Impersonal cost centre consists of a location or an item of equipment (or group of these).
- In a manufacturing concern there are two main types of Cost Centres as indicated below :

(i) Production Cost Centre: It is a cost centre where raw material is handled for conversion into finished product. Here, both direct and indirect expenses are incurred. Machine shops, welding shops and assembly shops are examples of production Cost Centres.

(ii) Service Cost Centre: It is a cost centre which serves as an ancillary unit to a production cost centre. Power house, gas production shop, material service centres, plant maintenance centres are examples of service cost centres.

Profit Centres - Centres which have the responsibility of generating and maximizing profits are called Profit Centres.

Investment Centres - Those centres which are concerned with earning an adequate return on investment are called Investment Centres.

ASSOCIATION WITH THE PRODUCT

Product Costs –

- These are the costs which are associated with the purchase and sale of goods (in the case of merchandise inventory).
- In the production scenario, such costs are associated with the acquisition and conversion of materials and all other manufacturing inputs into finished product for sale.
- Hence, under marginal costing, variable manufacturing costs and under absorption costing, total manufacturing costs (variable and fixed) constitute inventoriable or product costs.
- Under the Indian GAAP, product costs will be those costs which are allowed to be a part of the value of inventory as per Accounting Standard 2, issued by the Council of the Institute of Chartered Accountants of India.

Period Costs - These are the costs, which are not assigned to the products but are charged as expenses against the revenue of the period in which they are incurred. All non-manufacturing costs such as general and administrative expenses, selling and distribution expenses are recognised as period costs.

ON THE BASIS OF ANALYTICAL AND DECISION MAKING PURPOSE:

OPPORTUNITY COST- This cost refers to the value of sacrifice made or benefit of opportunity foregone in accepting an alternative course of action. It is a Notional Cost which is not actually paid in Cash. It is also called as Implicit Cost or Imputed Cost.

For example, a firm financing its expansion plan by withdrawing money from its bank deposits. In such a case the loss of interest on the bank deposit is the opportunity cost for carrying out the expansion plan.

OUT-OF-POCKET COST - It is that portion of total cost, which involves cash outflow. This

cost concept is a **short-run concept** and is used in decisions relating to **fixation of selling price in recession, make or buy, etc.**

SHUT DOWN COSTS- Those costs, which continue to be, incurred even when a plant is temporarily shut down, e.g. Rent, Rates, Depreciation, etc. These costs cannot be eliminated with the closure of the plant. In other words, all fixed costs, which cannot be avoided during the temporary closure of a plant, will be known as shut down costs.

How Shut Down Decision is taken?

Shut Down Cost is computed and is compared with existing losses of the business as normally this decision is taken due to losses. If Existing Losses exceeds Shut Down Cost, Then it is better to Shut Down and Cut losses. However, if Existing Losses are less than Shut Down Costs, then it is not recommended to Shut Down.

SUNK COSTS- Historical costs incurred in the past are known as sunk costs. They play no role in decision making in the current period.

For example, in the case of a decision relating to the replacement of a machine, the written down value of the existing machine is a sunk cost and therefore, not considered.

DISCRETIONARY COSTS- Such costs are **not tied to a clear cause and effect relationship** between inputs and outputs. They usually arise from periodic decisions regarding the maximum outlay to be incurred. Examples include advertising, public relations, executive training etc.

STANDARD COST- A pre-determined cost, which is calculated from managements 'expected standard of efficient operation' and the relevant necessary expenditure. It may be used as a basis for **price fixing** and for **cost control** through variance analysis.

MARGINAL COST- The amount at any given volume of output by which aggregate costs are changed if the volume of output is increased or decreased by one unit.

Note: In this context a unit may be a single article, an order, a stage of production, a process of a department. It relates to change in output in the particular circumstances under consideration within the capacity of the concerned organisation.

PRE-PRODUCTION COSTS: These costs forms the part of development cost, incurred in making a trial production run, preliminary to formal production. These costs are incurred when a new factory is in the process of establishment or a new project is undertaken or a new product line or product is taken up, but there is no established or formal production to which such costs may be charged. These costs are normally treated as deferred revenue expenditure (except the portion which has been capitalised) and charged to the costs of future production.

RESEARCH AND DEVELOPMENT COSTS: Research costs are the costs incurred for the discovery of new ideas or processes by experiment or otherwise and for using the results of such experimentation on a commercial basis. Research costs are defined as the costs of searching for new or improved products, new applications of materials, or improved methods, processes, systems or services.

Development costs are the costs of the process which begins with the implementation of the

decision to produce a new or improved product or to employ a new or improved method and ends with the commencement of formal production of that product by that method.

TRAINING COSTS:

- **Examples:** These costs comprises of – wages and salaries of the trainees or learners, pay and allowances of the training and teaching staff, payment of fees etc, for training or for attending courses of studies sponsored by outside agencies and cost of materials, tools and equipments used for training.
- Costs incurred for running the training department, the losses arising due to the initial lower production, extra spoilage etc. occurring while providing training facilities to the new recruits.
- All these costs are booked under separate standing order numbers for the various functions.
- Usually there is a service cost centre, known as the Training Section, to which all the training costs are allocated. The total cost of training section is thereafter apportioned to production centers.

COST CLASSIFICATION BASED ON VARIABILITY

Fixed cost – These are costs, which do not change in total despite changes of a cost driver. A fixed cost is fixed only in relation to a given relevant range of the cost driver and a given time span. Rent, insurance, depreciation of factory building and equipment are examples of fixed costs where the final product produced is the cost object.

Variable costs – These are costs which change in total in proportion to changes of cost driver. Direct material, direct labour are examples of variable costs, in cases where the final product produced is the cost object.

Semi-variable costs – These are partly fixed and partly variable in relation to output e.g. telephone and electricity bill, Depreciation as a whole, etc.

Behavior of Cost:

1. Total Fixed Cost remains Constant
2. Fixed Cost per unit decreases with increase in Output
3. Total Variable Cost varies in direct proportion with output
4. Variable Cost per unit remain Constant

SEGREGATION OF FIXED OVERHEADS AND VARIABLE OVERHEADS FROM SEMI – VARIABLE OVERHEADS

(1) Graphical Presentation Method: Observation in respect of the total cost at different levels of activity or output are plotted on a graph as follows

Output on 'X' axis

Cost on 'Y' axis

A line of best fit, which passes through all or most of the points is drawn.

(2) Least Square Method: 'Line of best fit' is drawn for a number of observations with the help of statistical method. This method uses the line equation $Y = MX + C$

M = > variable element of cost

C = > represents total fixed cost
Y = > represents the total cost
X = > the volume of output

(3) High & Low Point Method: Under this method the output at two different levels i. e. high & low points is compared with the amount of expenses incurred at these different periods.

(4) Analytical Method: Under this method the degree of variability is estimated for each item of semi – variable expenses.

(5) Comparison by period or level of activity method: The output and expense at two levels are compared. Fixed overheads remains fixed and variable overhead can be obtained by the following formula.

$$\text{Variable cost per unit} = \frac{\text{Change in Cost/Expenses}}{\text{Change in Output or Quantity}}$$

COST ACCOUNTING VS. MANAGEMENT ACCOUNTING:

	Basis	Cost Accounting	Management Accounting
(i)	Nature	It records the quantitative aspect only	It records both qualitative and quantitative aspect.
(ii)	Objective	It records the cost of producing a product and providing a service	It Provides information to management for planning and co-ordination
(iii)	Area	It only deals with cost Ascertainment.	It is wider in scope as it includes F.A., budgeting, Tax, Planning.
(iv)	Recording of data	It uses both past and present figures.	It is focused with the projection of figures for future.
(v)	Development	It's development is related to industrial revolution.	It develops in accordance to the need of modern business world.
(vi)	Rules and Regulation	It follows certain principles and procedures for recording costs of different products	It does not follow any specific rules and regulations.

TYPES OF COSTING:

For ascertaining cost, following types of costing are usually used.

- (i) **Marginal Costing:** It is defined as the ascertainment of marginal cost by differentiating between fixed and variable costs. It is used to ascertain effect of changes in volume or type of output on profit.
- (ii) **Standard Costing And Variance Analysis:** It is the name given to the technique whereby standard costs are pre-determined and subsequently compared with the recorded actual costs. It is thus a technique of cost ascertainment and cost control. This technique may be used in conjunction with any method of costing. However, it is especially suitable where the manufacturing method involves production of standardized goods of repetitive nature.

- (iii) **Absorption Costing:** It is the practice of charging all costs, both variable and fixed to operations, processes or products. This differs from marginal costing where fixed costs are excluded.

METHODS OF COSTING:

Different industries follow different methods of costing because of the differences in the nature of their work. The various methods of costing are as follows:

Job Costing	In this case the cost of each job is ascertained separately. It is suitable in all cases where work is undertaken on receiving a customer's order like a printing press, motor workshop, etc.
Batch Costing	It is the extension of job costing. A batch may represent a number of small orders passed through the factory in batch. Each batch here is treated as a unit of cost and thus separately costed. Here cost per unit is determined by dividing the cost of the batch by the number of units produced in the batch.
Contract Costing	It is also known as Terminal Costing. It is also an Extension of Job Costing. Here the cost of each contract is ascertained separately. It is suitable for firms engaged in the construction of bridges, roads, buildings, etc.
Process Costing	Here the cost of completing each stage of work is ascertained, like cost of making pulp and cost of making paper from pulp. In mechanical operations, the cost of each operation may be ascertained separately; the name given is operation costing. Process costing is generally adopted in textile industries, chemical industries, oil refineries, soap manufacturing, paper manufacturing, tanneries, etc.
Operating Costing or Service Costing	It is used in the case of concerns rendering services like transport, supply of water, retail trade, Hotels, Restaurants, Telephone, Electricity, Railways, etc.
Multiple Composite or Costing	It is a combination of two or more methods of costing outlined above. Suppose a firm manufactures bicycles including its components; the parts will be costed by the system of job or batch costing but the cost of assembling the bicycle will be computed by the Single or output costing method. The whole system of costing is known as multiple costing. This method is applicable to manufacturing concerns producing motor cars, aeroplanes, machine tools, type-writers, radios, cycles, sewing machines, etc.
Unit or Single or Output Costing	This method is used where a single article is produced or service is rendered by continuous manufacturing activity. The cost of 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. This method is useful for the assembly department in a factory producing a mechanical article e.g., bicycle.
Departmental Costing	When costs are ascertained department by department, the method is called "Departmental Costing".

RELATIONSHIP BETWEEN COST ACCOUNTING, FINANCIAL ACCOUNTING, MANAGEMENT ACCOUNTING AND FINANCIAL MANAGEMENT :

- Cost Accounting is a branch of accounting, which has been developed because of the limitations of Financial Accounting from the point of view of management control and internal reporting.
- Financial accounting performs admirably, the function of portraying a true and fair overall picture of the results or activities carried on by an enterprise during a period and its financial position at the end of the year.
- Also, on the basis of financial accounting, effective control can be exercised on the property and assets of the enterprise to ensure that they are not misused or misappropriated.
- To that extent financial accounting helps to assess the overall progress of a concern, its strength and weaknesses by providing the figures relating to several previous years.
- Data provided by Cost and Financial Accounting is further used for the management of all processes associated with the efficient acquisition and deployment of short, medium and long term financial resources. Such a process of management is known as Financial Management.
- The objective of Financial Management is to maximise the wealth of shareholders by taking effective Investment, Financing and Dividend decisions. Investment decisions relate to the effective deployment of scarce resources in terms of funds while the Financing decisions are concerned with acquiring optimum finance for attaining financial objectives.
- The last and very important 'Dividend decision' relates to the determination of the amount and frequency of cash which can be paid out of profits to shareholders.
- On the other hand, Management Accounting refers to managerial processes and technologies that are focused on adding value to organisations by attaining the effective use of resources, in dynamic and competitive contexts.
- Hence, Management Accounting is a distinctive form of resource management which facilitates management's 'decision making' by producing information for managers within an organisation.

COST CONTROL VS. COST REDUCTION:

Basis	Cost Control	Cost Reduction
Meaning	Cost control is the guidance and regulation by executive action of the cost of operating an undertaking.	Cost reduction is the achievement of real and permanent reduction in the unit cost of goods and services without impairing their suitability.
Emphasis	It emphasizes on past performances	It emphasizes on present and future

	and variance analysis	performance without considering the past performance.
Approach	It is a conservative approach which stresses on the conformity to the set norms.	It is a dynamic approach where in every function is analysed in a view of its contribution
Focus	It is a short term review with focus on reducing cost in a particular period.	It seeks to reduce the unit cost on a permanent basis on a systematic approach.
Nature of function	It is a corrective function	It is a preventive function

Method of Costing and Cost Unit for various Industries/Activities

Industry (I) Service (S) Activity (A)		Method of Costing	Unit of Cost
1. Advertising	S	Job	Per Job
2. Automobile	I	Multiple	Per Number
3. Bicycles	I	Multiple	Per Unit or Per Batch
4. Breweries	I	Process	Per Barrel
5. Brick Works	I	Single/Unit	Per 1,000 Bricks
6. Bridge Construction	I	Contract	Per Contract
7. Cement	I	Unit	Per Tonne or Per Bag
8. Chemicals	I	Process	Per Litre, Gallon, Kilogram, Tonne, etc.
9. Coal Mining	I	Single/Unit	Per Tonne
10. Credit Control (in Bank, Sales Dept, etc.)	A	NA	Per Account maintained
11. Education Services	S	Operating	Per Course, Per Student, etc.
12. Electronic Items	I	Multiple	Per Unit or Per Batch
13. Engineering Works	I	Contract	Per Job, Per Contract, etc.
14. Furniture	I	Multiple	Per Unit
15. Hospital/Nursing Home	S	Operating	Per Patient-Day or Room-Day
16. Hotel/Catering	S	Operating	Per Guest-Day or Room-Day, Per Meal
17. Interior Decoration	S	Job	Per Job
18. Oil Refining	I	Process	Per Barrel, Per Tonne, Per Litre, etc.
19. Personnel Administration	A	NA	Per Personnel Record, Per Employee
20. Pharmaceuticals	I	Batch/Unit	Per Unit/Box
21. Professional Services	S	Operating	Per Chargeable Hour, Per Job, etc.
22. Power/Electricity	I	Operating	Per Kilo-Watt Hour
23. Road Transport	S	Operating	Per Tonne-Km/Passenger-Km
24. Selling	A	NA	Per Customer Call, Per Order booked
25. Ship Building	I	Contract	Per Ship
26. Soap	I	Process	Per Unit
27. Steel	I	Process	Per Tonne
28. Storage and Handling of Materials	A	NA	Per Stores Requisition, Per Issue, etc.
29. Sugar Company having own sugarcane fields	I	Process	Per Tonne or Per Quintal

30. Toy Making	I	Batch	Per Batch
31. Transport	S	Operating	Per Passenger Kilometer, Tonne-Km

AMIT TALDA CLASSES

FORMAT OF COST SHEET

Particulars	Rs.
Add: Opening Stock of Raw Materials Add: Purchases (including Carriage Inwards, Transit Insurance etc.) Less: Closing Stock of Raw Materials	
Add: Direct Materials Consumed/Raw Materials Consumed Add: Direct Labor Add: Direct Expenses	
PRIME COST Add: Factory Overheads Add: Opening Stock of Work-in-Progress Less: Closing Stock of Work-in-Progress	
FACTORY COST/WORKS COST Add: Quality Control Cost Add: R & D Cost Add: Administration Overheads (related to Factory) Less: Credit for Recoveries/Scrap/ By Product/ Misc Income Add: Packing Cost	
COST OF PRODUCTION Add: Opening Stock of Finished Goods Less: Closing Stock of Finished Goods	
COST OF GOODS SOLD Add: Administrative Overheads (General) Add: Marketing Overheads - Selling Overheads - Distribution Overheads	
COST OF SALES	

LIST OF COST ACCOUNTING STANDARDS

(till date 24 Cost Accounting Standards have been issued by
Institute of Cost Accountants of India)

CAS No.	Title
CAS 1	Classification of Cost
CAS 2	Capacity Determination
CAS 3	Production & Operation Overhead
CAS 4	Cost of Production for Captive Consumption
CAS 5	Average (equalized) Cost of Transportation
CAS 6	Material Cost
CAS 7	Employee Cost
CAS 8	Cost of Utilities
CAS 9	Packing Material Cost
CAS 10	Direct Expenses
CAS 11	Administrative Overheads
CAS 12	Repairs And Maintenance Cost
CAS 13	Cost of Service Cost Centre
CAS 14	Pollution Control Cost
CAS 15	Selling & Distribution Overheads
CAS 16	Depreciation & Amortization
CAS 17	Interest & Finance Charges
CAS 18	Research & Development Cost
CAS 19	Joint Cost
CAS 20	Royalty & Technical Know How
CAS 21	Quality Control
CAS 22	Manufacturing Cost
CAS 23	Overburden Removal Cost
CAS 24	Treatment of Revenue in cost statements

CODING SYSTEM:

The Chartered Institute of Management Accountants has defined a code as “a system of symbols designed to be applied to a classified set of items to give a brief account reference, facilitating entry collation and analysis”

COMPOSITE CODES:

A company has devised a system of codification in which the first three digits indicate the nature of the expenditure and the last three digits the cost centre or cost unit to be charged

e.g. if the first digit is 1, the system implies that it refers to raw material and if the number is 2 it represents a labour cost. The second and third numbers relating to 1 i.e., raw material, provide details of the type e.g., whether the raw material is an electronic component (number 4), mechanical component (number 1) consumables (number 2) or packing (number 3) and the name respectively. Hence the description of a cost with a code 146.729 shall be understood as follows:

- ✓ Since the first number is 1 the cost refers to raw material cost
- ✓ The second number being 4 indicates that the raw material is an electronic component.
- ✓ The third number 6 refers to the description which according to the company's codification refers to Diodes.

The last three numbers provide details of the cost centre e.g. the first number provides details of the location of the plant, the second number gives detail of the department (machining or assembly or something else) and the third number indicates whether the cost is direct or indirect.

ADVANTAGES OF A CODING SYSTEM:

(a) Short and simple: Since the code is, most of the times, briefer than a description, it saves time when systems are worked upon manually and in case the system is computerized it reduces the data storage capacity. The illustration above demonstrates this advantage very clearly.

(b) Clarity: A code helps in reducing ambiguity. In case two professionals understand the same item differently a code will help them objectively.

(c) Computer friendly: Unlike detailed descriptions, a code facilitates data processing in computerized systems.

THE REQUIREMENTS FOR AN EFFICIENT CODING SYSTEM

(a) Unique: Every number used in the code should be unique and certain, i.e. it should be easily identified from the structure of the code.

(b) Flexibility: Elasticity and comprehensiveness is an absolute must for a well-designed coding system. It should be possible to identify a code for every item and the coding system should be capable of expanding to accommodate new items.

(c) Brief: The code should be brief and meaningful.

(d) Centralized: The maintenance of the coding system should be centrally controlled. It should not be possible for individuals to independently add new codes to the existing coding system.

(e) Similarity: Codification systems should be of the same length. This makes errors easier to spot and it assists computerized data processing.

MANAGEMENT ACCOUNTING

- The fundamental objective of management accounting is to assist the management in carrying out its duties efficiently so that maximize profits or minimize losses of management.
- Main Objectives of Management Accounting
 - To formulate Planning & Policy
 - To Interpret Financial Statements
 - To Assist in Decision Making
 - To help in Control
 - To provide Reports
 - To Facilitate Co-ordination of Operations
- Management Accounting is Futuristic in Nature as it helps in Decision Making which are taken for Future period.
- Management Accounting uses the data from Financial Accounting, Cost Accounting & Market/Economic related data.

- Management Accounting is purely done for Management & is for Internal Use only.
- Management accounting is concerned equally with short-range and long-range planning and uses highly sophisticated techniques like sensitivity analysis, probability structures, etc., in the planning and forecasting prices.
- Management Accounting is Optional. The form and content of management accounting information differs according to the needs and purpose.

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CHAPTER 2: MATERIAL COST

TECHNIQUES OF INVENTORY CONTROL:

1. Min-Max Plan:

- It is one of the oldest methods of inventory control.
- Under this plan the analyst lays down a maximum and minimum for each stock item keeping in view its usage, requirements and margin of safety required to minimum the risks of stock outs.
- The minimum level establishes the reorder point and order is placed for that quantity of material which will bring it to the maximum level.
- The method is very simple and based upon the premise that minimum and maximum quantity limits for different items can fairly be well defined and established.
- Considerations like economic order quantity and identification of high value and critical items of stock for special management attention are not cared for under this plan.

2. Two Bin Systems:

- The basic procedure used under this system is that for each item of stock, two piles, bundles or bins are maintained.
- The first bin stocks that quantity of inventory which is sufficient to meet its usage during the period that elapses between the receipt of an order and the placing of next order.
- The second bin contains the safety stock and also the normal amount used from order to delivery date.
- The moment stock contained in the first bin is exhausted and the second bin is tapped, a requisition for new supply is prepared and submitted to the purchasing department.

3. Order Cycling System:

- In order cycling system, quantities in hand of each item or class of stock is reviewed periodically say 30, 60, 90 days, etc.
- if in the course of a scheduled periodic review it is observed that the stock level of a given item will not be sufficient till the next scheduled review keeping in view its probable rate of depletion, an order is placed to replenish its supply.
- Review period will vary from firm to firm and also among different materials in the same firm.
- Critical items of stock usually require a short review cycle.
- Order for replenishing a given stock item, is placed to bring it to some desired level which is often expressed in relation to number of days or week's supply,

4. ABC Analysis:

- With the numerous parts and materials that enter into each and every industrial product, inventory control lends itself, first and foremost, to a problem of analysis. Such analytical approach is popularly known as ABC Analysis (Always better Control), which is believed to have originated in the General Electric Company of America.
- The ABC plan is based upon segregation of material for selection of control.

- It measures the money value i.e cost significance of each material item in relation to total cost and inventory value.
- The logic behind this kind of analysis is that the management should study each item of stock in terms of its usage, lead time, technical or other problems and its relative money value in the total investment in inventories.
- Critical i.e high value items deserve very close attention, and low value items need to be devoted minimum expense and effort in the task of controlling inventories.

Under ABC analysis, the different items of stock may be ranked in order of their average inventory investment or on the basis of their annual rupee usage. The important steps involved in segregating materials or inventory control are:

- Find out future use of each item of stock in terms of physical quantities for the review forecast period.
- Determine the price per unit of each item.
- Determine the total project cost of each item by multiplying its expected units to be used by the price per unit of such item.
- Beginning with the item with the highest total cost, arrange different items in order of their total cost as computed under step (iii) above
- Express the units of each item as a percentage of total cost of all items
- Compute the total cost of each item as a percentage of total cost of all items.

If it is convenient different items may be classified into only three categories and labeled as A, B and C respectively depending upon whether they are high value items, middle value items and low value items. If need be, percentage of different items may be plotted on a chart.

- Fixation of various levels:** Certain stock levels are fixed up for every items or stores so that the stock and purchases can be efficiently controlled. These are:
 - Maximum Level: this represents the maximum quantity above which stock should not be held at any time.
 - Minimum Level: This represents the minimum quantity of stock that should be held at all times.
 - Danger Level: Normal issue of stock are usually stopped at this level and made only under specific instructions.
 - Ordering level: it is the level at which indents should be placed for replenishing stock.
 - Ordering Quantity: it is the quantity that is ordered.

ECONOMIC ORDER QUANTITY	• The basic problems of inventory control are two viz <u>what quantity</u> of an item should be ordered at a time and <u>when</u> should an order be placed. • While deciding economic order quantity, the efforts are directed to ascertain the <u>ideal order size</u>. • While deciding the ideal order size, factors such as Inventory carrying cost and the ordering cost associated with the placement of purchase order are to be considered; the total of both has to be minimized. • The <u>inventory carrying charges</u> include the interest on the capital invested in the stores of materials, rent for the storage space,
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	salaries and wages of the storekeeper department, any loss due to pilferage and deterioration, stores insurance charges, stationery, etc used by the stores, taxes on inventories, etc. • <u>Ordering cost</u> may include rent for the space used by the purchasing department, the salaries and wages of officers and staff in the purchasing department, the depreciation on the equipment and furniture used by the department, postage, telegraph charges and telephone bills, the stationery and other consumables required by the purchase department, any travelling expenditure incurred and the cost of inspection, etc on receipt of materials. • The optimum order quantity i.e the quantity for which the cost of holding plus the cost of purchasing is the minimum is called as Economic Order Quantity and is calculated as under: EOQ (Economic Order Quantity - Wilson's Formula) = $\sqrt{2AO/C}$ Where: A = Annual usage units O = Ordering cost per unit C = Annual carrying cost of one unit i.e. Carrying cost % * Carrying cost of unit • While deciding the question as to what should be the economic ordering quantity one has to ensure that the cost incurred should be minimum. An ideal order size, therefore, is at the quantity where the cost is minimum i.e. Cost of holding the stock and ordering cost intersect each other. <u>At EOQ, Carrying Cost & Ordering Cost are Minimum & Equal.</u>
USE OF PERPETUAL INVENTORY SYSTEM AND CONTINUOUS VERIFICATION:	• The perpetual inventory system records changes in materials, WIP on a daily basis. Hence, managerial control and preparation of interim financial statement is easier. • Perpetual inventory derived its name because it indicates the amount of stock in hand at all times. • It facilitates verification of stock at any time and helps to authenticate the correctness of stock records. • The two main functions of perpetual inventory are: (i) It records the quantity and value of stock in hand (ii) There is continuous verification of physical stock • Chartered Institute of Management Accountants, London has defined it as "The recording as they occur of receipts, issues and the resulting balances of individual items of stock in either quantity or quantity and value." • A perpetual inventory system is usually checked by a programme of continuous stock taking and the two terms are sometimes loosely considered synonymous. • Perpetual inventory means the system of records, whereas continuous stock taking means the physical checking of those records with actual stocks. • The perpetual inventory method has the following advantages:

	(a) The inventory of various items can be easily ascertained. Hence, profit and loss account and balance sheet can be easily prepared. (b) Information regarding material on hand eliminates delays and stoppage in production. (c) The investment in stock can be reduced to the minimum keeping in view the operational requirements. (d) Because of internal check, the activities of various department are checked. Hence, the stores records are reliable. (e) Production need not be stopped when stock taking is carried out. (f) These records give the cost of materials. Hence, management can exercise control over costs. (g) Discrepancies and errors are promptly discovered and remedial action can be taken to prevent their re-occurrence in the future. (h) This method has a moral effect on the staff, makes them disciplined and careful and acts as a check against dishonest actions. (i) Loss of interest on capital invested in stock, loss through deterioration, obsolescence can be avoided. (j) Stock figures are available for insurance purposes. (k) It reveals the existence of surplus, dormant, obsolete and slow moving material and hence, remedial action can be taken against them.												
CONTINUOUS PHYSICAL STOCK VERIFICATION:	(i) The stores accounts reveal what the balances should be and a physical verification reveals the actual stock position. Under this system of verification, the total number of man-days available for verification is calculated. The items to be verified per man-day is selected by classifying the various items into groups depending upon the time required. The stock verification staff plan the programme and divide the work among themselves. The plan is such that all the items are verified in the year. (ii) There is an element of surprise and sometimes the stock verifier knows of the items to be verified only on the actual date of verification. Stock not recorded should not be mixed up with the stock. After counting or weighting the results are recorded.												
BIN CARD VS STORES LEDGER	<table border="1"> <thead> <tr> <th>Bin Card</th><th>Stores Ledger</th></tr> </thead> <tbody> <tr> <td>It is a quantity record</td><td>It is a record of quantity and value</td></tr> <tr> <td>It is kept inside the stores.</td><td>It is kept outside the stores</td></tr> <tr> <td>It is maintained by the storekeeper</td><td>It is maintained by Cost Accounting department</td></tr> <tr> <td>The postings are done before the transaction takes place</td><td>The posting are done after the transaction takes place</td></tr> <tr> <td>Each transaction is individually posted</td><td>Transactions may be posted periodically and in total.</td></tr> </tbody> </table>	Bin Card	Stores Ledger	It is a quantity record	It is a record of quantity and value	It is kept inside the stores.	It is kept outside the stores	It is maintained by the storekeeper	It is maintained by Cost Accounting department	The postings are done before the transaction takes place	The posting are done after the transaction takes place	Each transaction is individually posted	Transactions may be posted periodically and in total.
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PURCHASE PROCEDURE	Though different concerns adopt different practices regarding details recorded, forms and records used. The routine followed for the purchase of materials is usually the same. The steps may be enumerated as follows: (i) Indenting for materials (ii) Issuing of tenders and receiving quotations (iii) Placing of order (iv) Inspecting stores received (v) Receiving the stores accepted in inspection (vi) Checking and passing bills for payment.
REVIEW OF SLOW AND NON MOVING ITEMS:	The money locked up in inventory is money lost to the business. If more money is locked up, lesser is the amount available for working capital and the cost of carrying inventory also increases. Stock turnover ratio should be as high as possible. Loss due to obsolescence should be eliminated or these items used in some profitable work. Slow moving stock should be identified and speedily disposed off. The speed of movement should be increased. The turnover of difference items of stock can be analysed to find out the slow moving stocks. Materials become useless or obsolete due to changes in product, process, design or method of production, slow moving items have a low turnover ratio. Capital is locked up and cost of carrying have to be incurred. Hence, management should take effective steps to minimize losses.
WHAT IS JUST IN TIME (JIT) PURCHASE? WHAT ARE THE ADVANTAGES OF SUCH PURCHASES?	JIT purchasing is the purchase of materials and supplies in such a manner that delivery immediately precedes the demand of use. This will ensure that stock are as low as possible or nearly cut to a minimum. Considerable saving in material handling expenses is made by requiring suppliers to inspect materials and guarantee their quality. This improved service is obtained by giving more business to fewer suppliers, who can provide high quality and reliable delivery. Encouragement is given to employees to render goods service by placing with them long term purchasing order. Companies which implements JIT purchasing substantially reduces their investment in raw material and WIP. Advantages of JIT: • It results in considerable savings in material handling expenses. • It results in savings in factory space. • Investment in raw material & WIP in substantially reduced. • Large quantity discounts can be obtained and paperwork is reduced because of using of blanket long term order to few suppliers instead of purchase orders.
MATERIAL HANDLING COST	• <u>Meaning</u>: It refers to the expenses involved in receiving, storing, issuing and handling materials. To deal with this cost in cost accounts there are two prevalent approaches as under: • <u>First approach</u> suggests the inclusion of these costs as part of the

	cost of materials by establishing a separate material handling rate e.g., at the rate of percentage of the cost of material issued or by using a separate material handling rate which may be established on the basis of weight of materials issued. • <u>Under another approach</u> these costs may be included along with those of manufacturing overhead and be charged over the products on the basis of direct labour or machine hours.
AT THE TIME OF PHYSICAL STOCK TAKING, IT WAS FOUND THAT ACTUAL STOCK LEVEL WAS DIFFERENT FROM THE CLERICAL OR COMPUTER RECORDS. WHAT CAN BE POSSIBLE REASONS FOR SUCH DIFFERENCES? HOW WILL YOU DEAL WITH SUCH DIFFERENCES?	Possible reasons for differences arising at the time of physical stock taking may be as follows when it was found that actual stock level was different from that of the clerical or computer records: (i) Wrong entry might have been made in stores ledger account or bin card, (ii) The items of materials might have been placed in the wrong physical location in the store, (iii) Arithmetical errors might have been made while calculating the stores balances on the bin cards or store-ledger when a manual system is operated, (iv) Theft of stock. When a discrepancy is found at the time of stock taking, the individual stores ledger account and the bin card must be adjusted so that they are in agreement with the actual stock. For example, if the actual stock is less than the clerical or computer record the quantity and value of the appropriate store ledger account and bin card (quantity only) must be reduced and the difference in cost be charged to a factory overhead account for stores losses.
VARIOUS NOTES/ BILLS	MATERIAL REQUISITION NOTE A material requisition note is a formal written demand or request usually from the production department to the stores for the supply of specified material, stores, etc. it authorizes the stores keeper to issue the requisitioned materials and record the same in the bin card. Generally, a material requisition note is prepared in triplicate. One cope is sent to the stores, one copy to the costing department and the third copy is retained by the department making the requisition for its future reference. It contains information about the description, code, quantity of material and job or work order for which it is needed. BILL OF MATERIAL: A bill of material is a comprehensive list of materials with specifications, material codes and quantity of each material required for a particular job, process or service. It is prepared by production planning department or engineering department. A bill of material acts as an authorization to the stores department in procuring the materials and all materials listed on the bill are sent to the production department. Generally four copies is sent to stores department, one copy to the purchase department, one copy to costing department, and fourth copy is retained by production planning department for future reference.

	MATERIAL TRANSFER NOTE: Surplus material drawn against one job can be used in another instead of transferring it to the stores. These transfers are recorded in material transfer note to charge individual job correctly. The material transferred is, no doubt, in its original condition. Hence, it should be valued at the original issue price. If the price is not available, then it is priced at the latest issue price. PURCHASE ORDER: Normally six copies of purchase orders are made. The supplier, stores, inspection department, store accounting section, purchase department and progress department are sent one copy each.
TREATMENTS OF WASTE, SCRAP, SPOILAGE & DEFECTIVES	WASTE: Waste comprises of invisible loss, visible loss that cannot be collected and also the unsalable portion of the collected loss. Waste is excluded from the output quantity. Examples of waste are smoke, dust, gases, etc. (I) Normal Waste: This is unavoidable and uncontrollable and treated as part of the product cost. The wastage cost is borne by the good units. (ii) Abnormal Waste: it is valued as if the output is good. The cost is transferred to profit and loss account. SCRAP: Scrap represents the unusable loss which can be sold. It is a residue which is measureable and has a minor value. Accounting treatment: (i) where the scrap has negligible value, it is charged to the goods units. Income from sale of scrap is credited to other income. The sale value can also be reduced from the material cost. (ii) If the scrap has significant value, a scrap account may be opened. It should be charged with full cost of scrap and credited with the net sale value of the scrap; the difference should be transferred to costing profit and loss account. SPOILAGE: Spoilage are those material or components which are so damaged in manufacturing process that they cannot be repaired or reconditioned. Some spoilage may be sold as seconds. Accounting treatment: (I) Loss due to spoilage can be debited to the Job/Product/Process in which it occurred. (ii) It may be charged to factory overheads so that the loss is borne by all products. (iii) Abnormal loss which is unexpected but controllable should be transferred to costing profit and loss account. DEFECTIVES: Defectives are that portion of the process loss which can be converted into a finished product by incurring more material and labour

	expenses. The additional expenses are added to the cost of manufacture and the rectified units to total units. Accounting treatment: (I) Defective inherent in the manufacturing process are classified as normal and treated in the following manner: a. The loss is charged to good units. B. the additional cost of rectification is charged to factory overheads and apportioned to various goods as part of factory overheads. C. if a particular department is responsible for the additional cost of rectification, it can be charged to that department. (ii) If the defectives units can be traced to a specific order, the additional cost can be charged to that job. (iii) If the defectives are abnormal and due to uncontrollable factors, the additional cost are charged to costing profit and loss account.
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FORMULA:

Reorder level = Maximum usage * Maximum lead time (Or) Minimum level + (Average usage * Average Lead time)
Minimum level = Reorder level – (Average usage * Average lead time)
Maximum level = Reorder level + Reorder quantity – (Minimum usage * Minimum lead time)
Average level = $\frac{\text{Minimum level} + \text{Maximum level}}{2}$ (or) Minimum level + $\frac{1}{2}$ Reorder quantity
EOQ (Economic Order Quantity - Wilson's Formula) = $\sqrt{2AO/C}$ Where A = Annual usage units O = Ordering cost per unit C = Annual carrying cost of one unit i.e. Carrying cost % * Carrying cost of unit
Danger level (or) safety stock level = Minimum usage * Minimum lead time (preferred)

METHODS OF MATERIAL PRICING:

There are numerous methods of pricing issues. They may be classified as follows:

I. Cost Price Methods

- (a) Specified Price
- (b) First-in First-out (FIFO)
- (c) Last-in First-out (LIFO)
- (d) Highest-in First-out (HIFO)
- (e) Base Stock

II. Average Price Method

- (a) Simple Average
- (b) Weighted Average
- (c) Periodic Simple Average
- (d) Moving Simple Average
- (e) Moving Weighted Average

III. Notional Price Methods

- (a) Standard Price
 - (i) Current Standard
 - (ii) Basic Standard
- (b) Inflated Price
- (c) Market Price
 - (i) Replacement Price
 - (ii) Realisable Price

Special Points to Remember:

- FIFO facilitates Inter Firm & Intra Firm Comparisons.
- During Inflation i.e Rising Prices, FIFO gives higher Inventory, Lower Cost & Hence, Higher Profits.
- During Inflation i.e Rising Prices, LIFO give Lower Inventory, Higher Cost & Hence, Lower Profits.
- LIFO is a good method of avoiding tax.
- HIFO is mainly used for monopoly Products or Cost Plus Contracts. When Stocks are undervalued, a Secret Reserve is created.
- Periodical Weighted Average method is useful in Process Costing.
- Market Price method differentiates between holding gains & operating gains.

VALUATION OF MATERIAL RECEIPTS:

Trade/ Quantity Discount	Deducted from the purchase price
Cash Discount	Cash discount is not deducted from the purchase price. It is treated as interest and finance charges
Subsidy/ Grant/ Incentives	Any Subsidy/ Grant/ Incentive received from the Government or from other sources deducted from the cost of purchase.
Road/ Toll Tax	Included in the cost of purchase if paid by the buyer
Octori/ Entry Tax	It is added with the cost of purchase if paid by the buyer
CST	CST is paid on interstate sale and collected from the buyers. The buyer is not getting any credit of tax paid hence it is added with the cost of purchase.
VAT	VAT is on Intra State sale and collected from buyers. It is excluded from cost of purchase if credit for the same is available.
Excise Duty	Excise duty is paid on manufacture of goods and collected from

	buyer. It is excluded from the cost of purchase if CENVAT Credit is available for the same. Unless mentioned specifically, excise duty is not added.
Custom Duty	Custom duty is paid on import of goods from outside India. It is added with purchase cost as no credit is available.
Purchase Tax	It is tax paid on purchase of goods from unregistered supplier. Credit of purchase tax paid is available hence not added to cost.
Demurrage	Demurrage is a penalty imposed by transporter for delay in uploading or offloading of materials. It is an abnormal cost and not included with the cost of purchase.
Detention charge/ Fine	Detention Charges or Fines are imposed for non-compliance of rule or law. It is an abnormal cost and not included with the cost of purchase.
Penalty	Penalty of any type is not included with the cost of purchase
Insurance Charges	Added with the cost of purchase
Commission/ Brokerage	Added with the cost of purchase
Freight Inwards	Added with the cost of purchase
Cost of Containers	<u>Non-Returnable</u>: Added with the cost of purchase <u>Returnable Containers</u>: Not Added with the cost of purchase if full amount is refunded. However, if only part amount is refunded then only shortfall should be added.

CHAPTER 3: LABOUR COST

TIME RECORDING:	Recording of time has two purposes – time keeping and time booking. It is necessary for both type of workers: direct and indirect. It is necessary even if the workers are paid on piece basis. Time keeping is necessary for the purpose of recording attendance and for calculating wages. Time booking means a record for utilisation point of view; the purpose is cost analysis and cost apportionment. Record keeping is correct when time keeping and time booking tally.
TIME KEEPING:	The purpose of time keeping is to provide the basic data for: i. Pay roll preparation ii. Finding out the labour cost of a job/product/service. iii. Attendance records to meet the statutory requirements. iv. Determining the productivity and controlling labour cost v. Calculating overhead cost of a job, product or service. vi. To maintain discipline in attendance vii. To distinguish between normal and overtime, late attendance and early leaving, and viii. To provide the internal check against dummy workers
METHODS OF TIME KEEPING	MANUAL METHODS: <u>a) ATTENDANCE REGISTER METHOD:</u> An attendance register is kept at the entrance of the factory gate in this method. The in and out timing are noted, either by the worker himself or by a staff of the time office. Later, entries are made to the individual attendance records of the workmen. <u>b) DISC METHOD:</u> Under this method, metal discs bearing employee's numbers allotted by the personnel department are placed on hooks on a board provided either at the gate or at the entrance of the department. On entering the factory, the worker removes the disc bearing his number from the board and places it in a box kept for this purpose. The box is taken away as soon as normal reporting time is over. A worker coming late will pick up the disc and put it in the "Late" box provided in the department. MECHANICAL METHODS: The attendance cards are used in time clocks installed at the entrance of the factory. On entering the factory, the worker takes his card from 'OUT' racks and press it inside the clock, which will print arrival time in 'IN' column. He then places it in 'IN' rack of the department where he reports for duty. Late attendance is normally reported in red ink. Similarly, when the employee leaves the factory, he collects the card from the 'IN' rack and punches the time in the clock and keeps it in the 'OUT' rack.

TIME BOOKING:	The objectives of time booking are: - To apportion overheads against jobs; - To calculate the labour cost of jobs done; - To ascertain idle time for the purpose of control; - To find out that the time during which a worker is in the factory is properly utilized - To evaluate labour performance, to compare actual and budgeted time; - To determine overhead rates of absorbing overhead expenses under the labour hour and machine hour methods; - To calculate the wages and bonus provided the system of payment depends on the time taken.
METHODS OF TIME BOOKING	Different methods used for time booking are: <u>(1) Daily Time Sheets</u> Under this method, a daily time sheet is provided to each worker on which time spent by him on various work orders is mentioned. <u>(2) Weekly Time Sheets</u> In this method time is recorded for all the jobs done during the week instead of recording the work done for a day only. One sheet is allotted to each worker. It involves less paper work. <u>(3) Job Cards</u> Job Card is a method of recording details of time with reference to the jobs or work orders undertaken by the workers. Job cards may be of two types, one, which is a job order cost card, and contains information regarding material consumption as well as time spent by operators. The other one is, in effect, a job ticket, which is issued to an operator by the supervisor and contains only the operation details.
STATE THE CIRCUMSTANCES IN WHICH TIME RATE SYSTEM OF WAGE PAYMENT CAN BE PREFERRED IN A FACTORY	Circumstances in which time rate system of wage payment can be preferred: In the following circumstances the time rate system of wage payment is preferred in a factory. - Persons whose services cannot be directly or tangibly measured, e.g., general helpers, supervisory and clerical staff etc. - Workers engaged on highly skilled jobs or rendering skilled services, e.g., tool making, inspection and testing. - Where the pace of output is independent of the operator, e.g., automatic chemical plants.
DISCUSS BRIEFLY, HOW YOU WILL DEAL WITH CASUAL WORKERS AND WORKERS EMPLOYED ON OUTDOOR WORK	<u>Causal and outdoor workers:</u> Casual workers (badli workers) are employed temporarily, for a short duration to cope with sporadic increase in volume of work. If the permanent labour force is not sufficient to cope effectively with a rush of work, additional labour (casual workers) are employed to work for a short duration. Out door workers are those workers who do not carry out their work in the factory premises. Such workers either carry out the assigned work in

IN COST ACCOUNTS.	their homes (e.g., knitwear, lamp shades) or at a site outside the factory. Casual workers are engaged on a daily basis. Wages are paid to them either at the end of the day's work or after a periodic interval. Wages paid are charged as direct or indirect labour cost depending on their identifiability with specific jobs, work orders, or department. Rigid control should be exercised over the out-workers specially with regard to following: 1. Reconciliation of materials drawn/issued from the store with the output. 2. Ensuring the completion of output during the stipulated time so as to meet comfortably the orders and contracts.
IDLE TIME:	When workers are paid on time basis there is usually a difference between the time for which the workers are paid and the time actually spent by them in production. The loss of time for which the employer pays but obtains no direct benefit is termed as idle time. In other words, idle time cost represents the wages paid for the time lost i.e time during which the worker was idle. Treatment in Cost Accounting: Idle time may be normal or abnormal: Normal idle time: It is inherent in any job situation and thus it cannot be eliminated or reduced. For example:- time gap between the finishing of one job and the starting of another; time lost due to fatigue etc. The cost of normal idle time should be charged to the cost of production. This may be done by inflating the labour rate. It may be transferred to factory overheads for absorption, by adopting a factory overhead absorption rate. Abnormal idle time: It is defined as the idle time which arises on account of abnormal causes; e.g. strikes; lockouts; floods; major breakdown of machinery; fire etc. Such an idle time is uncontrollable. The cost of abnormal idle time due to any reason should be charged to Costing Profit & Loss Account. Control on Idle Time: Idle time arising due to normal and controllable causes can be controlled by proper planning but those arising due to abnormal causes cannot be controlled. Idle time is bound to occur due to setting up of tools for various jobs, time interval between two jobs, time to travel from factory gate to work place. Idle time can be eliminated /minimized by taking the following steps: i. Production should be properly planned in advance. ii. Purchasing of material in time iii. Proper maintenance of machines

	iv. Utilizing man power effectively. Responsibility for controlling idle time should be properly defined and fixed. The different causes should be properly analysed by a detailed break up under each head. Person/department responsible for the idle time should be identified and remedial steps should be taken. The causes can be classified as follows: (a) The productive causes can be listed as follows: (i) machine breakdown; (ii) unutilised manpower; (iii) waiting for work; (iv) power cuts; (v) waiting for tools/raw materials; (vi) waiting for instructions. Time lost due to the causes mentioned above can be controlled internally. Proper planning helps control. All engineering organisations should prepare a report showing lost and setting time. The departments in which time was lost can be identified and effective remedial measures taken. It is charged as an item of <u>departmental overhead</u>. (b) Idle time arising due to administrative causes are: (i) Poor planning, (ii) Delayed/unproper instructions, (iii) Unutilised capacity due to management decisions. Idle time arising due to these uncontrollable causes cannot be controlled. It is recovered as a part of <u>general works overhead</u>. (c) Idle time arising due to economic causes are: (i) lack of demand resulting in unutilised capacity, (ii) lock outs and strikes, (iii) non-dismissal of workers in the off-season in the case of seasonal industries. Such idle time is not a part of cost of production. It is directly transferred to <u>Costing Profit and Loss Account</u>.
TREATMENT OF IDLE CAPACITY COST	(a) If idle capacity is due to unavoidable reasons such as repairs & maintenance, change over of job etc., a supplementary overhead rate may be used to recover the idle capacity cost. In this case, the costs are charged to production capacity utilized. (b) If idle capacity cost is due to avoidable reasons such as faulty planning, power failure etc, the cost should be charged to P/L A/c. (c) If idle capacity is due to seasonal factors, then the cost should be charged to cost of production by inflating overhead rates.

OVERTIME:	Overtime refers to the situation when a worker works beyond his normal working hours. The overtime rate is always higher than the normal rate and is usually double the normal rate. Overtime consists of two elements viz the normal cost and the extra payment or premium. The premium is known as overtime cost. The normal cost is allocated to the production order or cost centre on which the worker is working. The treatment of overtime cost varies according to the circumstances. Causes of Overtime: Overtime arises due to the following circumstances: - For working due to seasonal rush; - For making up time lost due to unavoidable reasons; - For completing a job or order within a specified period as requested by the customer; - For working due to policy decisions i.e when there is general pressure of work and labour shortage, etc Treatment of Overtime Cost: The premium or overtime cost can be charged as follows: - The job or order, if the overtime is worked at the customer's request. - As a general overhead item if it has been paid because of general pressure of work - To the department responsible for the delay - To costing profit and loss account if overtime was due to unavoidable reasons - To general overhead if caused due to seasonal rush. Control on Overtime: - Overtime should be strictly controlled and discouraged. It should be permitted only in emergencies. - Overtime should be sanctioned by a competent authority. - If overtime is being sanctioned for a long time, recruitment of more man and extra shift working should be considered.
LABOUR TURNOVER:	It is a common feature in any concern that some employee leave the concern and others join it. Workers change the job either for personal betterment or for better working conditions or due to compulsion. Labour turnover is the ratio of the number of persons leaving in a period to average number employed. Causes of Labour Turnover: The main causes of labour turnover in an organisation/ industry can be broadly classified under the following three heads: - Personal Causes; - Unavoidable Causes; and - Avoidable Causes. Personal causes are those which induce or compel workers to leave

	their jobs; such causes include the following: (i) Change of jobs for betterment. (ii) Premature retirement due to ill health or old age. (iii) Domestic problems and family responsibilities. (iv) Discontent over the jobs and working environment. Unavoidable causes are those under which it becomes obligatory on the part of management to ask one or more of their employees to leave the organisation; such causes are summed up as listed below: (i) Seasonal nature of the business; (ii) Shortage of raw material, power, slack market for the product etc.; (iii) Change in the plant location; (iv) Disability, making a worker unfit for work; (v) Disciplinary measures; (vi) Marriage (generally in the case of women). Avoidable causes are those which require the attention of management on a continuous basis so as to keep the labour turnover ratio as low as possible. The main causes under this case are indicated below (i) Dissatisfaction with job, remuneration, hours of work, working conditions, etc., (ii) Strained relationship with management, supervisors or fellow workers; (iii) Lack of training facilities and promotional avenues; (iv) Lack of recreational and medical facilities; (v) Low wages and allowances.
DISCUSS THE TWO TYPES OF COST ASSOCIATED WITH LABOUR TURNOVER.	Two types of costs which are associated with labour turnover are: (i) Preventive costs: This includes costs incurred to keep the labour turnover at a low level. If a company incurs high preventive costs, the rate of labour turnover is usually low. Examples of Preventive Costs (i) costs of providing medical services; (ii) personnel administration cost; (iii) cost of labour welfare activities; (iv) costs incurred for providing pension, provident fund and retirement schemes (ii) Replacement costs: These are the costs which arise due to high labour turnover. If men leave soon after they acquire the necessary training and experience of work, additional costs will have to be incurred on new workers, i.e., cost of advertising, recruitment, selection, training and induction, extra cost also incurred due to abnormal breakage of tools and machines, defectives, low output, accidents etc., caused due to the inefficiency and inexperienced new workers. Examples of Replacement costs (i) Decline in output due to inexperience of new workers.

	(ii) Decline in quality due to the lack of experience of new workmen. (iii) Loss of output during the time lost while recruiting new workers. (iv) Cost of recruitment/selection. (v) Cost of training. (vi) Cost of tool, equipment and machine breakages. (vii) Waste, scrap and defectives arising due to lack of experience of new workers. (viii) Cost of accidents, compensation paid, damage to property, assets etc.
MEASUREMENT OF LABOUR TURNOVER:	Separation rate method = $\frac{\text{Separation during the period}}{\text{Average No. of worker's during the period}}$ Replacement method = $\frac{\text{Number of replacements}}{\text{Average No. of worker's during the period}}$ Labour flux rate = $\frac{\text{No. of separation} + \text{No. of New employees} + \text{No. of replacements}}{\text{Average No. of worker's during the period}}$
REMEDIAL STEPS TO BE TAKEN TO MINIMIZE THE LABOUR TURNOVER:	• Exit interview with each outgoing employee to ascertain the reasons for his leaving the organisation. • Job analysis and evaluation carried out even before recruitment to ascertain the requirement of each job. • Scientific system of recruitment, placement and promotion, by fitting the right person in the right job. • Use of committee, comprising of members from management and workers to handle issue concerning the workers grievance, requirements, etc • Enlightened attitude of management – mental revolution on the part of management by taking workers into confidence and acting a healthy working atmosphere.
JOB EVALUATION AND MERIT RATING:	Job Evaluation: it can be defined as the process of analysis and assessment of jobs to ascertain reliably their relative worth and to provide management with a reasonably sound basis for determining the basic internal wage and salary structure for the various job positions. In other words, job evaluation provides a rationale for different wages and salaries for different group of employees and ensures that these differentials are consistent and equitable. Merit Rating: it is a systematic evaluation of the personality and performance of each employee by his supervisor or some other qualified person. Thus the main points of distinction between job evaluation and merit rating are as follows: 1. Job evaluation is the assessment of the relative worth of jobs within a company and merit rating is the assessment of the relative worth of the man behind a job. In other words, job evaluation rates the job while merit rating rates employees on the job. 2. Job evaluation and its accomplishment are means to set up a rational wage and salary structure whereas merit rating provides

	scientific basis for determining fair wages for each worker based on his ability and performance. 3. Job evaluation simplifies wage administration by bringing uniformity in wage rates. On the other hand merit rating is used to determine fair rate of pay for different workers on the basis of their performance.
WHAT DO YOU MEAN BY TIME AND MOTIONS STUDY? WHY IS IT SO IMPORTANT TO MANAGEMENT?	It is the study of time taken and motions (movements) performed by workers while performing their jobs at the place of their work. Time and motion study has played a significant role in controlling and reducing labour cost. Time Study is concerned with the determination of standard time required by a person of average ability to perform a job. Motion study, on the other hand, is concerned with determining the proper method of performing a job so that there are no wasteful movements, hiring the worker unnecessarily. However, both the studies are conducted simultaneously. Since materials, tools, equipment and general arrangement of work, all have vital bearing on the method and time required for its completion. Therefore, their study would be incomplete and would not yield its full benefit without a proper consideration of these factors. <u>Time and motion study is important to management because of the following features:</u> 1. Improved methods, layout, and design of work ensures effective use of men, material and resources. 2. Unnecessary and wasteful methods are pin-pointed with a view to either improving them or eliminating them altogether. This leads to reduction in the work content of an operation, economy in human efforts and reduction of fatigue. 3. Highest possible level of efficiency is achieved in all respect. 4. Provides information for setting labour standards - a step towards labour cost control and cost reduction. 5. Useful for fixing wage rates and introducing effective incentive scheme.
CLASSIFICATION OF INCENTIVE SCHEMES	
DIFFERENTIAL PIECE RATE	<u>Taylor's differential piece rate system:</u> No minimum rate is guaranteed. The standard output is determined on the basis of time and motion studies. Those attaining or exceeding the standard get a higher piece rate and those not attaining it get a lower rate. <u>The lower rate is based on 83% of the day wage rate.</u> This rate is applicable to those who don't attain the standard. <u>The higher rate is based on 125% of the day rate and an incentive of 50% of the day rate.</u> The efficiency of the worker can be determined either by comparing standard time and actual time taken or by comparing actual output and standard output. Hence, this method penalizes the slow worker and rewards the efficient one. This principle is based on the fact that

slow production increases the cost of production.

Merrick's differential rate scheme:

This is a modification of the Taylor's scheme. This system smoothen the sharp differences in Talyor's scheme by determining 3 Gradual rates. It does not guarantee time rate but each one is paid according to efficiency. The performance below standard is not penalized.

Efficiency Level	Piece Rate
Upto 83%	Normal Rate
83% to 100%	110% of Normal Rate
Above 100%	120% of the Normal Rate

Gantt Task and Bonus Plan:

This system is a combination of time and piece work system. According to this system a high standard or task is set and payment is made at time rate to a worker for production below the set standard. If the standards are achieved or exceeded, the payment to the concerned worker is made at a higher piece rate. The piece rate fixed under this system also includes an element of bonus the extent of 20%.

Output	Payment
Output below standard	Guaranteed time wage
Output at standard	Time rate plus Bonus @20% of time rate
Output above standard	High piece rate on worker's whole output

Baum's Differential Scheme (Milwaukee Scheme)

It is a combination of Halsey and Taylor's differential piece rate system. This system provides incentives at different levels of efficiency.

PREMIUM BONUS SCHEME

Emerson's Efficiency System:

Though minimum daily wages is guaranteed, efficiency is also rewarded. Standard is set based on the time and motion study.

Efficiency	Piece Rate
66 2/3rd %	Guaranteed Time Rate
90%	Time Rate + 10% Bonus
100%	Time Rate + 20% bonus
Above 100%	Time Rate + 20% Bonus + 1% for every increase of 1% beyond 100%.

Efficiency % = Standard time/Time taken *100

Efficiency % = Actual Output/Standard Output * 100

Bedauxe Point System:

Time wages is guaranteed, earnings increase after the worker attains 100% efficiency level. Standard time and standard work is measured in terms of Bedaux points, which is also known as B's. one B unit represents the amount of work which an average worker can do under normal conditions in one minute allowing for the relaxation needed. Workers get a bonus which is equal to 75% of B's saved.

Wages = Basic wages + 75% of Bedaux points * hourly rate /60

Halsey Plan:

Under this plan, time rate is guaranteed. The bonus is 50% of the

	standard time saved. Total wages = (time taken * Hourly rate) + 50% (time SAVED * hourly rate) <u>Halsey Weir Plan:</u> Total wages = (time taken * Hourly rate) + 33 1/3rd % (time SAVED * hourly rate) <u>Rowan Plan:</u> The time rate is guaranteed. The % of bonus to the wages earned is that which the time saved bears to the standard time. Total wages = (time taken * hourly rate) + [(time saved/standard time)*(time taken * hourly rate)] <u>Comparison of Halsey and Rowan Plan</u> • If the worker finishes the work in half the time fixed for it, the result under Rowan and Halsey plan will be same. • If the time saved is less than 50% of the standard time, the Rowan plan is better. • If time saved is greater than 50% of the standard time, the Halsey plan is better. <u>Barth Scheme:</u> This scheme does not guarantee wages. Total wages = hourly rate * $\sqrt{\text{Standard time} * \text{time taken}}$ Total wages is higher for less efficient people. As the efficiency increases, the earnings decrease. Hence, this plan is suitable for beginners and trainees. Since it is complicated, workers cannot understand it. Moreover, it does not encourage efficient workers. <u>Hayne's Scheme</u> Time wages are guaranteed. The standard time is set in terms of standard man minutes called '<u>manits</u>'. A manit means a standard work performed in a standard minute. Bonus is given for the time saved. The value of the time saved is shared by the worker and foreman in the ratio of 5 : 1 if the work is standardised and repetitive in nature. Otherwise, the ratio of sharing between worker, employer and supervisor will be 5 : 4 : 1. <u>Diemer Scheme:</u> It is a combination of Halsey's and Gantt's schemes.
GROUP BONUS SCHEME	(i) <u>Priestman Production Bonus Plan</u> For each department, the standard output and standard time are calculated. Bonus is payable to the department in which actual output is greater than standard output. The bonus is given on the basis of the percentage by which actual output exceeds the standard output. (ii) <u>Cost Premium System</u> Payment is made on an agreed basis, for any costs saved, for the factory as a whole. Bonus is dependent on output and also the

	economy effected in the use of materials and services. But this system is not very common and there is no direct relation between the incentive and the efforts of the workers. (iii) <u>Rucker's Plan (Share of Production Plan)</u> The ratio of earning and added value is calculated. Added value is the change in the market value because of change in form, availability or location of the product. Any reduction in this ratio increases the wages. (iv) <u>Scanlon Plan</u> This is similar to Rucker's plan but the meaning of 'added value' is different. Bonus depends on the ratio between earnings and production achieved at selling price. (v) <u>Towne Gain Sharing Plan</u> Bonus depends on the reduction in labour cost as compared to the standard set. In addition to wages earned, half of any saving in cost is paid to workers and supervisors.
BONUS SCHEME FOR INDIRECT WORKERS	(i) <u>Profit Sharing</u> Henry R. Seagar has defined profit sharing "as an agreement freely entered into, by which employee receives a share, fixed in advance, of the profits." (ii) <u>Co-Partnership:</u> Sometimes labour is given a share of the profit in the form of shares. This form of profit-sharing is called labour co-partnership. It gives the labour a permanent interest in the future of their organisation. Hence, this scheme is also known as co-ownership.

CHAPTER 4: DIRECT EXPENSES & OVERHEADS

DIRECT EXPENSES	Direct Expenses are also termed as 'Chargeable expenses'. These are the expenses which can be allocated directly to a cost object. Direct expenses are defined as 'costs other than material and wages which are incurred for a specific product or saleable services'. Examples of direct expenses are : (i) Hire charges of special machinery or plant for a particular production order or job. (ii) Payment of royalties. (iii) Cost of special moulds, designs and patterns. (iv) Travelling and conveyance expenses incurred in connection with a particular job. (v) Sub-contracting expenses or outside work costs if jobs are sent out for special processing. Characteristics of Direct Expenses : (i) Direct expenses are those expenses, which are other than the direct materials and direct labour. (ii) These expenses are either allocated or charged completely to cost centres or work orders. (iii) These expenses are included in prime cost of a product.
ABSORPTION OF OVERHEADS:	Absorption of overhead refers to charging of overheads to individual products or jobs. The overhead expenses pertaining to a cost centre are ultimately to be charged to the products, jobs, etc. which pass through that cost centre. For the purpose of the absorption of overheads to individual jobs, processes or products, overheads absorption rates are applied. The overhead rate of expenses for absorbing them to production may be estimated on the following three basis: (i) The figure of the previous year or period may be adopted as the overhead rate to be charged on production in current year. (ii) The overhead rate for the year may be determined on the basis of the estimated expenses and the anticipated volume of production or activity. (iii) The overhead rate for the year may be determined on the basis of normal volume of output or capacity of business.
ALLOCATION OF OVERHEADS:	• After having collected the overheads under proper standing order numbers the next step is to arrive at the amount for each department. • This may be through allocation or absorption. • According to Chartered Institute of Management Accountants, London, <u>Cost Allocation</u> is "that part of cost attribution which charges a specific cost to a cost centre or cost unit". • Thus, the wages paid to maintenance workers as obtained from wages analysis book can be allocated directly to maintenance service cost centre. • Similarly, indirect material cost can also be allocated to different cost centre according to use by pricing stores requisition. The following are the differences between allocation and

	apportionment. 1. Allocation costs are directly allocated to cost centre. Overhead which cannot be directly allocated are apportioned on some suitable basis. 2. Allocation allots whole amount of cost to cost centre or cost unit where as apportionment allots part of cost to cost centre or cost unit. 3. No basis required for allocation. Apportionment is made on the basis of area, assets value, number of workers etc.
BLANKET OVERHEAD RATE:	• <u>Meaning</u>: Blanket overhead rate refers to the computation of one single overhead rate for the entire factory. This is also known as plant wise or the single overhead rate for the entire factory. • <u>Formula</u>: It is determined as follows: Blanket Overhead Rate = Overhead Cost for entire factory/base for the period Base for the year can be labour hours or machine hours. Situation for using blanket rate: The use of blanket rate may be considered appropriate for factories which produce only one major product on a continuous basis. It may also be used in those units in which all products utilise same amount of time in each department. If such conditions do not exist, the use of blanket rate will give misleading results in the determination of the production cost, specially when such a cost ascertainment is carried out for giving quotations and tenders.
DISCUSS IN BRIEF THREE MAIN METHODS OF ALLOCATING SUPPORT DEPARTMENTS COSTS TO OPERATING DEPARTMENTS. OUT OF THESE THREE, WHICH METHOD IS CONCEPTUALLY PREFERABLE	The three main methods of allocating support departments costs to operating departments are: (i) Direct re-distribution method: Under this method, support department costs are directly apportioned to various production departments only. This method does not consider the service provided by one support department to another support department. (ii) Step method: Under this method the cost of the support departments that serves the maximum numbers of departments is first apportioned to other support departments and production departments. After this the cost of support department serving the next largest number of departments is apportioned. In this manner we finally arrive on the cost of production departments only. (iii) Reciprocal service method: This method recognises the fact that where there are two or more support departments they may render services to each other and, therefore, these inter-departmental services are to be given due weight while re-distributing the expenses of the support departments. The methods available for dealing with reciprocal services are: (a) Simultaneous equation method (b) Repeated distribution method

	(c) Trial and error method. The reciprocal service method is conceptually preferable. This method is widely used even if the number of service departments is more than two because due to the availability of computer software it is not difficult to solve sets of simultaneous equations.					
DISCUSS THE TREATMENT IN COST ACCOUNTS OF THE COST OF SMALL TOOLS OF SHORT EFFECTIVE LIFE.	Small tools are mechanical appliances used for various operations on a work place, specially in engineering industries. Such tools include drill bits, chisels, screw cutter, files etc. Treatment of cost of small tools of short effective life: (i) Small tools purchased may be capitalized and depreciated over life if their life is ascertainable. Revaluation method of depreciation may be used in respect of very small tools of short effective life. Depreciation of small tools may be charged to: • Factory overheads • Overheads of the department using the small tool. (ii) Cost of small tools should be charged fully to the departments to which they have been issued, if their life is not ascertainable.					
EXPLAIN WHAT DO YOU MEAN BY CHARGEABLE EXPENSES AND STATE ITS TREATMENT IN COST ACCOUNTS	Chargeable expenses: All expenses, other than direct materials and direct labour cost which are specifically and solely incurred on production, process or job are treated as chargeable or direct expenses. These expenses in cost accounting are treated as part of prime cost, Examples of chargeable expenses include - Rental of a machine or plant hired for specific job, royalty, cost of making a specific pattern, design, drawing or making tools for a job.					
DEFINE SELLING AND DISTRIBUTION EXPENSES. DISCUSS THE ACCOUNTING FOR SELLING AND DISTRIBUTION EXPENSES	Selling expenses: Expenses incurred for the purpose of promoting, marketing and sales of different products. Distribution expenses: Expenses relating to delivery and despatch of goods/products to customers. Accounting treatment for selling and distribution expenses. Selling and distribution expenses are usually collected under separate cost account numbers. These expenses may be recovered by using any one of following method of recovery. 1. Percentage on cost of production / cost of goods sold. 2. Percentage on selling price. 3. Rate per unit sold.					
BASIS OF APPORTIONMENT	<table><tr><th>Basis</th><th>Expense items</th></tr><tr><td> </td><td> </td></tr></table>		Basis	Expense items		
Basis	Expense items					

	Area or cubic measurement of department Direct labour hours or, where wage rates are more or less uniform, total direct wages of department.	Rent, rates, lighting and building maintenance Supervision																		
	Number of employees in departments	Supervision																		
	Cost of material used by departments	Material handling charges																		
	Value of assets	Depreciation and insurance																		
	Horse power of machines	Power																		
	<table><tr><th>Service department cost</th><th>Basis of apportionment</th></tr><tr><td>Maintenance Department</td><td>Hours worked for each department</td></tr><tr><td>Employment department</td><td>Rate of labour turnover or number of employees in each department</td></tr><tr><td>Payroll Department</td><td>Direct labour hours, machine hours number of employees</td></tr><tr><td>Stores keeping department</td><td>No. of requisitions, quantity or value of materials</td></tr><tr><td>Welfare department</td><td>No. of employees</td></tr><tr><td>Internal transport department</td><td>Truck hours, truck mileage</td></tr><tr><td>Building service department</td><td>Relative area of each department</td></tr><tr><td>Power house</td><td>Floor area, Cubic contents</td></tr></table>		Service department cost	Basis of apportionment	Maintenance Department	Hours worked for each department	Employment department	Rate of labour turnover or number of employees in each department	Payroll Department	Direct labour hours, machine hours number of employees	Stores keeping department	No. of requisitions, quantity or value of materials	Welfare department	No. of employees	Internal transport department	Truck hours, truck mileage	Building service department	Relative area of each department	Power house	Floor area, Cubic contents
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TREATMENT OF UNDER OR OVER ABSORPTION:	The treatment will depend on the cause that led to under or over absorption. The amount relating to abnormal factors should be charged off to costing profit and loss account, otherwise cost previously arrived at should be adjusted. The following are the main methods of disposal of under or over absorption of overheads. (i) Use of supplementary Rates: where the amount of under or over absorption is considerable, the cost of jobs or products is adjusted by means of a supplementary rate. This rate is determined by dividing the amount of under or over absorption by the base that was adopted for absorption. This rate may be positive or negative. The amount of under absorption is set right by a positive rate while a negative rate is determined for adjusting over absorption. The amount of under or over absorption at the end of the accounting period is adjusted in work in progress, finished goods and cost of sales in proportion to direct labour hours or machine hours or value of balances in each of these accounts by use of supplementary rate. (ii) Writing off to costing profit and loss account: where the difference between the actual or absorbed overheads is not large, the simple method is to write off to the costing profit and loss account. When there is under absorption due to idle capacity, the concerned amount is also written off in this manner,
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	likewise, when there was wasteful expenditure due to lack of control also.
(iii)	Carry Forward to Subsequent Year: Difference should be carried forward in the expectation that next year the position will be automatically corrected. This would really mean that costing data of two years would be wrong. This method is suitable where operating cycle of business is more than one year.

CONCEPT RELATED TO CAPACITY:

RATED CAPACITY	It refers to the capacity of a machine or a plant as indicated by its manufacturer. In fact this capacity is the maximum possible productive capacity of a plant. It is also known as installed capacity of a plant. Due to the loss of operating time of a plant it is difficult to achieve this rated capacity. In other words, it is only a theoretical capacity and is therefore, seldom achieved.
PRACTICAL CAPACITY	It is defined as actually utilised capacity of a plant. It is also known as operating capacity. This capacity takes into account loss of time due to repairs, maintenance, minor breakdown, idle time, set up time, normal delays, Sundays and holidays, stock taking etc. Generally, practical capacity is taken between 80 to 90% of the rated capacity. It is also used as a base for determining overhead rates. Practical capacity is also called net capacity or available capacity.
NORMAL CAPACITY	It is the capacity of a plant which is expected to be utilised over a long period based on sales expectancy. The determination of this capacity considers the average utilisation of plant capacity during one full business cycle which may extend over 2 to 3 years. It is also known as average capacity and is used to compute overhead recovery rate.
ACTUAL CAPACITY	It is the capacity actually achieved during a given period. This capacity may lie between practical capacity and capacity based on sales expectancy.
IDLE CAPACITY	It is that part of the capacity of a plant, machine or equipment which cannot be effectively utilised in production. In other words, it is the difference between the practical or normal capacity and capacity utilisation based on expected sales.

AMIT TALDA CLASSES

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CHAPTER 5: ACTIVITY BASED COSTING (ABC)

Traditional Absorption Costing System:

The traditional absorption system for overheads involves the following procedure:

Step 1: Collection of overhead costs.

Step 2: Classification of overhead costs into fixed and variable for decision making purposes.

Step 3: Allocation of specific costs to particular cost centres.

Step 4: Apportionment of common costs to various cost centres on appropriate basis e. g. rent based on area.

Step 5: Re- apportionment of service cost centre expenses to production cost centres.

Step 6: Computation of overhead recovery rate based on labour hours or machine hours.

Disadvantages: The traditional system outlined above suffers from the following disadvantages:

(a) This method attributes costs to cost centres. However, costs are influenced by a particular factor called cost driver. They are not influenced by cost centres. Even within a cost centre, different heads of cost items can be influenced by different factors and behave in different ways.

(b) This method seeks to measure the cost per unit of time, instead of cost per unit of the product.

(c) This method uses a denominator that may be defective. These rates assume that products, which take longer time, involve more overheads.

(d) This method does not facilitate easy identification of idle capacity costs or abnormal overhead costs.

ABC or activity based costing system has been devised to overcome the above disadvantages.

ACTIVITY BASED COSTING

Activity based costing (ABC) is a technique which involves identification of cost with each cost driving activity and making it as the basis for apportionment/assignment of costs over different cost objects/jobs/products/customers/services.

Features of Activity Based Costing

- ◆ Activity – based costing (ABC) is a two – stage product costing method that first assigns costs to activities and then allocates them to products based on each product's consumption of activities.
- ◆ The cost pools in the two – stage approach now accumulate activity – related costs.
- ◆ An activity is any discrete task that an organization undertakes to make or deliver a product or service.
- ◆ Activity – based costing is based on the concept that products consume activities and activities consume resources.
- ◆ Activity – based costing can be used by any organization that wants a better understanding of the costs of the goods and services it provides, including manufacturing, service, and even non-profit organizations.
- ◆ The concepts of ABC were developed in the manufacturing sector of the **United States** during the 1970's and 1980's.

Classification of Activities

1. Unit Level: This type of activity must be done for each unit of production. The machine – related activity cost pool represents a unit – level activity since every product unit requires machine time.

2. Batch Level: These activities must be performed for each batch of products, rather than each unit. Batch – level activities include the set up, purchasing, material handling, quality assurance, and packing/shipping activity cost pools.

3. Product Sustaining Level: This category includes activities that are needed to support an entire product line but are not performed every time a new unit or batch of products is produced. Engineering design costs as a product – sustaining – level activity cost pool

4. Facility (or general operations) Level: Facility – level activities are required in order for the entire production process to occur: Examples of such activity costs include plant management salaries, plant depreciation, property taxes, plant maintenance, and insurance. This classification of activities into unit – level, batch – level, product – sustaining – level, and facility – level activities is called a cost hierarchy.

Terminology of Activity Based Costing

(1) Cost Object: It is an item for which cost measurement is required e. g. Product, job or a customer.

(2) Cost Pool: Costs are grouped into pools according to the activities, which drive them. In this all costs associated with procurement i. e. ordering, inspection, storing etc. would be included in this cost pool and cost driver identified.

(3) Cost Driver: In an ABC system, the allocation bases that are used for applying costs to services or procedures are called cost drivers. It is a factor that causes a change in the cost of an activity.

(a) Resource Cost Driver: It is a measure of the quantity of resources consumed by an activity. It is used to assign the cost of a resource to an activity or cost pool.

(b) Activity Cost Driver: It is a measure of the frequency and intensity of demand placed on activities by cost objects. It is used to assign activity costs to cost objects.

Examples of cost drivers:

Function	Cost drivers
Research & development	No. of research projects Personnel hours on a project Technical complexities of projects
Customer service	No. of service calls No. of products received

	Hours spent on servicing products
Design of products, service & processes	No. of products in design No. of parts per product No. of engineering hours
Marketing	No. of advertisements/insertions No. of sales personnel Sales revenue
Distribution	No. of items distributed No. of customers Weight of items distributed

(4) Unit Level Cost: Traditionally, cost drivers were viewed only at the unit level. These drivers create unit – level costs meaning that they are caused by the production or acquisition of a single unit of product or the delivery of a single unit or service.

For any given product, unit – level costs change in a more – or – less linear fashion with the number of units produced. For example, fabric and thread are unit – level costs for an apparel manufacturer: if the company wants to double production, it will need twice as much fabric and thread.

(5) Batch Level Cost: Costs that are caused by a group of things being made, handled or processed at a single time are referred to as batch level costs.

These costs change in a more – or – less linear fashion with the number of batches run. Machine set up costs are often batch – level costs. The time required to prepare a machine to run one batch of product is usually independent of the number of units in the batch: the same time is required to prepare the machine to run a batch of 100 units as a batch of 50 units. Hence, batch – level costs do not necessarily vary in a linear fashion with the number of unit produced.

Other Examples: Tasks such as placing purchase orders, setting up equipment, and arranging for shipments to customers are batch – level activities.

(6) Product Level Cost: A cost caused by the development, production or acquisition of different items is called a product level or process level cost. These include engineering change orders, equipment maintenance, product development and scrap, if related to product design.

These costs are usually fixed and direct with respect to a given product. An example is the salary of a product manager with responsibility for only one product. The product manager's salary is a fixed cost to the company for a wide range of production volume levels. However, if the company drops the product entirely, the product manager is no longer needed.

Other Examples: designing a product, advertising a product, and maintaining a product manger and staff are all product – level activities.

(7) Facility Level Cost: Some costs cannot be related to a particular product line. These are instead related to providing a facility. For example cost of maintaining a building or plant security or advertisement promoting the organization. Facility level costs cannot be traced to individual products or services but support the organization as a whole.

These costs are usually fixed and direct with respect to the facility. An example is property taxes on the facility, or the salaries of front office personnel such as the receptionist and office manager.

Some of the examples of facility level costs are: Managing factory, heating factory, providing factory safety and security, maintaining general – purpose equipment, cleaning executive offices, arranging for loans, closing books each month, preparing annual reports to shareholders, providing a computer network, etc.

(8) Product Sustaining Costs: These are costs of activities undertaken to support individual products regardless of the number of units or batches in which the units are produced.

(9) Service Sustaining Costs: These are costs of activities undertaken to support individual services.

(10) Organizational Level Cost: Certain costs are incurred at organizational level for the single purpose of supporting continuing facility operations. These organizational level costs common to many different activities and products and services can be prorated among services and products on an arbitrary basis only. These costs are not product related, thus they should be subtracted from net product revenues instead of an arbitrary and illogical apportionment.

Steps involved in Activity Based Costing

The various steps involved in computation of ABC Absorption rates are:

Step 1: Identify the various activities within the organization.

Step 2: Relate the overheads to the activities using resource cost drivers.

Step 3: Apportion the costs of support activities over the primary activities on suitable basis.

Steps 4: Determine the activity cost drivers for each activity/cost pool. Activity cost driver rates are computed for each activity, just like overhead absorption rates.

$$\text{Total cost of activity} = \frac{\text{Activity cost driver rate}}{\text{Activity cost driver}}$$

Step 5: The rates will be multiplied by the different amounts of each activity that each product/other cost object to ascertain its cost.

Benefits of Activity Based Costing

The purposes and benefits of ABC are:

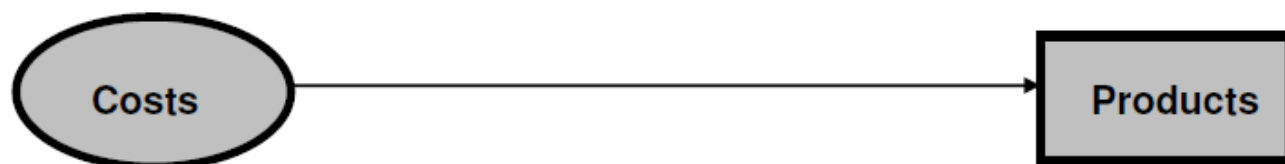
- (1) To link the cost to its causal factor i. e. the cost driver.
- (2) To identify costs of activities rather than cost Centres.
- (3) To ascertain product costs with greater accuracy by relating overheads to activities.
- (4) To overcome the inherent limitations of traditional absorption costing and use of blanket overhead rates.

Distinction between: Traditional Absorption Costing & Activity Based Costing

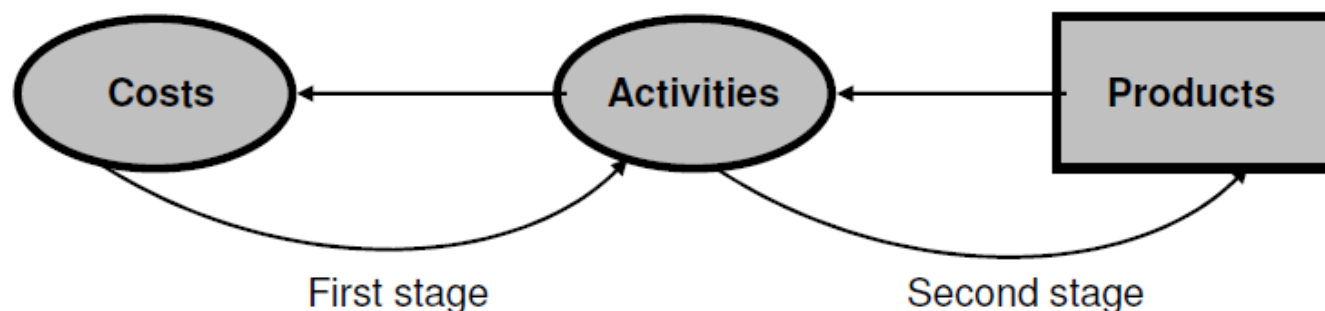
Points	Traditional absorption costing	Activity based costing
Meaning	Absorption costing can be defined as a managerial accounting cost method of	Activity based costing (ABC) is a technique which involves identification of cost with each cost driving activity and making it as

	expensing all costs related to manufacturing of a specific product, which involves the use of total direct costs and overhead costs related to the manufacturing of a product as the cost base.	the basis for apportionment/assignment of costs over different cost objects/jobs/products/customers/services.
Relation of overheads	Overheads are first related to departments/cost centres production and service cost centres.	Overhead are first related to activities or grouped into cost pools.
Activities	Only two types of activities viz. unit level activities and facility level activities are identified.	All levels of activities in the manufacturing cost hierarchy viz. unit level, batch level, product level and facility level are identified.
Realistic	This method relates overheads to cost centres i. e. locations. It is not realistic of the behavior of costs.	This method relates overheads to the casual factor i. e. cost driver. Thus, it is more realistic of cost behavior.
Used	Overhead rates can be used to ascertain cost of products only.	Activity cost driver rates can be used to ascertain cost of products and also cost of other cost objects such as customers/customer segments, distribution, channels etc.

- **Traditional allocation method**



- **Activity-based allocation method**



CHAPTER 6: COST RECORDS

WHAT ARE INTEGRATED ACCOUNTS:	• <u>Meaning</u>: Integrated Accounting is the name given to a system of accounting whereby cost and financial accounts are kept in the same set of books. • Such a system will have to afford full information required for costing as well as for Financial Accounts. In other words, information and data should be recorded in such a way so as to enable the firm to ascertain the cost (together with the necessary analysis) of each product, job, process, operation or any other identifiable activity. • For instance, purchases analysed by nature of material and its end use. Purchases account is eliminated and direct postings are made to Stores Control Account, Work-in-Progress accounts, or Overhead Account. Payroll is straightway analysed into direct labour and overheads. • It also ensures the ascertainment of marginal cost, variances, abnormal losses and gains, In fact, all information that management requires from a system of costing for doing its work properly is made available. • The integrated accounts give full information in such a manner so that the profit and loss account and the balance sheet can be prepared according to the requirements of law and the management maintains full control over the liabilities and assets of its business.
ADVANTAGES OF INTEGRATED ACCOUNTS:	The main advantages of Integrated Accounting are as follows: (i) Since there is <u>one set of accounts</u>, thus there is one figure of profit. Hence the question of reconciliation of costing profit and financial profit does not arise. (ii) There is <u>no duplication of recording</u> of entries and efforts to maintain separate set of books. (iii) Costing data are available from books of original entry and hence no delay is caused in obtaining information. (iv) The operation of the system is facilitated with the use of <u>mechanized accounting</u>. (v) Centralization of accounting function results in <u>economy</u>.
ESSENTIAL PRE-REQUISITES FOR INTEGRATED ACCOUNTS:	• The management's decision about the extent of integration of the two sets of books. Some concerns find it useful to integrate up to the stage of primary cost or factory cost while other prefer full integration of the entire accounting records. • A suitable coding system must be made available so as to serve the accounting purposes of financial and cost accounts. • An agreed routine, with regard to the treatment of provision for accruals, prepaid expenses, other adjustment necessary for preparation of interim accounts. • Perfect coordination should exist between the staff responsible for the financial and cost aspects of the accounts and an efficient processing of accounting documents should be ensured.
RECONCILIATION OF COST AND FINANCIAL	• <u>Need</u>: When the cost and financial accounts are kept separately, it is imperative that those should be reconciled, otherwise the cost accounts would not be reliable. • <u>Sufficient Information</u>: In this connection, it is necessary to remember

ACCOUNTS:	that a reconciliation of the two sets of accounts only can be made if both the sets contain sufficient details as would enable the causes of differences to be located. It is, therefore, important that in the financial accounts, the expenses should be analysed in the same way as in the cost accounts. • Reconciliation of the balances generally, is possible preparing a <u>Memorandum Reconciliation Account</u>. • In this account, the items charged in one set of accounts but not in the other or those charged in excess as compared to that in the other are collected and by adding or subtracting them from the balance of the amount of profit shown by one of the accounts, shown by the other can be reached. The procedure is similar to the one followed for reconciling the balance with a bank that shown by the cash book or the ledger.
ITEMS INCLUDED IN THE FINANCIAL ACCOUNTS BUT NOT IN COST ACCOUNTS :	(a) Matters of pure finance : • Interest received on bank deposits. • Interest, dividends, etc. received on investments. • Rents receivable. • Losses on the sales of investments, building etc. • Profits made on the sale of fixed assets. • Expenses of the company's share transfer office, if any. • Transfer fee received. • Remuneration paid to the proprietor in excess of a fair reward for services rendered. • Damages payable at law. • Penalties payable at law. • Losses due to scrapping of machinery. (b) Item included in the cost accounts only (notional expenses): • Charges in lieu of rent where premises are owned. • Interest on capital employed in production, but upon which no interest is actually paid if the firm decided to treat interest as part of cost. • Salary for the proprietor where he works but does not charge a salary. (c) Items whose treatment is different in the two sets of accounts. The objective of cost accounting is to provide information to management for decision making and control purposes while financial accounting conforms to external reporting requirements. Hence there are chances that certain items are treated differently in the two sets of accounts. For example, LIFO method is not allowed for inventory valuation in India as per the Accounting Standard 2 issued by the Council of the ICAI. However, this method may be adopted for cost accounts as it is more suitable for arriving at costs which shall be used as a base for deciding selling prices. Similarly cost accounting may use a different method of depreciation than what is allowed under financial accounting. (d) Varying basis of valuation: It is another factor which sometimes is responsible for the difference. It is well known that in financial accounts stock are valued either at cost or market price, whichever is lower. But in Cost Accounts, stocks are only valued at cost.

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CHAPTER 7: COSTING SYSTEMS

COST PLUS CONTRACT	Under Cost plus Contract, the contract price is ascertained by adding a percentage of profit to the total cost of the work. Such type of contracts are entered into when it is not possible to estimate the Contract Cost with reasonable accuracy due to unstable condition of material, labour services, etc. Advantages: (i) The Contractor is assured of a fixed percentage of profit. There is no risk of incurring any loss on the contract. (ii) It is useful specially when the work to be done is not definitely fixed at the time of making the estimate. (iii) Contractee can ensure himself about 'the cost of the contract', as he is empowered to examine the books and documents of the contractor to ascertain the veracity of the cost of the contract. Disadvantages - The contractor may not have any inducement to avoid wastages and effect economy in production to reduce cost.
ESCALATION CLAUSE:	• <u>Meaning</u>: Escalation clause is a stipulation in the contract that the contract price will be increased by an agreed amount or percentage if the price of the raw material, wages, etc increases beyond a certain limit. • The <u>object of this clause</u> is to safeguard the interest of both side against unfavorable change in price. • While due to loss of the contractor's interest is safeguarded as his profit percentage is not reduced. • The customer's interest is safeguarded as quality is ensured because due to the escalation clause the contractor does not use material of low quality.
NOTIONAL PROFIT AND RETENTION MONEY IN CONTRACT COSTING:	Notional profit is the excess of income till date over expenditure till date on a contract. Since actual profit can be computed only after the contract is complete, notional profit is used to recognize profit during the course of contract. Notional profit = Value of work certified + cost of work uncertified – cost incurred till date Retention money: the contractor gets money on the basis of work completed as certified by the certificate of work done. Sometimes the customer does not pay the whole value of work done. As per the agreement, a certain percentage of the value of work done is retained by the customer. This is called as retention money. The objective behind retention money is to place the customer in a favorable position as against the contractor. It safeguards the interest of the customer as against the failure of the contractor to fulfill any of the clauses of the agreement or against the defective work found later on.

RECOGNITION OF PROFIT ON INCOMPLETE CONTRACTS:	Profit on uncompleted contract is computed on the basis of notional profit and the percentage of the work done. It is transferred to costing profit and loss account and computed as follows: Stage of contract – Less than 25%: Profit to be recognized is NIL as it is impossible to foresee clearly the future position. Stage of contract – More than 25% but less than 50% : Profit to be recognized is $\text{Profit} = \frac{1}{3} * \text{Notional Profit} * \text{Cash received/Work certified}$ Stage of contract – More than 50% but less than 90% Profit to be recognized is $\text{Profit} = \frac{2}{3} * \text{Notional profit} * \text{Cash received/work certified}$ Stage of contract – more than 90% Profit to be recognized is a proportion of estimated profit. The estimated profit is arrived at by deducting the contract price the aggregate of estimated cost and expenditure incurred. The proportion of estimated profit is computed by adopting any of the following formula: $\frac{\text{Estimated profit} * \text{work certified/contract price} * \text{Cash received/ work certified}}$
OPERATING COSTING:	Operating costing is one of the methods of costing used to ascertain the cost of generating and rendering services such as transport, hospital, canteens, electricity, etc. Job costing is undertaken in industries which provides services such as canteens, hospitals, electricity, transport, etc. Operating costing aims at ascertaining the operating costs. The cost incurred to generate and render services such as hospital, canteen, electricity, transport, etc is called operating cost. Operating costs are classified into three broad categories; Operating and running cost: these are the cost which are incurred for operating and running the vehicle. For e.g. cost of diesel, petrol, etc. these cost are variable in nature and vary with the operations in more or less same proportions. Standing costs: standing cost are the cost which are incurred irrespective of operation. For e.g. rent of garage, salary of drivers, insurance premium, etc. it is fixed in nature and thus the cost goes on accumulating as the time passes. Maintenance costs: Maintenance cost are the cost which are incurred to keep the vehicle in good or running condition. For e.g. cost of repair, painting, overhauling, etc. it is semi variable in nature and is influenced by both time and volume of operation.
JOB COSTING AND BATCH COSTING	CIMA London defines Job Costing as “the category of basic costing methods which is applicable where the work consists of separate contracts, jobs or batches each of which is authorised by specific

	order or contract.” - According to this method costs are collected and accumulated according to jobs, contracts, products or work orders. - Each job or unit of production is treated as a separate entity for the purpose of costing. - Job costing is carried out for the purpose of ascertaining cost of each job and takes into account the cost of materials, labour and overhead etc. - The job costing method is also applicable to industries in which production is in batches since batch production basically is of the same character as the job order production, the <i>difference being mainly one in the size of different orders</i>. The method then may also be described as “Batch Costing”. Process of Job costing - Prepare a separate cost sheet for each job - Disclose cost of materials issued for the job - Labour charges incurred (on the basis of bill of material and time cards respectively) - When job is completed, overhead charges are added for ascertaining total expenditure
ECONOMIC BATCH QUANTITY IN BATCH COSTING	In batch costing the most important problem is the determination of ‘Economic Batch Quantity’ The determination of economic batch quantity involves two type of costs viz, (i) set up cost and (ii) carrying cost. With the increase in the batch size, there is an increase in the carrying cost but the set-up cost per unit of the product is reduced; this situation is reversed when the batch size is reduced. Thus there is one particular batch size for which both set up and carrying costs are minimum. This size of a batch is known as economic or optimum batch quantity. Economic batch quantity can be determined with the help of a table, graph or mathematical formula. The mathematical formula usually used for its determination is as follows: $\sqrt{2DS/C}$ Where, D = Annual demand for the product S = Setting up cost per batch C = Carrying cost per unit of production per annum
EQUIVALENT PRODUCTION:	- The presence of opening or closing WIP poses an accounting problem as to the evaluation of inventory as well as ascertainment of cost per unit of output. - To solve this problem, the WIP or incomplete units are expressed in terms of complete units, which are termed as equivalent unit of production. - Thus, equivalent production refers to a systematic procedure of

	expressing the output of a process in terms of completed units. • It is therefore, the conversion of uncompleted production into its equivalent completed units. • Equivalent units of production means converting the uncompleted production into its equivalent completed units. To compute the equivalent units, in each process, an estimate is made of the percentage completion of the closing WIP. • The WIP is inspected and an estimate is made of the degree of completion, usually on a percentage basis.	
NORMAL WASTE, ABNORMAL WASTE & ABNORMAL GAIN AND THEIR TREATMENT IN COST ACCOUNTS:	NORMAL PROCESS LOSS	➤ It is defined as the loss of material which is inherent in the nature of work. Such a loss can be reasonably anticipated from the nature of the material, nature of operation, the experience and technical data. ➤ The cost of normal process loss in practice is absorbed by good units produced under the process. The amount realised by the sale of normal process loss units should be credited to the process account.
	ABNORMAL PROCESS LOSS	➤ It is defined as the loss in excess of the pre-determined loss. This type of loss may occur due to the carelessness of workers, a bad plant design or operation etc. ➤ Such a loss cannot obviously be estimated in advance. But it can be kept under control by taking suitable measures. ➤ The cost of an abnormal process loss unit is equal to the cost of a good unit. The total cost of abnormal process loss is credited to the process account from which it arise. ➤ Cost of abnormal process loss is not treated as a part of the cost of the product. In fact, the total cost of abnormal process loss is debited to costing profit and loss account.
	ABNORMAL GAIN	➤ Sometimes, loss under a process is less than the anticipated normal figure. In other words, the actual production exceeds the expected figures. ➤ Under such a situation the difference between actual and expected loss or actual and expected production is known as abnormal gain. So abnormal gain may be defined as unexpected gain in production under normal conditions. ➤ The process account under which abnormal gain arises is debited with the abnormal gain. The cost of abnormal gain is computed on the basis of normal production.
EXPLAIN BRIEFLY THE PROCEDURE	The valuation of work-in-process can be made in the following three ways, depending upon the assumptions made regarding the flow of	

FOR THE VALUATION OF WORK-IN-PROCESS UNDER PROCESS COSTING	costs. – First-in-first-out (FIFO) method – Last-in-first-out (LIFO) method – Average cost method A brief account of the procedure followed for the valuation of work-in-process under the above three methods is as follows; FIFO method: According to this method the units first entering the process are completed first. Thus the units completed during a period would consist partly of the units which were incomplete at the beginning of the period and partly of the units introduced during the period. The cost of completed units is affected by the value of the opening inventory, which is based on the cost of the previous period. The closing inventory of work-in-process is valued at its current cost. LIFO method: According to this method units last entering the process are to be completed first. The completed units will be shown at their current cost and the closing-work in process will continue to appear at the cost of the opening inventory of work-in-progress along with current cost of work in progress if any. Average cost method: According to this method opening inventory of work-in-process and its costs are merged with the production and cost of the current period, respectively. An average cost per unit is determined by dividing the total cost by the total equivalent units, to ascertain the value of the units completed and units in process.
WHAT IS INTER-PROCESS PROFIT? STATE ITS ADVANTAGES AND DISADVANTAGES.	Definition of Inter-Process Profit and Its advantages and disadvantages: In some process industries the output of one process is transferred to the next process not at cost but at market value or cost plus a percentage of profit. The difference between cost and the transfer price is known as inter-process profits. The advantages and disadvantages of using inter-process profit, in the case of process type industries are as follows: Advantages: 1. Comparison between the cost of output and its market price at the stage of completion is facilitated. 2. Each process is made to stand by itself as to the profitability. Disadvantages: 1. The use of inter-process profits involves complication. 2. The system shows profits which are not realised because of stock not sold out.
JOINT PRODUCTS AND BY-	Joint Products are defined as the products which are produced simultaneously from same basic raw materials by a common process

PRODUCTS:	or processes but none of the products is relatively of more importance or value as compared with the other. For example spirit, kerosene oil, fuel oil, lubricating oil, wax, tar and asphalt are the examples of joint products. By products, on the other hand, are the products of minor importance jointly produced with other products of relatively more importance or value by the common process and using the same basic materials. These products remain inseparable upto the point of split off. For example in Dairy industries, batter or cheese is the main product, but butter milk is the by-product. Points of Distinction: (1) Joint product are the products of equal economic importance, while the by-products are of lesser importance. (2) Joint products are produced in the same process, whereas by-products are produced from the scrap or the discarded materials of the main product. (3) Joint products are not produced incidentally, but by-products emerge incidentally also.
TREATMENT OF BY-PRODUCT COST IN COST ACCOUNTING	(i) When they are of small total value, the amount realized from their sale may be dealt as follows: • Sales value of the by-product may be credited to Profit and Loss Account and no credit be given in Cost Accounting. The credit to Profit and Loss Account here is treated either as a miscellaneous income or as additional sales revenue. • The sale proceeds of the by product may be treated as deduction from the total costs. The sales proceeds should be deducted either from production cost or cost of sales. (ii) When they require further processing: In this case, the net realizable value of the by product at the split-off point may be arrived at by subtracting the further processing cost from realizable value of by products. If the value is small, it may be treated as discussed in (i) above.
METHODS OF APPORTIONMENT OF JOINT COST OVER JOINT PRODUCTS	Methods of apportioning joint cost among the joint products: Physical Unit Method: This method is based on the assumption that the joint products are capable of being measured in the same units. Accordingly joint costs here are apportioned on the basis of some physical base, such as weight or measure expressed in gallons, tonnes etc. This method cannot be applied if the physical units of the two joint products are different. Average Unit Cost Method: under this method, total process cost (upto the point of separation) is divided by total units of joint products produced. On division average cost per unit of production is obtained. The effect of application of this method is that all joint products will have uniform cost per unit. Contribution Margin Method: under this method joint costs are

segregated into two parts – variable and fixed. The variable costs are apportioned over the joint products on the basis of units produced (average method) or physical quantities. If the products are further processed, then all variable cost incurred be added to the variable cost determined earlier. Then contribution is calculated by deducting variable cost from their respective sales values. The fixed costs are then apportioned over the joint products on the basis of contribution ratios.

Survey Method: This method is also known as point value method. It is based on technical survey of all the factors involved in the production and distribution of products. Under this method joint cost are apportioned over the joint products, on the basis of percentage/point values, assigned to the products according to their relative importance.

Market Value at the Time of Separation: This method is used for apportioning joint costs to joint products upto the split off point. It is difficult to apply if the market value of the products at the point of separation are not available. The joint cost may be apportioned in the ratio of sales values of different joint products.

Market Value after further Processing: Here the basis of apportionment of joint costs is the total sales value of finished products at the further processing. The use of this method is unfair where further processing costs after the point of separation are disproportionate or when all the joint products are not subjected to further processing.

Net Realisable Value Method: Here joint costs is apportioned on the basis of net realisable value of the joint products,

Net Realisable Value = Sale value of joint products (at finished stage)
 (-) estimated profit margin
 (-) selling & distribution expenses, if any
 (-) post split off cost

JOB VS. PROCESS COSTING

JOB COSTING	PROCESS COSTING
A job is carried out or a product is produced by specific orders	The process of producing the product has a continuous flow and the product produced is homogeneous.
Cost are determined for each Job	Cost are compiled on time basis i.e for production of a given accounting period for each process or department
Each job is separate and independent of other jobs	Products lose their individual identity as they are manufactured in a continuous flow
Each job or order has a number	The unit cost of process is an

	and cost are collected against the same job number	average cost for the period
	Cost are computed when a job is completed. The cost of a job may be determined by adding all cost against the job	Cost are calculated at the end of the cost period. The unit cost of a process may be computing by dividing the total cost for the period by the output of the process during that period.
	As production is not continuous and each job may be different, so more managerial attention is required for effective control	Process of production is usually standardized and is therefore quite stable. Hence control is comparatively easier.

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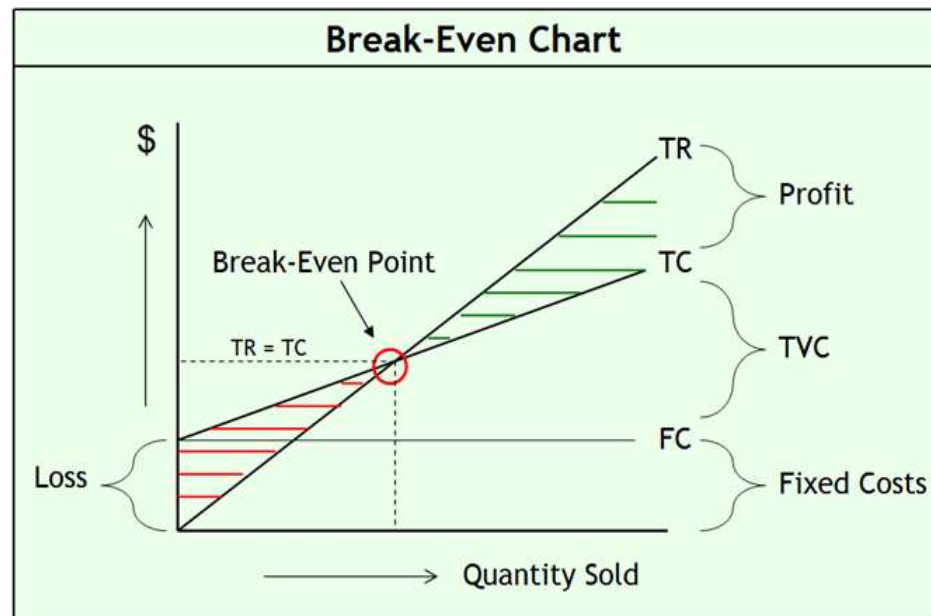
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CHAPTER 8, 9 & 10: MARGINAL COSTING, STANDARD COSTING & BUDGETARY CONTROL

KEY FACTOR OR LIMITING FACTOR	Key Factor is a factor which at a particular time or over a period limits the activities of an undertaking. It may be the level of demand for the products or services or it may be the shortage of one or more of the productive resources, e.g., labour hours, available plant capacity, raw material's availability etc. Examples of Key Factors or Limiting Factors are: - Shortage of raw material. - Shortage of labour. - Plant capacity available. - Sales capacity available. - Cash availability.
ADVANTAGES OF MARGINAL COSTING	- The marginal cost remains constant per unit of output whereas the fixed cost remains constant in total. Since marginal cost per unit is constant from period to period within a short span of time, <u>firm decisions on pricing policy can be taken</u>. If fixed cost is included, the unit cost will change from day to day depending upon the volume of output. This will make decision making task difficult. - Overheads are recovered in costing on the basis of pre-determined rates. If fixed overheads are included on the basis of pre-determined rates, there will be under-recovery of overheads if production is less or if overheads are more. There will be over-recovery of overheads if production is more than the budget or actual expenses are less than the estimate. This creates the problem of treatment of such under or over-recovery of overheads. <u>Marginal costing avoids such under or over recovery of overheads</u>. - Advocates of marginal costing argues that under the marginal costing technique, the stock of finished goods and work-in-progress are carried on marginal cost basis and the fixed expenses are written off to profit and loss account as period cost. This <u>shows the true profit of the period</u>. - Marginal costing helps in the <u>preparation of break-even analysis</u> which shows the effect of increasing or decreasing production activity on the profitability of the company. - Segregation of expenses as fixed and variable helps the management to exercise control over expenditure. The management <u>can compare the actual variable expenses with the budgeted variable expenses</u> and take corrective action through analysis of variances. - Marginal costing helps the management in taking a number of <u>business decisions</u> like make or buy, discontinuance of a particular product, replacement of machines, etc.
LIMITATIONS	It is <u>difficult to classify</u> exactly the expenses into fixed and variable

OF MARGINAL COSTING	category. Most of the expenses are neither totally variable nor wholly fixed. For example, various amenities provided to workers may have no relation either to volume of production or time factor. • Contribution of a product itself is <u>not a guide for optimum profitability</u> unless it is linked with the key factor. • Sales <u>staff may mistake</u> marginal cost for total cost and sell at a price; which will result in loss or low profits. Hence, sales staff should be cautioned while giving marginal cost. • Overheads of fixed nature cannot altogether be excluded particularly in large contracts, while valuing the work-in-progress. In order to show the correct position fixed overheads have to be included in work-in-progress. • Some of the assumptions regarding the behaviour of various costs are not necessarily true in a realistic situation. • Marginal costing <u>ignores time factor and investment</u>. For example, the marginal cost of two jobs may be the same but the time taken for their completion and the cost of machines used may differ. The true cost of a job which takes longer time and uses costlier machine would be higher. This fact is not disclosed by marginal costing.
ASSUMPTIONS OF COST VOLUME PROFIT ANALYSIS:	• Changes in the levels of revenues and costs arise only because of changes in the number of product (or service) units produced and sold – for example, the number of television sets produced and sold by Sony Corporation or the number of packages delivered by Overnight Express. <u>The number of output units is the only revenue driver and the only cost driver.</u> Just as a cost driver is any factor that affects costs, a revenue driver is a variable, such as volume, that causally affects revenues. • <u>Total costs can be separated into two components</u>; a fixed component that does not vary with output level and a variable component that changes with respect to output level. Furthermore, variable costs include both direct variable costs and indirect variable costs of a product. Similarly, fixed costs include both direct fixed costs and indirect fixed costs of a product • When represented graphically, the behaviours of total revenues and total costs are <u>linear</u> (meaning they can be represented as a straight line) in relation to output level within a relevant range (and time period). • Selling price, variable cost per unit, and total fixed costs (within a relevant range and time period) are known and <u>constant</u>. • The analysis either covers a single product or assumes that the <u>proportion of different products</u> when multiple products are sold will <u>remain constant</u> as the level of total units sold changes.

- All revenues and costs can be added, subtracted, and compared without taking into account the time value of money.



ANGLE OF INCIDENCE

This angle is formed by the intersection of sales line and total cost line at the break- even point. This angle shows the rate at which profits are being earned once the break-even point has been reached. The wider the angle the greater is the rate of earning profits. A large angle of incidence with a high margin of safety indicates extremely favourable position.

MARGIN OF SAFETY

The margin of safety can be defined as the difference between the expected level of sale and the breakeven sales. The larger the margin of safety , the higher are the chances of making profits.

The Margin of Safety can also be calculated by identifying the difference between the projected sales and breakeven sales in units multiplied by the contribution per unit. This is possible because, at the breakeven point all the fixed costs are recovered and any further contribution goes into the making of profits.

ABSORPTION COSTING AND MARGINAL COSTING:

Basis	Absorption Costing	Marginal Costing
Calculation of Overhead Rate	In this, absorption rates includes both fixed and variable overheads.	Marginal costing rate include only variable manufacturing overhead.
Valuation of inventory	In absorption costing, valuation is on product cost i.e prime cost plus applied fixed and variable manufacturing overheads	Marginal costing will be at prime cost plus applied variable manufacturing overheads.
Classification of overheads	In absorption costing, the overhead may be classified as factory,	In marginal costing, overheads are classified as fixed and variable.

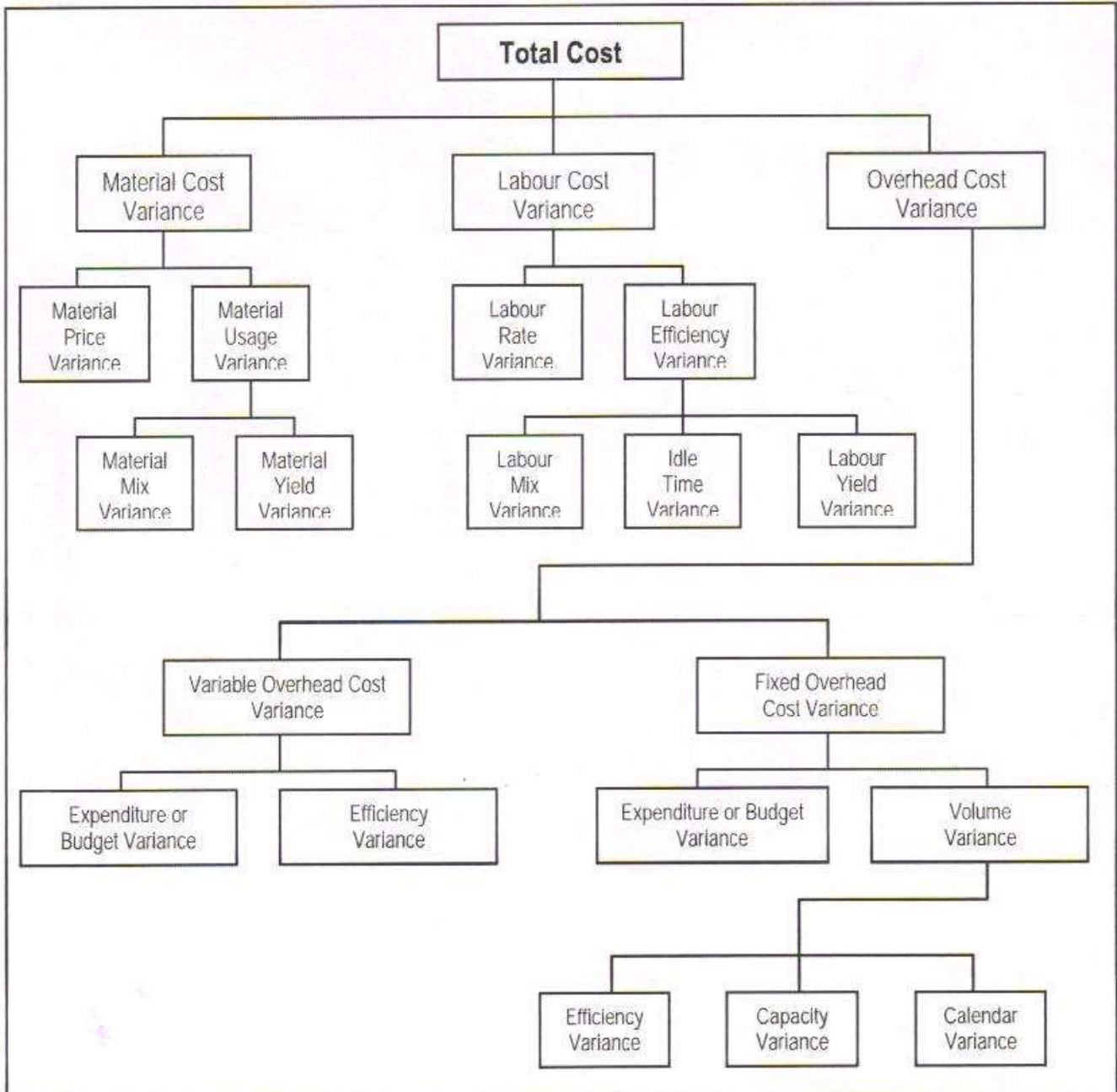
		administration and selling and distribution.	
	Decision making	It distorts decision making	It facilitates decision making
	Profitability	Fixed cost are charged to the cost of production. Each product bears reasonable share of fixed costs and thus profitability of a product is influenced by an apportionment of fixed cost.	Fixed cost are regarded as period costs. The profitability of different products are judged by their PV ratio.

NEED OF STANDARD COSTING:	Standard costing system is widely accepted as it serves the different needs of an organisation. The standard costing is preferred for the following reasons: (a) Prediction of future cost for decision making: Standard costs are set after taking into account all the future possibilities and can be termed as future cost. Standard cost is used for calculating profitability from a project/ order/ activity proposed to be undertaken. Hence, standard cost is very useful for decision making purpose. (b) Provide target to be achieved: Standard costs are the target cost which should be no be crossed. It keeps challenging target before the responsibility centres. Management of responsibility centres monitor the performance continuously against the set standards and deviations are immediately corrected. (c) Used in budgeting and performance evaluation: Standard costs are used to set budgets and based on these budgets managerial performance is evaluated. This is of two benefits, one managers of a responsibility centre will not compromise with the quality to fulfill the budgeted quantity and second, variances can be traced with the responsible department or person. (d) Interim profit measurement and inventory valuation: Actual profit is known only after the closure of the account. Few organisations used to prepare profitability statement for some interim periods as per the requirement of the management. To arrive at the profitability figure standard costs are deducted from the revenue.
PROCESS OF STANDARD COSTING	The process of standard cost is as below: (i) Setting of Standards: The first step is to set standards which are to achieved, The process of standard setting is explained above. (ii) Ascertainment of actual costs: Actual cost for each component of cost is ascertained. Actual costs are ascertained from books of account, material invoices, wage sheet, charge slip etc. (iii) Comparison of actual cost and standard cost: Actual costs are compared with the standards costs and variances are determined. (iv) Investigation of variances: Variances arises are investigated for

further action. Based on this performance is evaluated and appropriate actions are taken.

(v) **Disposition of variances:** variances arise are disposed off by transferring it the relevant accounts (costing profit and loss account) as per the accounting method (plan) adopted.

Fig 8.1: Classification of Variances



TYPES OF VARIANCES:

Controllable and un-controllable variances: The purpose of the standard costing reports is to investigate the reasons for significant variances so as to identify the problems and take corrective action.

Variances are broadly of two types, namely, controllable and uncontrollable. Controllable variances are those which can be controlled

	by the departmental heads whereas uncontrollable variances are those which are beyond their control. Responsibility centres are answerable for all adverse variances which are controllable and are appreciated for favourable variances. Controllability is a subjective matter and varies from situation to situation. If the uncontrollable variances are of significant nature and are persistent, the standard may need revision. Favourable and Adverse variance: Favourable variances are those which are profitable for the company and Adverse variances are those which causes loss to the company. While computing cost variances favourable variance means actual cost is less than standard cost. On the other hand adverse variance means actual cost is exceeding standard cost. The situation will be reversed for sales variance. Favourable variances are profitable for the company and on contrary adverse variance causes loss to the company. Hence, these are credited and debited in the costing profit and loss account respectively. Favourable variance in short denoted by capital 'F' and adverse variances by capital 'A'. Students may note that signs of favourable and adverse variance may or may not match exactly with mathematical signs i.e. (+) or (-).
DISPOSITION OF VARIANCES:	There is no unanimity of opinion in regard to disposition of variances. The following are the various methods:- (a) Write off all variances to profit and loss account or cost of sales every month. (b) Distribute the variance prorata to cost of sales, work-in-progress and finished good stocks. (c) Write off quantity variance to profit and loss account but the price variances may be spread over cost of sales, work-in-progress and finished goods stocks. The reason behind apportioning price variances to inventories and cost of sales is that they represent cost although they are described as variance.
ADVANTAGES OF BUDGETARY CONTROL SYSTEM	• The use of budgetary control system enables the management of a business concern to conduct its business activities in the efficient manner. • It is a powerful instrument used by business houses for the control of their expenditure. It infact provides a yardstick for measuring and evaluating the performance of individuals and their departments. • It reveals the deviations to management, from the budgeted figures after making a comparison with actual figures. • Effective utilisation of various resources like—men, material, machinery and money is made possible, as the production is planned after taking them into account. • It helps in the review of current trends and framing of future policies. • It creates suitable conditions for the implementation of standard costing system in a business organisation. • It inculcates the feeling of cost consciousness among workers.

LIMITATIONS OF BUDGETARY CONTROL SYSTEM :	The limitations of budgetary control system are as follows : (i) Budgets may or may not be true, as they are based on estimates. (ii) Budgets are considered as rigid document. (iii) Budgets cannot be executed automatically. (iv) Staff co-operation is usually not available during budgetary control exercise. (v) Its implementation is quite expensive.
INSTALLATION OF BUDGETARY CONTROL SYSTEM	1. Organisation Chart: An organizational chart is a statement defining functional representatives of executives responsible for accomplishment of organizational objectives. (i) Functional responsibility of a particular executive. (ii) Delegation of authority to various levels. (iii) Relative position of a functional head with heads of other functions. 2. Budget Committee: the budget committee is a group of representatives of various functions in an organisation. As all functions are inter related and as any change in one's target will have its impact on that of the other, it is necessary to discuss the targets so that a mutually agreed programme is determined. It is a powerful force in knitting together the various activities of the business and enforcing real control over operations. The budget manual should specify the responsibilities and duties of the budget committee, which should include the following: (i) Receive and review budget estimates from the respective divisions or departments and make recommendations. (ii) recommend decisions or budget matters where there may be conflicts between departments or divisions. (iii) recommend changes and approval of the revised budget. (iv) Receive, study and analyse periodic reports comparing the budget with actual performance. Consider policies with respect to follow up procedures. (v) consider and make recommendations for revision of the budget when conditions warrant. (vi) make recommendations for the budget manual. 3. Budget Reports: performance evaluation and reporting variances is an integral part of all control systems. Establishing budgets in itself is of no use unless a comparison is made regularly between the actual expenditure and budgeted allowances, and the results reported to the management. For this purpose, budget reports showing comparison between the actual and budgeted expenditure should be presented periodically and promptly. A budget report to be effective must be: (i) regularly and promptly presented. (ii) designed to give only the essential information required and avoid unnecessary details; (iii) Free from personal bias of the person preparing it; and (iv) dated and signed by those who prepare and check it.

	4. Budget manual: A budget manual is a document which sets outstanding instructions governing the responsibilities of persons and procedures, forms and records relating to the preparation and use of budgets and it is a booklet containing standing instructions regarding the procedures to be followed and the time schedules to be observed. (i) The dates by which preliminary forecast and plans are to be submitted; (ii) the important factors that must be considered for each forecast or plan; (iii) the manner of scrutiny and the personnel to carry it out; (iv) the finalisation of functional budgets and their compilation into master budget. (v) the manner in which budgets, after acceptance and issuance, are to be revised or amended; (vi) the matters, included in budgets, on which action may be taken only with the approval of top management.
FIXED BUDGET -	• <u>Definition:</u> According to Chartered Institute of Management Accountants of England, “a fixed budget, is a budget designed to remain unchanged irrespective of the level of activity actually attained”. • <u>One Activity Level:</u> A fixed budget shows the expected results of a responsibility center for only one activity level. • <u>No Change:</u> Once the budget has been determined, it is not changed, even if the activity changes. • <u>Application of Fixed Budgets:</u> Fixed budgeting is used by many service companies and for some administrative functions of manufacturing companies, such as purchasing, engineering, and accounting. • Fixed Budget is used as an effective tool of cost control. In case, the level of activity attained is different from the level of activity for budgeting purposes, the fixed budget becomes ineffective. • Such a budget is quite suitable for fixed expenses. It is also known as a <u>static budget</u>.
MASTER BUDGET	• Master budget is a <u>consolidated summary</u> of the various functional budgets. • A master budget is the summary budget incorporating its component functional budget and which is finally approved, adopted and employed. • It is the culmination of the preparation of all other budgets like the sales budget, production budget, purchase budget, etc. • It consists in reality of the budgeted profit and loss account, the balance sheet and budgeted cash flow statement.
FLEXIBLE BUDGET	Unlike static budgets, flexible budgets show the expected results of a responsibility center for several activity levels. You can think of a flexible budget as a series of static budgets for different levels of activity. Such budgets are especially useful in estimating and controlling factory costs and operating expenses. It is more realistic and practicable because it gives due consideration to cost behaviours at different levels of activity. While preparing a flexible budget the expenses are classified into three categories viz.

	(i) Fixed, (ii) Variable, and (iii) Semi-variable. Semi-variable expenses are further segregated into fixed and variable expenses. Flexible budgeting may be resorted to under following situations: (i) In the case of new business venture due to its typical nature it may be difficult to forecast the demand of a product accurately. (ii) Where the business is dependent upon the mercy of nature e.g., a person dealing in wool trade may have enough market if temperature goes below the freezing point. (iii) In the case of labour intensive industry where the production of the concern is dependent upon the availability of labour.
TYPES OF BUDGETS	<pre> graph TD BUDGET --> Capacity_wise[Capacity wise] BUDGET --> Functional_wise[Functional wise] BUDGET --> Master_Budget[Master Budget] BUDGET --> Period_wise[Period wise] Capacity_wise --> Fixed_Budgets[Fixed Budgets] Capacity_wise --> Flexible_Budgets[Flexible Budgets] Functional_wise --> Sales_budget[Sales budget] Functional_wise --> Production_budget[Production budget] Functional_wise --> Plant_utilisation_budget[Plant utilisation budget] Functional_wise --> Direct_material_usage_budget[Direct-material usage budget] Functional_wise --> Direct_material_purchase_budget[Direct-material purchase budget] Functional_wise --> Direct_labour_personnel_budget[Direct-labour (personnel) budget] Functional_wise --> Factory_overhead_budget[Factory overhead budget] Functional_wise --> Production_cost_budget[Production cost budget] Functional_wise --> Ending_inventory_budget[Ending-inventory budget] Functional_wise --> Cost_of_goods_sold_budget[Cost of goods-sold budget] Functional_wise --> Selling_and_distribution_cost_budget[Selling and distribution cost budget] Functional_wise --> Administration_expenses_budget[Administration expenses budget] Functional_wise --> Research_and_development_cost_budget[Research and development cost budget] Functional_wise --> Capital_expenditure_budget[Capital expenditure budget] Functional_wise --> Cash_budget[Cash budget] Period_wise --> Long_term_Budgets[Long-term Budgets] Period_wise --> Short_Budgets[Short Budgets] Period_wise --> Current_Budgets[Current Budgets] </pre>

FIXED FLEXIBLE BUDGETS	VS.	<table><tr><th>Sl. no.</th><th>Fixed Budget</th><th>Flexible Budget</th></tr><tr><td>1.</td><td>It does not change with actual volume of activity achieved. Thus it is known as rigid or inflexible budget</td><td>It can be re-casted on the basis of activity level to be achieved. Thus it is not rigid.</td></tr><tr><td>2.</td><td>It operates on one level of activity and under one set of conditions. It assumes that there will be no change in the prevailing conditions, which is unrealistic.</td><td>It consists of various budgets for different levels of activity</td></tr><tr><td>3.</td><td>Here as all costs like - fixed, variable and semi-variable are related to only one level of activity so variance analysis does not give useful information.</td><td>Here analysis of variance provides useful information as each cost is analysed according to its behaviour.</td></tr><tr><td>4.</td><td>If the budgeted and actual activity levels differ significantly, then the aspects like cost ascertainment and price fixation do not give a correct picture.</td><td>Flexible budgeting at different levels of activity facilitates the ascertainment of cost, fixation of selling price and tendering of quotations.</td></tr><tr><td>5.</td><td>Comparison of actual performance with budgeted targets will be meaningless specially when there is a difference between the two activity levels.</td><td>It provides a meaningful basis of comparison of the actual performance with the budgeted targets.</td></tr></table>	Sl. no.	Fixed Budget	Flexible Budget	1.	It does not change with actual volume of activity achieved. Thus it is known as rigid or inflexible budget	It can be re-casted on the basis of activity level to be achieved. Thus it is not rigid.	2.	It operates on one level of activity and under one set of conditions. It assumes that there will be no change in the prevailing conditions, which is unrealistic.	It consists of various budgets for different levels of activity	3.	Here as all costs like - fixed, variable and semi-variable are related to only one level of activity so variance analysis does not give useful information.	Here analysis of variance provides useful information as each cost is analysed according to its behaviour.	4.	If the budgeted and actual activity levels differ significantly, then the aspects like cost ascertainment and price fixation do not give a correct picture.	Flexible budgeting at different levels of activity facilitates the ascertainment of cost, fixation of selling price and tendering of quotations.	5.	Comparison of actual performance with budgeted targets will be meaningless specially when there is a difference between the two activity levels.	It provides a meaningful basis of comparison of the actual performance with the budgeted targets.
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ZERO BASE BUDGETING		- Zero base budgeting is a <u>revolutionary concept</u> of planning the future activities and there is a sharp contradiction from conventional budgeting. - Zero base budgeting, may be better termed as “<u>De Nova Budgeting</u>” or budgeting from the beginning without any reference to any base past budgets and actual happening. - Zero base budgeting may be <u>defined as</u> “a planning and budgeting process which requires each manager to justify his entire budget requested in detail from scratch (hence zero base) and shifts the burden of proof to each manager to justify why he should spend any money at all. The approach requires that all activities be analyzed in decision packages which are evaluated by systematic analysis and ranked in order of importance.” - It is a technique which complements and links the existing planning, budgeting and review processes. It identifies alternative and efficient methods of utilizing limited resources in effective attainment of selected benefits. - It is a <u>flexible management approach</u> which provides a credible rationale for reallocating resources by focusing on systematic review and justification of the funding and performance levels of current programs of activities. - The concept of ZBB was <u>developed in USA</u>. - Under ZBB, each program and each of its constituent part is challenged for its very inclusion in each year’s budget. Program objectives are also re-examined with a view to start things afresh. It requires analysis and evaluation of each program in order to justify its inclusion or exclusion from the final budget.																		

	<u>Advantages of ZBB:</u> (i) ZBB is not based on incremental approach, so it promotes operational efficiency because it requires managers to review and justify their activities or the funds requested. (ii) Since this system requires participation of all managers, preparation of budgets, responsibilities of all levels at management in successful execution of budgetary system can be ensured. (iii) This technique is relatively elastic because budgets are prepared every year on a zero base. This system makes it obligatory to develop financial planning and management information system. (iv) This system weeds out inefficiency and reduces the cost of production because every budget proposal is evaluated on the basis of cost benefit analysis. (v) It provides the organisation with a systematic way to evaluate different operations and programs undertaken by the management. It enables management to allocate resources according to priority of the programs. (vi) It is helpful to the management in making optimum allocation of scarce resources because a unique aspect of zero base budgeting is the evaluation of both current and proposed expenditure and placing it in some order of priority. <u>Criticism against ZBB:</u> (i) Defining the decision units and decision packages is rather difficult. (ii) ZBB requires a lot of training for managers. (iii) Cost of preparing the various packages may be very high in large firms involving large number of decision packages. (iv) It may lay more emphasis on short term benefits to the detriment of long term objectives of the organisation. (v) It will lead to enormous increase in paper work created by the decision packages. The assumptions about cost and benefits in each package must be continually up dated and new packages developed as soon as new activities emerge. (vi) Where objectives are very difficult to quantify as in research and development, zero base budgeting does not offer any significant control advantage.
PERFORMANCE BUDGETING:	• The concept of performance budgeting relates to greater management efficiency specially in government work. With a view to introducing a system's approach, the concept of performance budgeting was developed and as such there was a shift from financial classification to Cost or Objective Classification. • Performance budgeting, is therefore, looked upon as a budget based on functions, activities and projects and is linked to the budgetary system based on objective classification of expenditure. • The purpose of performance budgeting is to focus attention upon the work to be done, services to be rendered rather than things to be spent for or acquired. • In performance budgeting, emphasis is shifted from control inputs to efficient and economic management of functions and objectives. • Performance budgeting takes a system view of activities by trying to associate the inputs of the expenditure with the output of accomplishment in terms of services, benefits, etc. in performance

	budgeting, the objective of the budget makers and setting the task and sub task for accomplishment of the defined objectives are to be clearly decided well in advance before budgetary allocations of inputs are made. The <u>main purpose</u> of performance budgeting are: (i) TO review at every stage, and at every level of organisation, so as to measure progress towards the short term and long term objectives. (ii) To inter relate physical and financial aspects of every programme, project or activity. (iii) TO facilitate more effective performance audit (iv) TO assess the effects of the decision making of supervisor to the middle and top managers. (v) To bring annual plans and budgets in line with the short and long term plan objectives. (vi) To present a comprehensive operational document showing the complete planning fabric of the programme and prospectus their objectives interwoven with the financial and physical aspects. • However, Performance budgeting has <u>certain limitations</u> such as difficulty in classifying Programmes and activities, problems of evaluation of various schemes, relegation to the background of important Programmes. Moreover, the technique enables only quantitative evaluation scheme and sometimes the needed results cannot be measured.
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MARGINAL COSTING FORMULA

Contribution = Sales – variable Cost (or) Contribution = Fixed Cost + Profit
Profit Volume Ratio = Contribution/sales (or) Change in contribution/change in sales
Break Even Point = Fixed Cost/Contribution (or) Fixed Cost/PV Ratio (or) Fixed Cost/ Contribution at 1% Capacity
Contribution = Sales * PV Ratio
Margin of Safety = Actual Sale – Break even sales (or) Profit/Contribution per unit (or) Profit/PV Ratio
Sale Value at Desired Profit = $\frac{\text{Fixed Cost} + \text{Desired Profit}}{\text{PV Ratio}}$
Variable Cost Ratio = $\frac{\text{Change in Total Cost}}{\text{Change in Total Cost}}$

Change in Total Sales
Variable Cost per unit = $\frac{\text{Change in total cost}}{\text{Change in output}}$
Contribution per unit = $\frac{\text{Change in Profit}}{\text{Change in output}}$
Net profit = MOS * PV Ratio

STANDARD COSTING FORMULA

MATERIAL COST VARIANCES	Material Cost Variance: (Std Qty req for AO * SP) - (AQ Consumed * AP) Material Price Variance: AQ consumed (SP - AP) Material Usage Variance: SP (Std Qty for AO - AQ) Where, AO=Actual Output SP= Standard Price AP= Actual Price AQ= Actual Quantity <u>Material Cost Variance = Material Price Variance + Material Usage Variance</u>
LABOR COST VARIANCES	Labor Cost Variance: (SH for AO * SR) - (AH * AR) Labor Rate Variance: AH (SR-AR) Labor Efficiency Variance: SR(SH for AO - AH) Where, SH= Standard Hours AH= Actual Hours SR= Standard Rate of Labor per hour AR= Actual Rate of Labor per hour AO= Actual Output <u>Labor Cost Variance = Labor Rate Variance + Labor Efficiency Variance</u>
VARIABLE OVERHEAD COST VARIANCE	Variable OH Cost Variance: (AO * SRR/Unit) - Actual OH Variable OH Expenditure Variance: (AH * SRR/Hr) - Actual OH Variable OH Efficiency Variance: SRR/hr (SH - AH) SRR/Unit = Budgeted Variable OH/Budgeted Output SRR/Hr = Budgeted Variable OH/Budgeted Hours <u>Variable OH Cost Variance = Expenditure Variance + Efficiency Variance</u>

FIXED OVERHEAD COST VARIANCE	Fixed OH Cost Variance: $(AO * SRR/Unit) - \text{Actual OH}$ ➤ Fixed OH Expenditure Variance : Budgeted OH – Actual OH ➤ Fixed OH Volume Variance: $SRR/Unit(BO - AO)$ ○ Fixed OH Calendar Variance: $SRR/day(\text{Budgeted working days} - \text{actual working days})$ ○ Fixed OH Capacity Variance: $SRR/Hr(BH - AH)$ ○ Fixed OH Efficiency Variance: $SRR/Hr(SH - AH)$ $SRR/Unit = \text{Budgeted Fixed OH} / \text{Budgeted Output}$ $SRR/Hr = \text{Budgeted Fixed OH} / \text{Budgeted Hours}$ $SRR/Day = \text{Budgeted Fixed OH} / \text{Budgeted Working Days}$ <u>Fixed OH Cost Variance = Expenditure Variance + Volume Variance</u> <u>Fixed OH Volume Variance = Calendar Variance + Capacity Variance + Efficiency Variance</u>
SALES VARIANCE	Sales Variance : $(BQ * SSP) - (AQ * ASP)$ Sales price Variance: $AQS(SSP - ASP)$ Sales Volume Variance: $SSP(BQ - AQ)$ Where, BQ= Budgeted Quantity to be sold AQ= Actual Quantity Sold SSP= Standard Selling Price ASP= Actual Selling Price <u>Sales Variance = Sales Price Variance + Sales Volume Variance</u>
OTHER IMPORTANT RATIO	Efficiency Ratio = $\frac{\text{Standard Hours for AO}}{\text{Actual Hours}}$ Activity Ratio= $\frac{\text{Output in Standard Hours}}{\text{Budgeted Output in Standard hours}}$ Calendar Ratio = $\frac{\text{Actual working days}}{\text{No. of working days in budgeted period}}$

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CHAPTER 11: COST ACCOUNTING RECORDS & COST AUDIT

COST AUDIT	Cost audit is an independent examination of cost records and other related information of an entity including a non-profit entity, when such an examination is conducted with a view to expressing an opinion thereon. Cost audit comprises of the followings: (a) Verification of the cost accounting records for the accuracy of the cost accounts, cost reports, cost statements and cost data and (b) Examination of these records to ensure that they adhere to the cost accounting principles, plans, procedures and objectives.
PROVISIONS CONTAINED IN COMPANIES ACT, 2013 RELATING TO COST RECORDS	Section 2(13) and section 128 of the Companies Act, 2013 deals with the books of accounts to be kept by a company. According to section 2(13) on the Companies Act, 2013 “books of account” includes records maintained in respect of- (i) all sums of money received and expended by a company and matters in relation to which the receipts and expenditure take place; (ii) all sales and purchases of goods and services by the company; (iii) the assets and liabilities of the company; and (iv) the items of cost as may be prescribed under section 148 in the case of a company which belongs to any class of companies specified under that section; Section 128 on the Companies Act, 2013 provides that every company shall prepare and keep at its registered office books of account and other relevant books and papers and financial statement for every financial year which give a true and fair view of the state of the affairs of the company, including that of its branch office or offices, if any, and explain the transactions effected both at the registered office and its branches and such books shall be kept on accrual basis and according to the double entry system of accounting. Further all or any of the books of account aforesaid and other relevant papers may be kept at such other place in India as the Board of Directors may decide and where such a decision is taken, the company shall, within seven days thereof, file with the Registrar a notice in writing giving the full address of that other place.
PROVISIONS CONTAINED IN COMPANIES ACT, 2013 RELATING TO COST AUDIT	Section 148 of the Companies Act, 2013 deals with the audit of Cost Accounting records. The section provides as follows: (1) Notwithstanding anything contained in Chapter X of Companies Act 2013, the Central Government may, by order, in respect of such class of companies engaged in the production of such goods or providing such services as may be prescribed, direct that particulars relating to the utilisation of material or labour or to other items of cost as may be prescribed shall also be included in the books of account kept by that class of companies: Provided that the Central Government shall, before issuing such order

in respect of any class of companies regulated under a special Act, consult the regulatory body constituted or established under such special Act.

(2) If the Central Government is of the opinion, that it is necessary to do so, it may, by order, direct that the audit of cost records of class of companies, which are covered under sub-section (1) and which have a net worth of such amount as may be prescribed or a turnover of such amount as may be prescribed, shall be conducted in the manner specified in the order.

(3) The audit under sub-section (2) shall be conducted by a Cost Accountant in practice who shall be appointed by the Board on such remuneration as may be determined by the members in such manner as may be prescribed:

Provided that no person appointed under section 139 as an auditor of the company shall be appointed for conducting the audit of cost records:

Provided further that the auditor conducting the cost audit shall comply with the cost auditing standards.

Explanation.—for the purposes of this sub-section, the expression “cost auditing standards” mean such standards as are issued by the Institute of Cost and Works Accountants of India, constituted under the Cost and Works Accountants Act, 1959, with the approval of the Central Government.

(4) An audit conducted under this section shall be in addition to the audit conducted under section 143.

(5) The qualifications, disqualifications, rights, duties and obligations applicable to auditors under this Chapter shall, so far as may be applicable, apply to a cost auditor appointed under this section and it shall be the duty of the company to give all assistance and facilities to the cost auditor appointed under this section for auditing the cost records of the company:

Provided that the report on the audit of cost records shall be submitted by the cost accountant in practice to the Board of Directors of the company.

(6) A company shall within thirty days from the date of receipt of a copy of the cost audit report prepared in pursuance of a direction under sub-section (2) furnish the Central Government with such report along with full information and explanation on every reservation or qualification contained therein.

(7) If, after considering the cost audit report referred to under this section and the information and explanation furnished by the company under sub-section (6), the Central Government is of the opinion that any further information or explanation is necessary, it may call for such

	further information and explanation and the company shall furnish the same within such time as may be specified by that Government. (8) If any default is made in complying with the provisions of this section,— (a) the company and every officer of the company who is in default shall be punishable in the manner as provided in sub-section (1) of section 147; (b) the cost auditor of the company who is in default shall be punishable in the manner as provided in sub-sections (2) to (4) of section 147.
PURPOSE OF COST AUDIT	The primary purpose of Cost audit is to express an opinion on the cost accounts of the company whether these have been properly maintained and compiled according to the cost accounting system followed by the enterprise or not. However the purposes of cost audit may be segregated into general and social objectives. The general objectives can be described to include the following: (1) Verification of cost accounts with a view to ascertaining that these have been properly maintained and compiled according to the cost accounting system followed by the enterprise. (2) Ensuring that the prescribed procedures of cost accounting records rules are duly adhered to. (3) Detection of errors and fraud. (4) Verification of the cost of each “cost unit” and “cost centre” to ensure that these have been properly ascertained. (5) Determination of inventory valuation. (6) Facilitating the fixation of prices of goods and services. (7) Periodical reconciliation between cost accounts and financial accounts. (8) Ensuring optimum utilization of human, physical and financial resources of the enterprise. (9) Detection and correction of abnormal loss. (10) Inculcation of cost consciousness. (11) Advising management, on the basis of inter-firm comparison of cost records, as regards the areas where performance calls for improvement. (12) Promoting corporate governance through various operational disclosures.
SOCIAL PURPOSE OF COST AUDIT	The following deserve special mention 1. Facilitate in fixation of reasonable prices of goods and services

	produced by the enterprise. 2. Improvement in productivity of human, physical and financial resources of the enterprise. 3. Channelise enterprise resources to most optimum, productive and profitable areas. 4. Availability of audited cost data as regards contracts containing escalation clauses. 5. Facilitate in settlement of bills in the case of cost-plus contracts entered into by the Government. 6. Pinpointing areas of inefficiency and mismanagement, if any for the benefit of shareholders, consumers, etc., such that necessary corrective action could be taken in time.
APPLICABILITY OF COST AUDIT	Every such class of company and with such threshold limit as may be prescribed in the Companies (Cost Records and Audit) Amendment Rules, 2014, shall be required to get such cost records audited by a cost auditor. <u>Cost Audit</u> Every company covered under Rule 3 of the Companies (Cost Records and Audit) Amendment Rules, 2014 and with such threshold limits as specified in the Rules shall <u>within one hundred and eighty days of the commencement of every financial year</u> appoint a cost auditor. The company shall inform the cost auditor concerned of his or its appointment as such and file a notice of such appointment with the Central Government <u>within a period of thirty days of the Board meeting</u> in which such appointment is made or within a period of one hundred and eighty days of the commencement of the financial year, whichever is earlier, through electronic mode, in form CRA-2, along with the fee as specified in Companies (Registration Offices and Fees) Rules, 2014. Further every cost auditor appointed as such shall continue in such capacity till the expiry of one hundred and eighty days from the closure of the financial year or till he submits the cost audit report, for the financial year for which he has been appointed. The cost auditor, who conducts an audit of the cost records of a company, shall submit the cost audit report along with his or its reservations or qualifications or observations or suggestions, if any, in form CRA-3. The cost auditor shall forward his report to the Board of Directors of the company within a period of one hundred and eighty days from the closure of the financial year to which the report relates and the Board of directors shall consider and examine such report particularly any reservation or qualification contained therein. Every company covered above shall, within a period of thirty days from

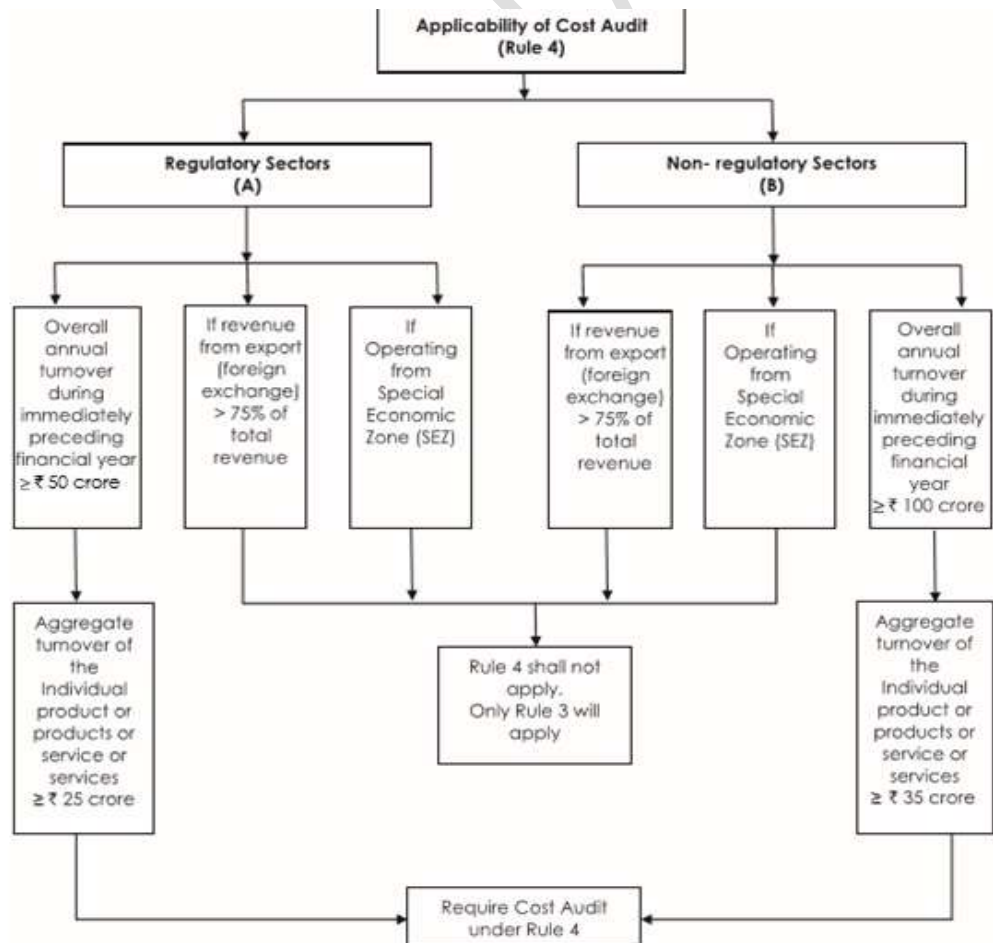
the date of receipt of a copy of the cost audit report, furnish the Central Government with such report along with full information and explanation on every reservation or qualification contained therein, in **form CRA-4** along with fees specified in the Companies (Registration Offices and Fees) Rules, 2014.

The provisions of section 143(12) of the Companies Act, 2013 and the relevant rules made there under shall apply mutatis mutandis to a cost auditor during performance of his functions under section 148 of the Companies Act, 2013 and the Companies (Cost Records and Audit) Rules, 2014.

Exemptions

The requirement of Cost Audit is not applicable for the following categories of companies even if they are covered under applicable class of companies:

- whose revenue from exports, in foreign exchange, exceeds 75 per cent of its total revenue or
- which is operating from a special economic zone



	Cost Audit (Rule 6) <pre> graph TD A[Cost Audit (Rule 6)] --> B[Board Meeting (Appointment within 180 days of the commencement of Financial Year)] B --> C[Company shall inform the Cost Auditor concerned of his or its appointment] B --> D[Whichever is earlier] D --> E[File a notice of such appointment with the CG within a period of 30 days of Board meeting in which such appointment is made.] D --> F[File a notice of such appointment with the CG within a period of 180 days from the commencement of the financial year] C --> G[Auditor shall continue in office till the expiry of 180 days from the closure of the financial year or till he submit the report] E --> G F --> G G --> H[Casual Vacancy shall be filled by BOD within 30 days] H --> I[Inform the CG in CRA – 2 within 30 days of such appointment] I --> J[Submit Cost Audit Report by Cost Auditor in CRA - 3] J --> K[Cost Audit Report submitted to BOD within 180 days] K --> L[Company within 30 days from the date of receipt of a copy of Cost Audit Report, furnish to the CG in CRA - 4] </pre>
ADVANTAGES OF COST AUDIT	Cost audit provides numerous benefits to the management, society, shareholders and the government. The advantages are as under: <u>Advantages to Management</u> (i) Management gets reliable data for its day-to-day operations like price fixing, control, decision making, etc. (ii) A close and continuous check on all wastages will be kept through a

proper system of reporting to management.

(iii) Inefficiencies in the working of the company will be brought to light to facilitate corrective action.

(iv) Management by exception becomes possible through allocation of responsibilities to individual managers.

(v) The system of budgetary control and standard costing will be greatly facilitated.

(vi) A reliable check on the valuation of closing stock and work-in-progress can be established.

(vii) It helps in the detection of errors and fraud.

Advantages to Society

(i) Cost audit is often introduced for the purpose of fixation of prices. The prices so fixed are based on the Audit Cost data and so the consumers are saved from exploitation.

(ii) Since price increase by some industries is not allowed without proper justification like increase in cost of production, inflation through price hikes can be controlled and consumers can maintain their standard of living.

Advantages to Shareholder

Cost audit ensures that proper records are kept as to purchases and utilisation of materials and expenses incurred on wages, etc. It also makes sure that the valuation of closing stocks and working-progress is on a fair basis. Thus the shareholders are assured of a fair return on their investment.

Advantages to Government

(i) Where the Government enters into a cost-plus contract, cost audit helps government to fix the price of the contract at a reasonable level.

(ii) Cost audit helps in the fixation of ceiling prices of essential commodities and thus undue profiteering is checked.

(iii) Cost audit enables the government to focus its attention on inefficient units.

(iv) Cost audit enables the government to decide in favour of giving protection to certain industries.

(v) Cost audit facilitates settlement of trade disputes brought to the government.

(vi) Cost audit and consequent management action can create a healthy competition among the various units in an industry. This imposes an automatic check on inflation.

APPOINTMENT & REMUNERATION OF COST AUDITOR	As per the Companies (Cost Records and Audit) Rules, 2014, cost audit will be performed by a Cost auditor who <u>shall be a Cost Accountant in practice.</u> “Cost Accountant in Practice” means a cost accountant as defined in section 2(1)(b) of the Cost and Works Accountants Act, 1959, who holds a valid certificate of practice under section 6(1) of that Act and who is deemed to be in practice under section 2(2) thereof, and includes a firm or limited liability partnership of cost accountants. The companies covered under the Cost audit category shall within 180 days of the commencement of every financial year, appoint a cost auditor at remuneration to be determined in accordance with provisions of section 148(3) of the Companies Act, 2013 and rules made there under. Provided that before such appointment is made, written consent of the cost auditor to such appointment, and a certificate that the appointment, if made, shall be in accordance with the provisions of section 139, section 141 and section 148 of the Companies Act, 2013 and the rules made there under, as applicable shall be obtained from the cost auditor. For the purpose of sub-section (3) of section 148 of the Companies Act, 2013— (a) in the case of companies which are required to constitute an audit committee*— (i) the Board shall appoint an individual, who is a cost accountant in practice, or a firm of cost accountants in practice, as cost auditor on the recommendations of the Audit committee, which shall also recommend remuneration for such cost auditor; (ii) the remuneration recommended by the Audit Committee under (i) shall be considered and approved by the Board of Directors and ratified subsequently by the shareholders; (b) in the case of other companies which are not required to constitute an audit committee, the Board shall appoint an individual who is a cost accountant in practice or a firm of cost accountants in practice as cost auditor and the remuneration of such cost auditor shall be ratified by shareholders subsequently.
RIGHTS & RESPONSIBILITIES OF COST AUDITOR	Section 148 of the Companies Act, 2013 gives the cost auditor same powers as the financial auditor has under section 143 of the Companies Act, 2013, which requires that the company and every officer thereof, shall make available to the cost auditor, such information and explanation as he may consider necessary for the performance of his duties as cost auditor and submit his report within the prescribed time limit. <u>Rights of Cost Auditor</u>

	The powers of the cost auditor under sub-Section (1) of Section 143 are as under: - Right to access at all times the books of account and vouchers of the company, whether kept at the head office of the company or elsewhere. - Entitled to require from the officers of the company such information and explanations as he may think necessary for the performance of his duties as an auditor.
PUNISHMENT FOR CONTRAVENTION	(1) If any of the provisions of sections 139 to 146 (both inclusive) is contravened, the company shall be punishable with fine which shall not be less than twenty-five thousand rupees but which may extend to five lakh rupees and every officer of the company who is in default shall be punishable with imprisonment for a term which may extend to one year or with fine which shall not be less than ten thousand rupees but which may extend to one lakh rupees, or with both. (2) If an auditor of a company contravenes any of the provisions of section 139, section 143, section 144 or section 145, the auditor shall be punishable with fine which shall not be less than twenty-five thousand rupees but which may extend to five lakh rupees or four times the remuneration of the auditor, whichever is less; Provided that if an auditor has contravened such provisions knowingly or wilfully with the intention to deceive the company or its shareholders or creditors or tax authorities, he shall be punishable with imprisonment for a term which may extend to one year and with fine which shall not be less than one lakh rupees but which may extend to twenty-five lakh rupees or eight times the remuneration of the auditor, whichever is less; (3) Where an auditor has been convicted under sub-section (2), he shall be liable to— (i) refund the remuneration received by him to the company; and (ii) pay for damages to the company, statutory bodies or authorities or to the members or Creditors of company for loss arising out of incorrect or misleading statements of particulars made in his audit report.
COST AUDIT TECHNIQUES	There are no specific techniques being used by cost auditor in carrying out the cost audit assignments. Techniques employed by a Cost auditor in effectively carrying out his audit are – <u>(i) Accounting or economic techniques</u> 1. Vouching. 2. Physical Verification. 3. Comparison of data with Peer. 4. Break-even analysis. 5. Budgetary control including flexible budget system. 6. Cost management techniques indicating how an organization's assets should be allocated over competing projects or to decide whether it is worth proceeding with the investment, keeping in view proportionate value of expenditure on such projects.

7. Discounted cash flow and net present value methods.
8. Cost benefit analysis.
9. Standard costing and marginal costing.
10. Activity based costing to test the relevance of cost to activities.
11. Quality analysis of company transactions.

(ii) Scientific Techniques

(a) *Computer Models*: There are many types of problems which can be solved on a computer e.g. decision on material mix, product mix, make or buy decisions etc.

(b) *Network analysis*: To analyse strings of tasks to arrange them in sequential or parallel order so that the project is completed in a shortest possible time.

(c) Mathematical Programme solving by heuristic (trial and error) techniques to determine the best material mix, best use of organization's transport fleet, the best mix of products to obtain or to maximize profits and optimum use of labour, finance, equipments, etc.

(iii) Statistical Techniques

(a) Activity Sampling: It is one of the many ways in which the present workloads can be measured to obtain controls to be exercised by management.

(b) Monte Carlo Simulation: In this a number of variables are drawn from large statistical population which have equal choice of being selected and obtain the best sample possible.

(c) Exponential smoothing

(d) Inter firm comparison

(iv) Personnel Techniques

(a) Attitude survey

(b) Ergonomic (Man-machine relationship)

(c) Training methods

(d) Profitability and productivity measurement

(v) General techniques

(a) Statistical theory of management is an attempt to emphasize what should be the practical approach to a problem by –

- Analyzing the problem to establish the basic difficulties and factors involved.
- Establish management by objectives.
- Identifying the likely ways of tackling the problems in the light of objectives to develop a solution.
- Determine the key factors affecting management decision-making.
- Evaluating alternative courses of action.
- Evaluating each alternative in terms of economy, efficiency and best fit.

	• Specifying the action required to exploit the situation to the best advantage of the organization. (b) Brain storming (c) Transfer pricing (d) Management by objectives (e) Management by exception (f) Corporate planning (g) Information theory
COST AUDIT PROGRAMME	Cost audit programme is an essential prerequisite for conducting an audit. It is a plan of action drawn in advance before taking up the audit, and to help the auditor to cover the entire area of his function thoroughly. The audit programme should include all the usual broad steps that a financial auditor include in his audit programme. However, the significant things that should not be missed are: proper vouching of expenses, capital and revenue character determination, allocation of expenses, apportionment of overheads, arithmetical accuracy, the statutory requirements, examination of contracts and agreements, review of the Board's and shareholders' minute books to trace important decisions having bearing on costs, verification of title deeds and documents relating to properties and assets, etc. Cost audit, in order to be effective, should be completed at one time as far as practicable. The exact content of cost audit largely depends on the size of the organisation, range of products, production process, the existence of a well organised costing department and of a well designed costing system, and the existence of a capable internal auditing system. Other relevant considerations may be: <u>(A) Review of Cost Accounting Records</u> This will include: 1. Method of costing in use - batch, process or unit. 2. Method of accounting for raw materials; stores and spares, wastages, spoilage, defectives, etc. 3. System of recording wages, salaries, overtime and spares, wastages, etc. 4. Basis of allocation of overheads to cost centres and apportionment of service department's expenses. 5. Treatment of interest, recording of royalties, research and development expenses, etc. 6. Method of accounting of depreciation. 7. Method of stock-taking and its valuation including inventory policies. 8. System of budgetary control. 9. System of internal auditing.

	<u>(B) Verification of cost statements and other data</u> This will include the verification of: (i) Licensed, installed and utilized capacities. (ii) Financial ratios. (iii) Production data. (iv) Cost of raw material consumed, wages and salaries, stores, power and fuel, overheads, provision for depreciation etc. (v) Sales Realisation. (vi) Abnormal, non-recurring and special costs. (vii) Reconciliation with financial books.
COST AUDIT REPORT	Cost audit report means the report duly audited and signed by the cost auditor including attachment, annexure, qualifications or observations etc. to cost audit report. Every cost auditor, who conducts an audit of the cost records of the company, shall <u>within 180 days from the close of the company's financial year</u> to which the report relates, submit the cost audit report along with his reservations or qualifications or observations or suggestions in the Form CRA-3 to the <u>Board of Directors</u> of the company.

CHAPTER 12: ANALYSIS & INTERPRETATION OF FINANCIAL STATEMENTS

OBJECTIVE OF FINANCIAL STATEMENT ANALYSIS	Financial statement analysis is very much helpful in assessing the financial position and profitability of a concern. The main objectives of analyzing the financial statements are as follows: (i) The analysis would enable the present and the future earning capacity and the profitability of the concern. (ii) The operational efficiency of the concern as a whole as well as department wise can be assessed. Hence the management can easily locate the areas of efficiency and inefficiency. (iii) The solvency of the firm, both short-term and long-term, can be determined with the help of financial statement analysis which is beneficial to trade creditors and debenture holders. (iv) The comparative study in regard to one firm with another firm or one department with another department is possible by the analysis of financial statements. (v) Analysis of past results in respects of earning and financial position of the enterprise is of great help in forecasting the future results. Hence it helps in preparing budgets. (vi) It facilitates the assessments of financial stability of the concern. (vii) The long-term liquidity position of funds can be assessed by the analysis of financial statements.
LIMITATIONS OF FINANCIAL STATEMENT ANALYSIS	(i) Owing to the fact that financial statements are compiled on the basis of historical costs, while there is a market decline in the value of the monetary unit and resultant rise in prices, the figures in the financial statement loses its functions as an index on current economic realities. Again the financial statements contain both items. So an analysis of financial statements cannot be taken as an indicator for future forecasting and planning. (ii) Analysis of financial statements is a tool which can be used profitably by an expert analyst but may lead to faulty conclusions if used by unskilled analyst. So the result cannot be taken as judgements or conclusions. (iii) Financial statements are interim reports and therefore cannot be final because the final gain or loss can be computed only at the termination of the business. Financial statement reflects the progress of the position of the business so analysis of these statements will not be a conclusive evidence of the performance of the business. (iv) Financial statements though expressed in exact monetary terms are not absolutely final and accurate and it depends upon the judgement of the management in respect of various accounting methods. If there is

	change in accounting methods, the analysis may have no comparable basis and the result will be biased. (v) The reliability of analysis depends on the accuracy of the figures used in the financial statements. The analysis will be vitiated by manipulations in the income statement or balance sheet and accounting procedure adopted by the accountant for recording. (vi) The results for indications derived from analysis of financial statements may be differently interpreted by different users. (vii) The analysis of financial statement relating to a single year only will have limited use. Hence the analysis may be extended over a number of years so that results may be compared to arrive at a meaningful conclusion. (viii) When different firms are adopting different accounting procedures, records, policies and different items under similar headings in the financial statements, the comparison will be more difficult. It will not provide reliable basis to assess the performance, efficiency, profitability and financial condition of the firm as compared to industry as a whole. (ix) There are different tool of analysis available for the analyst. However, which tool is to be used in a particular situation depends on the skill, training, and expertise of the analyst and the result will vary accordingly.
TYPES OF FINANCIAL STATEMENT ANALYSIS	1. ACCORDING TO NATURE OF ANALYST: EXTERNAL ANALYSIS: It is made by those who do not have access to the detailed records of the company. This group, which has to depend almost entirely on published financial statements, includes investors, credit agencies and governmental agencies regulating a business in nominal way. The position of the external analyst has been improved in recent times owing to the governmental regulations requiring business undertaking to make available detailed information to the public through audited accounts. INTERNAL ANALYSIS: The internal analysis is accomplished by those who have access to the books of accounts and all other information related to business. While conducting this analysis, the analyst is a part of the enterprise he is analysing. Analysis for managerial purposes is an internal type of analysis and is conducted by executives and employees of the enterprise as well as governmental and court agencies which may have regulatory and other jurisdiction over the business. 2. ACCORDING TO MODUS OPERANDI OF ANALYSIS: HORIZONTAL ANALYSIS: When financial statements for a number of years are reviewed and analysed, the analysis is called 'horizontal analysis'. As it is based on data from year to year rather than on one date or period of time as a whole, this is also known as 'dynamic

	analysis'. This is very useful for long term trend analysis and planning. VERTICAL ANALYSIS: It is frequently used for referring to ratios developed for one date or for one accounting period. Vertical analysis is also called 'Static Analysis'. This is not very conducive to proper analysis of the firm's financial position and its interpretation as it does not enable to study data in perspective. This can only be provided by a study conducted over a number of years so that comparisons can be effected. Therefore, vertical analysis is not very useful. 3. ACCORDING TO OBJECTIVE OF ANALYSIS: LONG TERM ANALYSIS: This analysis is made in order to study the long-term financial stability, solvency and liquidity as well as profitability and earning capacity of a business. The objective of making such an analysis is to know whether in the long-term the concern will be able to earn a minimum amount which will be sufficient to maintain a reasonable rate of return on the investment so as to provide the funds required for modernization, growth and development of the business. SHORT TERM ANALYSIS: This analysis is made to determine the short-term solvency, stability, liquidity and earning capacity of the business. The objective is to know whether in the short-run a business enterprise will have adequate funds readily available to meet its short-term requirements and sufficient borrowing capacity to meet contingencies in the near future.
METHODS OF ANALYSING FINANCIAL STATEMENTS	The analysis of financial statements consists of a study of relationship and trends, to determine whether or not the financial position and results of operations as well as the financial progress of the company are satisfactory or unsatisfactory. The analytical methods or devices, listed below, are used to ascertain or measure the relationships among the financial statements items of a single set of statements and the changes that have taken place in these items as reflected in successive financial statements. The fundamental objective of any analytical method is to simplify or reduce the data under review to more understandable terms. Analytical methods and devices used in analyzing financial statements are as follows: 1. Comparative Statements 2. Common Size Statements 3. Trend Ratios 4. Ratio Analysis 5. Cash Flow Statements 6. Fund Flow Statement.
SIGNIFICANCE OF RATIO ANALYSIS IN DECISION MAKING:	• Evaluation of Liquidity: the ability of a firm to meet its short term payment commitments is called as Liquidity. Current Ratio and Quick Ratio helps to assess the short term solvency of the firm. • Evaluation of Operating Efficiency: Ratio thrown light on the

	degree of efficiency in the management and utilisation of assets and resources. These are indicated by Activity or Performance or Turnover Ratios. These indicate the ability of the firm to generate revenue per rupee of investment in its assets. • Evaluation of Profitability: Profitability ratios like GP ratio, NP ratio are basic indicators of the profitability of the firm. In addition, various profitability indicators like Return on capital employed, EPS, Return on Assets are used to assess the financial performance. • Inter Firm & Intra Firm Comparison: Comparison of the firm's ratio with the industry average will help evaluate the firm's position vis-à-vis the industry. It will help in analyzing the firm's strength and weaknesses and take corrective action. Trend analysis of ratio over a period of years will indicate the direction of the firm's financial policies. • Budgeting: Ratios are not mere post mortem of operations. This help in depicting future financial positions. Ratios help predictor value and are helpful in planning and forecasting the business activities of the firm for future periods.
LIMITATION OF FINANCIAL RATIOS	(i) Concept of Ideal Ratio: the concept of ideal ratio is vague and there is no uniformity as to what an ideal ratio is. (ii) Thin line of difference between good and bad ratio: the line of difference between good and bad ratio is so thin that they are hardly separable. (iii) Financial Ratio are not independent: the financial ratio cannot be considered in isolation. They are inter related but not independent. Thus, decision taken on the basis of one ratio may not be correct. (iv) Misleading: various firms may follow different accounting policies. In such cases ratios of companies may be misleading. (v) Impact of Seasonal Factor: Seasonal factor brings boom or recession. Ratios may indicate different results during different periods. (vi) Impact of Inflation: under the impact of inflation, the ratio might not present true picture.
TYPES OF RATIOS	
FUNCTIONAL CLASSIFICATION	Profitability Ratios: Profitability ratios gives some yardstick to measure the profit in relative terms with reference to sales, assets or capital employed. These ratios highlight the end result of business activities. The main objective is to judge the efficiency of the business. Turnover Ratios or Activity Ratios: These ratios are used to measure the effectiveness of the use of capital/assets in the business. These ratios are usually calculated on the basis of sales or cost of goods sold and are expressed in integers rather than as percentages.

	Financial Ratios or Solvency Ratios: These ratios are calculated to judge the financial position of the organisation from short-term as well as long-term solvency point of view. Thus, it can be subdivided into: (a) Short-term Solvency Ratios (Liquidity Ratios) and (b) Long-term Solvency Ratios (Capital Structure Ratios). Market Test Ratios: These are of course, some profitability ratios, having a bearing on the market value of the shares.
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BASED ON LIQUIDITY	
Current Ratio	Current Ratio: $\frac{\text{Current Assets}}{\text{Current Liabilities}}$ Where, Current Assets = Inventories + Sundry Debtors + Cash & Bank Balances + Loans & Advances + Disposable Investments Current Liabilities = Sundry Creditors + Short term loans + Bank Overdraft + Cash Credit + Outstanding Expenses + Proposed Dividends + Provision for Taxation + Unclaimed Dividend Ideal Current Ratio is 2:1 but whether or not a specific ratio is satisfactory depends upon the nature of business and characteristics of its current assets and liabilities.
Quick Ratio or Acid Test Ratio or Liquid Ratio	Quick Ratio = $\frac{\text{Quick Assets}}{\text{Current Liabilities}}$ However, if Bank Overdraft or Cash Credit is given in the question, then Quick Ratio = $\frac{\text{Quick Assets}}{\text{Quick Liabilities}}$ Quick Assets = Current Assets – Inventories Quick Liabilities = Current Liabilities – Bank Overdraft – Cash Credit Ideal Quick Ratio is 1:1
BASED ON LONG TERM SOLVENCY	
Debt Equity Ratio	Debt Equity Ratio = $\frac{\text{Total Debt}}{\text{Shareholder's Equity}}$ A high ratio here means less protection for creditors. A low ratio, on the other hand, indicates a wider safety cushion (i.e., creditors feel the owner's funds can help absorb possible losses of income and capital). Ideal Ratio is 2:1

Preference Dividend Coverage Ratio	PSDR = $\frac{EAT}{\text{Preference Dividend}}$ This ratio measures the ability of a firm to pay dividend on preference shares which carry a stated rate of return. Earnings after tax is considered because unlike debt on which interest is charged on the profit of the firm, the preference dividend is treated as appropriation of profit. This ratio indicates margin of safety available to the preference shareholders. A higher ratio is desirable from preference shareholders point of view.
Capital Gearing Ratio	Formula = $\frac{(\text{Preference Share Capital} + \text{Debentures} + \text{Long term Loan})}{(\text{Equity Share Capital} + \text{Reserves \& Surplus} - \text{Losses})}$ In addition to debt-equity ratio, sometimes capital gearing ratio is also calculated to show the proportion of fixed interest (dividend) bearing capital to funds belonging to equity shareholders.
TURNOVER RATIOS	
Inventory Turnover Ratio	Inventory Turnover Ratio: This ratio also known as stock turnover ratio establishes the relationship between the cost of goods sold during the year and average inventory held during the year. It is calculated as follows: Formula = $\frac{\text{Cost of Goods Sold}}{\text{Average Inventory}}$ *Average Inventory = $\frac{(\text{Opening Stock} + \text{Closing Stock})}{2}$ This ratio indicates that how fast inventory is used/sold. A high ratio is good from the view point of liquidity and vice versa. A low ratio would indicate that inventory is not used/ sold/ lost and stays in a shelf or in the warehouse for a long time. Inventory Holding Period (Months) = $\frac{\text{Average Inventory}}{\text{COGS} / 12}$
Debtor Turnover Ratio	In case firm sells goods on credit, the realization of sales revenue is delayed and the receivables are created. The cash is realised from these receivables later on. The speed with which these receivables are collected affects the liquidity position of the firm. The debtors turnover ratio throws light on the collection and credit policies of the firm. Formula = $\frac{\text{Credit Sales}}{\text{Average Account Receivables}}$ Debtor Collection Period (Months) = $\frac{\text{Average Debtors}}{\text{Credit Sales} / 12}$

Creditor Turnover Ratio	Formula = $\frac{\text{Credit Purchase}}{\text{Average Account Payables}}$ A low creditor's turnover ratio reflects liberal credit terms granted by supplies. While a high ratio shows that accounts are settled rapidly. Creditor Payment Period (Months) = $\frac{\text{Average Creditors}}{\text{Credit Purchases/ 12}}$
Fixed Asset Turnover Ratio	Fixed Asset Turnover Ratio = $\frac{\text{Net Sales}}{\text{Fixed Asset}}$ This ratio is an indicator of the extent to which investment in fixed assets contributes to generate sales. The fixed assets are to be taken net of depreciation. The higher is the ratio the better is the performance.
Working Capital Turnover Ratio	WCTR = $\frac{\text{Net Sales}}{\text{Working Capital}}$ It indicates to what extent the working capital funds have been employed in the business towards sales.
BASED ON PROFITABILITY	
Gross Profit Ratio	GP Ratio = $\frac{\text{Gross Profit} * 100}{\text{Net Sales}}$ Gross Profit = Sales – Cost of Goods Sold Cost of Goods Sold = Opening Stock + Purchase – Closing Stock This ratio is important to determine general profitability since it is expected that the ratio would be quite high so as to cover not only the remaining costs but also to allow proper returns to owners.
Net Profit Ratio	Net Profit Ratio = $\frac{\text{Operating Profit}}{\text{Net Sales}} * 100$
Return on Equity (ROE)	Return on Equity = $\frac{\text{Profit after Tax}}{\text{Net worth}}$
Return on Investment (ROI)	Return on Investment (ROI): $\frac{\text{Return}}{\text{Capital Employed}} * 100$ Where, Return = Profit after Tax + Interest on long term debts + Provision for Tax - Interest/Dividend from non-trade investments Capital Employed = Equity Share Capital + Reserves and Surplus

	+ Preference Share Capital + Debenture and long term loan - Miscellaneous Expenditure and Losses - Non Trade Investments OR Capital Employed = Fixed Assets + Working Capital
Return on Total Assets (ROA)	Return on Total Assets = $\frac{\text{Net Profit after Tax}}{\text{Total Assets}}$
Return on Shareholder's Fund or Return on Net Worth	Return on Shareholders Fund = $\frac{\text{Net Profit after Interest \& Tax}}{\text{Shareholders Fund}}$
BASED ON MARKET TEST	
Earnings Per Shares (EPS)	Earnings Per Share (EPS): $\frac{\text{Net profit available for equity shareholders}}{\text{Number of ordinary shares outstanding}}$ The profitability of a firm from the point of view of ordinary shareholders can be measured in terms of number of equity shares. This is known as Earnings per share.
Dividend Per Share (DPS)	Dividend Per share: $\frac{\text{Total Profits distributed to equity shareholders}}{\text{Number of Equity Shares}}$ Earnings per share as stated above reflects the profitability of a firm per share; it does not reflect how much profit is paid as dividend and how much is retained by the business. Dividend per share ratio indicates the amount of profit distributed to shareholders per share.
Price Earnings Ratio (P/E)	P/E Ratio = $\frac{\text{Market Price per share}}{\text{Earnings per Share}}$ This ratio establishes relationship between the market price of the shares of a company and its earning per share. This ratio helps in predicting the future market value of the shares within reasonable limits. It also helps in ascertaining the extent of under and over-valuation in the market price, thus pointing to the effect of factors generated by the company's financial position.
Pay Out Ratio	Payout Ratio = $\frac{\text{Dividend Per Share}}{\text{Earnings per Share}}$ This ratio helps in predicting the future market value of the shares within reasonable limits. It also helps in ascertaining the extent of under and over-valuation in the market price, thus pointing to the effect of factors generated by the company's financial position.
Dividend Yield Ratio	Dividend Yield Ratio = $\frac{\text{Dividend Per Share}}{\text{Market Price Per Share}}$

	This ratio establishes the relationship between the market price and the dividend paid per share. It is expressed as a percentage and gives the rate of return on the market value of the shares and helps in the decision of investors who are more concerned about returns on their investment rather than its capital appreciation.
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IMPORTANT FORMULA'S:

1. **Cash Collected from Debtors** = Opening Balance of Debtor + Credit Sale – Closing Balance of Debtors
2. **Cash Paid to Suppliers** = Opening Balance of Creditor + Credit Purchase – Closing Balance of Creditor
3. **Payment to Employees** = Opening Outstanding Salary + Salary of Current Year – Closing Outstanding Salary
4. **Interest Paid** = Opening Outstanding Interest + Interest of Current Year – Closing Outstanding Interest
5. **Insurance Paid** = Insurance Expense of Current Year + Closing Prepaid Insurance – Opening Prepaid Insurance

CASH FLOW STATEMENTS

FEATURES:

- A cash flow statement is useful for short-term planning.
- Accounting Standard 3 “Cash Flow Statements” governs the preparation of Cash Flow Statement.
- Cash Flow Statement is prepared on Cash Basis and Not on Accrual Basis.
- Cash Flows are divided into three parts: Cash Flow from Operating Activities, Cash Flow From Investing Activities & Cash Flow from Financing Activities.
- Its chief advantages are as follows:
 - Helps in efficient cash management.
 - Helps in internal financial management.
 - Discloses the movements of cash.
 - Discloses the success or failure of cash planning.

Limitations of Cash Flow Statement:

- Cash flow statement cannot be equated with the Income Statement. An Income Statement takes into account both cash as well as non-cash items and, therefore, net cash flow does not necessarily mean net income of the business.

- The cash balance as disclosed by the cash flow statement may not represent the real liquid position of the business since it can be easily influenced by postponing purchases and other payments.
- Cash flow statement cannot replace the Income Statement or the Funds Flow Statement. Each of them has a separate function to perform.

Cash Flow Statement Vs. Fund Flow Statement:

Basis	Cash Flow Statement	Fund Flow Statement
Object	It indicates change in cash position	It indicates change in working capital
Scope	Its coverage is narrow confined only to cash	Its coverage is wide confined to working capital
Opening & Closing balance	It is always prepared by opening cash balance and closing cash balance	Opening and closing cash balances are not required
Adjustment	Due weightage is given to outstanding and prepaid income and expenses	No adjustment is needed for outstanding and prepaid expenses
Preparation of schedule of changes in working capital	No need to prepare schedule of change in working capital	It is necessary to prepare the schedule of change in working capital
Increase or decrease in working capital	Not shown	Always shown
Calculation	Cash generated from operation is calculated	Funds generated from operation is calculated
Analysis	Essential for short term financial analysis	Essential for long term financial analysis

FUND FLOW STATEMENTS

FEATURES:

- Fund flow statement also referred to as statement of “source and application of funds” presents the **movement of funds** and helps to **understand the changes in the structure of assets, liabilities and equity capital**.
- Whereas the balance sheet provides only a summary of the assets and liabilities at a particular point of time. It reveals the financial state of any organization the assets side of a balance sheet shows the deployment of resources while the liabilities side indicates its obligations.
- The statement of profit and loss shows the operating result of the business during a specified period. Both the statement provide the essential basic information on the financial activities of the business, but their usefulness is limited for analysis and planning process.

- Fund means working capital. If current assets of company is more than current liability of business, it is called working capital and working capital's other name is Fund.
- AS 3 is not applicable on Fund Flow Statements.
- Fund Flow Statement is prepared for Long Term Planning following accrual system.

MEANING OF FUND FLOW:

Flow of funds include both “inflow” and “outflow”. The term “ flow of funds” means “Transfer of economic values from one assets to another and one liability to another.” Flow of fund takes place whenever there is change in working capital. This change may be either inflow or outflow of funds.

If fixed assets are converted into current asset or fixed liability is converted into current liabilities, these are the flow of fund. But if current assets are changed with current assets or current assets are changed into current liabilities, then, there is no flow of fund because there is no change working capital. Suppose, we get the money from debtor, this is not flow of fund because, working capital is not changed. Both items of current assets and when current assets change into current assets, there will not be change in working capital.

FORMAT OF FUND FLOW STATEMENT

SOURCES OF FUND	₹	APPLICATION OF FUNDS	₹
Fund Flow from Operations		Buy Back of Equity Shares	
Issue of Equity Shares		Redemption of Preference Shares	
Issue of Preference Shares		Redemption of Debentures	
Issue of Debentures		Tax Paid	
Sale of Fixed Assets		Purchase of Fixed Assets	
Sale of Investments		Purchase of Investments	
Interest Received		Dividend Paid	
Dividend Received		Interest Paid	
Decrease in Working Capital		Interim Dividend Paid	
		Increase in Working Capital	
Total		Total	

FUND FLOW FROM OPERATIONS

Net Profit transferred to Balance Sheet (Closing balance of Profit & Loss – Opening Balance of Profit & loss Account)		
Add:		
Depreciation		
Provision for Tax		
Proposed Dividend		
Loss on Sale of Fixed Assets		
Loss on Sale of Investments		
Goodwill Written off		
Interest on Debentures		
Less:		
Profit on Sale of Fixed Asset		
Profit on Sale of Investment		
Refund of tax credited to Profit & Loss		
Interest Received on Investments		

Dividend Received on Investments		
Net Fund Flow from Operations		

COMPARATIVE STATEMENTS

Comparative statements are necessary for the study of trends and direction of movement in the financial position and operating results. This calls for a consistency in the practice of preparing these statements, otherwise comparability may be distorted. Comparative statements enable horizontal analysis of figures.

(a) Comparative Balance Sheet: A comparative balance sheet shows the balance of accounts of assets and liabilities on different dates and also the extent of their increases or decreases between these dates throwing light on the trends and direction of changes in the position over the periods. This helps in predicting about the position of the business in future.

(b) Comparative Statement of Profit and Loss or Income Statement: Comparative income statement shows the operating results for a number of accounting periods and changes in the data significantly in absolute periods and changes in the data significantly in absolute money terms as well as in relative percentage.

COMMON SIZE STATEMENTS

Common size financial statements are those in which figures reported are **converted into percentages** to some common base. For this, items in the financial statements are presented as percentages or ratios to total of the items and a common base for comparison is provided. Each percentage shows the relation of the individual item to its respective total.

(a) Common-size Income Statement: In a common size income statement the sales figure is assumed to be equal to 100 and all other figures of costs or expenses are expressed as percentages of sales. A comparative income statement for different periods helps to reveal the efficiency or otherwise of incurring any cost or expense. If it is being prepared for two firms, it shows the relative efficiency of each cost item for the two firms.

(b) Common-size Balance Sheet: In a common size balance sheet, total of assets or liabilities is taken as 100 and all the figures are expressed as percentage of the total. Comparative common size balance sheets for different periods help to highlight the trends in different items. If it is prepared for different firms in an industry, it facilitates to judge the relative soundness and helps in understanding their financial strategy.

TREND RATIOS

- **Trend ratios** can be defined as index numbers of the movements of the various financial items in the financial statements for a number of periods.
- It is a **statistical device** applied in the analysis of financial statements to reveal the trend of the items with the passage of time.
- Trend ratios show the nature and rate of movements in various financial factors. They provide a horizontal analysis of comparative statements and reflect the behaviour of various items with the passage of time.

- Trend ratios can be graphically presented for a better understanding by the management. They are very useful in predicting the behaviour of the various financial factors in future. However, it should be noted that conclusions should not be drawn on the basis of a single trend.
- Trends of related items should be carefully studied, before any meaningful conclusion is arrived at. Since trends are sometimes significantly affected by externalities, i.e. reasons extraneous to the organisations, the analyst must give due weightage to such extraneous factors like government policies, economic conditions, changes in income and its distribution, etc.

AMIT TALDA CLASSES

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LIST OF “OTHER NAMES”

Direct Expenses	Chargeable Expenses
Indirect Expenses	Overheads
Semi Variable Cost	Step Cost or Step Ladder Cost
Implicit Cost	Economic Cost
Explicit Cost	Out of Pocket Cost or Accounting Cost
Rated Capacity	Installed Capacity/ Maximum Capacity/ Theoretical Capacity
Practical Capacity	Operating Capacity
Normal Capacity	Average Capacity
Survey Method	Point Value Method
Horizontal Analysis	Dynamic Analysis
Vertical Analysis	Static Analysis
Key Factor	Limiting Factor
General Ledger Adjustment	Cost Ledger Control Account
Operating Costing	Service Costing
Contract Costing	Terminal Costing
Marginal Costing	Variable Costing / Differential Costing/ Out of pocket costing / Direct Costing (USA)

IMPORTANT DEFINITIONS AT ONE PLACE

COST	The Chartered Institute of Management Accountants, London defines cost as "the amount of expenditure (actual or notional) incurred on, or attributable to a specified thing or activity".
COST ACCOUNTING	The Costing terminology of C.I.M.A. London defines cost accounting as "The establishment of budgets, standard costs and actual costs of operations, processes, activities or products, and the analysis of variances, profitability or the social use of funds".
COST ACCOUNTANCY	Cost Accountancy has been defined as "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 there from for the purpose of managerial decision making".
FIXED COSTS	The Chartered Institute of Management Accountants, London, defines fixed cost as "the cost which is incurred for a period, and which, within certain output and turnover limits, tends to be unaffected by fluctuations in the levels of activity (output or turnover)".
CONTROLLABLE COST	The Chartered Institute of Management Accountants defines controllable cost as "cost which can be influenced by its budget holder".
DIFFERENTIAL COST	Differential cost has been defined as "the difference in total cost between alternatives, calculated to assist decision making".
COST CENTRE	According to the Chartered Institute of Management Accountants, London, cost centre means, "a production or service location, function, activity or item of equipment whose costs may be attributed to cost units".
MANAGEMENT ACCOUNTING	According to CIMA, London: "Management accounting is an integral part of management concerned with identifying, presenting and interpreting information used for: (a) formulating strategy; (b) planning and controlling activities; (c) decision taking; (d) optimising the use of resources; (e) disclosure to shareholders and others external to the entity; (f) disclosure to employees; (g) safeguarding assets.
DIRECT EXPENSES	Direct expenses are defined as "costs, other than materials or wages, which are incurred for a specific product or salable service."
OVERHEADS	CIMA, London defines overhead as "Expenditure on labour, materials or services which cannot be economically identified with a specific saleable cost unit".
ACTIVITY BASED COSTING	CIMA defines Activity Based Costing as, "cost attribution to cost units on the basis of benefit received from indirect activities e.g. ordering,

	setting up, assuring quality.'
JOINT PRODUCTS	CIMA has defined it as "two or more products separated in processing, each having a sufficiently high saleable value to merit recognition as a main product."
OPERATING COSTING OR SERVICE COSTING	CIMA London, defines Service Costing as "that form of operation costing which applies where standardized services are rendered either by an undertaking or by a service cost center within an undertaking".
MARGINAL COSTING	According to CIMA Terminology Marginal Costing is the ascertainment of marginal costs and of the effect on profit of changes in volume or type of output by differentiating between fixed costs and variable costs in this technique of costing only variable costs are charged to operations, processes or products leaving all indirect costs to be written off against profits in the period in which they arise.
COST VOLUME PROFIT ANALYSIS	Cost-volume-profit (CVP) analysis is defined in CIMA's Official Terminology as 'the study of the effects on future profit of changes in fixed cost, variable cost, sales price, quantity and mix'.
STANDARD COSTING	CIMA defines standard costing as "a control technique which compares standard costs and revenues with actual results to obtain variances which are used to stimulate improved performance".
BUDGET PERIOD	CIMA defines budget period as "the period for which a budget is prepared and used, which may then be sub-divided into control periods".
BUDGET KEY FACTOR	A budget key factor or principal budget factor is described by the CIMA London terminology as: "a factor which will limit the activities of an undertaking and which is taken into account in preparing budgets".
ZERO BASE BUDGETING	CIMA defines zero base budgeting as "a method of budgeting whereby all activities are re-evaluated each time a budget is set. Discrete levels of each activity are valued and a combination chosen to match funds available."
PERFORMANCE BUDGETING	According to National Institute of Bank Management, Bombay performance budgeting technique is, the process of analysing identifying, simplifying and crystallising specific performance objectives of a job to be achieved over a period in the frame work of the organisational objectives, the purpose and objectives of the job.
MANAGEMENT INFORMATION SYSTEM	According to CIMA MIS is a set of procedures designed to provide managers at different levels in the organization with information for decision making, and for control of those parts of the business for which they are responsible.
FINANCIAL	Data provided by Cost and Financial Accounting is further used for the

MANAGEMENT	management of all processes associated with the efficient acquisition and deployment of short, medium and long term financial resources. Such a process of management is known as Financial Management.
PERPETUAL INVENTORY SYSTEM	The Institute of Cost and Management Accountants of England and Wales, defines perpetual inventory as "A system of records maintained by the controlling department, which reflects the physical movement of stocks and their current balances." According to Weldon, "Perpetual inventory system is a method of recordings stores balances after every receipt and issue, to facilitate regular checking and obviate closing down of work for stock-taking."
REQUEST FOR PROPOSAL	It is an early stage in a procurement process. Purchaser issues an invitation to supplier for submitting a proposal on a particular goods or service often through a bidding process.
REQUEST FOR INFORMATION	A request for information (RFI) is a standard business process whose purpose is to collect written information about the capabilities of various suppliers. Normally it follows a format that can be used for comparative purposes. It is a proposal requested from a prospective seller or service provider to determine what products and services are potentially available in the marketplace to meet a buyer's needs and to know the capability of a seller in terms of offerings and strengths of the seller.
REQUEST FOR QUOTATION	A request for quotation (RFQ) is a standard business process whose purpose is to invite suppliers into a bidding process to bid on specific products or services.
DEFECTIVES	Defectives are that portion of the process loss which can be converted into a finished product by incurring more material and labour expenses.
SPOILAGE	Spoilage are those materials or components which are so damaged in the manufacturing process that they cannot be repaired or reconditioned.
CASUAL WORKER	A casual worker is one who is not a regular employee of the concern. This situation arises when there is an emergency or somebody is on leave.
OUTWORKER	Sometimes workers perform their duties outside the company's premises on behalf of the organisation Hence, the work done and payment made has to be controlled.
CASH	Cash comprises cash in hand and demand deposits with banks. Demand deposits mean those deposits which are repayable by bank on demand by the depositor.

CASH EQUIVALENTS	Cash equivalents are short term, highly liquid investments that are readily convertible into known amounts of cash and which are subject to an insignificant risk of changes in value. Cash equivalents are held for the purpose of meeting short term cash commitments rather than for investments or other purposes. Examples of cash equivalents are treasury bills, commercial paper etc.
BUDGET	The Chartered Institute of Management Accountants, London, (terminology) defines a budget as "A plan expressed in money. It is prepared and approved prior to the budget period and may show income, expenditure and the capital to be employed. May be drawn up showing incremental effects on former budgeted or actual figures, or be compiled by zero-based budgeting."
BUDGETING	Budgeting is the complete process of designing, implementing and operating budgets.
BUDGETARY CONTROL	The Chartered Institute of Management Accountants, London defines Budgetary control as "the establishment of budgets, relating the responsibilities of executive to the requirements of a policy and the continuous comparison of actual with budgeted results either to secure by individual action the objectives of that policy or to provide a firm basis for its revision".
MARGIN OF SAFETY	Margin of safety is the difference between the actual sales and sales at break-even point. Sales beyond break-even volume brings in profits.
BREAK EVEN POINT	The break-even point in any business is that point at which the volume of sales or revenues exactly equals total expenses or the point at which there is neither a profit nor loss under varying levels of activity.
COST PLUS CONTRACT	Cost plus contract is a contract in which the value of the contract is ascertained by adding a certain percentage of profit over the total cost of the work. This is used in case of those contracts whose exact cost cannot be correctly estimated at the time of undertaking a work.
RETENTION MONEY	The terms of the contract provide that whole of the amount shown by the certificate shall not be paid immediately but a percentage thereof shall be retained by the contractee until some time after the contract is completed. The sum retained is called retention money. Usually the contractor may be paid 75% or 80% of the work certified depending upon the terms of the contract. The object of this retention is to place the contractee in a favourable position in case the contractor does not fulfil some of the conditions laid down by the contract or in case of faulty work.