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MBA- Part-I SEM-I

102- Accounting for Management

Course Overview

The objective of this course is to acquaint the students of basic tools and techniques of accounting. The course will help students to develop basic understanding which would help them to understand various finance related concepts and will also help them in allied papers in subsequent semesters. This course also covers all major branches of accounting. The course is designed to provide professional managers, not involved in accounting and finance, with an introduction to the concepts and issues in accounting and finance, Managers practically need to acquire such knowledge for application in their day-to-day managerial decision making. Course Contents

Group-I:

Foundations of Financial Accounting: Introduction to Financial Accounting. Accounting Mechanics, Process and System. Nature of Accounting Information: Scope of Accounting, Accounting Concepts and Principles.

Accounting Cycle: Introducing Book Keeping and Record Maintenance. The Concept of Double Entry and Fundamental Principles, Journal Entries, Ledger, Trial Balance.

Financial Statements: Preparation of Final Accounts, Manufacturing Account; Trading Account, Profit and Loss Account; Balance Sheet (Simple Problems), Cash Flow Statement

Group-II:

Introduction to Management Accounting: Management Accounting and its Interrelationship with Financial Accounting, Ratio Analysis, Its meaning and Types of Ratios, Solvency Ratios, Liquidity Ratios, Leverage Ratios & Profitability Ratios(Simple Problems)

Cost Behavior: Introduction to Cost Behavior, Cost Volume Relationships, Marginal Costing, Break-Even Analysis (Simple problems).

Cost Controlling Techniques: Budgetary Control System, Cash budget, Master Budget, Flexible Budget, Zero-based Review, and Behavioral Aspects of Budgeting.

Introduction to New Developments in Management Accounting: Life-Cycle Costing, Target Costing, and Activity-based Costing.

Pedagogy: A variety of teaching and learning techniques can be employed to impart knowledge and skills to students. Lectures, case analysis, exercises, group discussions and practical assignments can be used to develop conceptual and analytical skills and to prepare the students to face the challenges of the complex business environment. There will be assignment based on practical analysis of financial statements of different companies. Field assignments to accounting departments of companies and guest lecturers of accounting professionals can be arranged. The teacher should assess the students' performance through a continuous system of tests and quiz tests to ensure highest academic standards as well as practical orientation.

GROUP - A

FOUNDATIONS OF FINANCIAL ACCOUNTING

INTRODUCTION

Accounting has rightly been termed as the language of the business. The basic function of a language is to serve as a means of communication. Accounting also serves this function. It communicates the results of business operations to various parties who have some stake in the business viz., the proprietor, creditors, investors, Government and other agencies. Though accounting is generally associated with business but it is not only business which makes use of accounting. Persons like housewives, Government and other individuals also make use of a accounting.

For example, a housewife has to keep a record of the money received and spent by her during a particular period. She can record her receipts of money on one page of her "household diary" while payments for different items such as milk,

food, clothing, house, education etc. on some other page or pages of her diary in a chronological order. Such a record will help her in knowing about:

- ***(i)*** ***The sources from which she received cash and the purposes for which it was utilized.***
- ***(ii)*** ***Whether her receipts are more than her payments or vice-versa?***
- ***(iii)*** ***The balance of cash in hand or deficit, if any at the end of a period.***

In case the housewife records her transactions regularly, she can collect valuable information about the nature of her receipts and payments. For example, she can find out the total amount spent by her during a period (say a year) on different items say milk, food, education, entertainment, etc. Similarly she can find the sources of her receipts such as salary of her husband, rent from property, cash gifts from her relatives, etc. Thus, at the end of a period (say a year) she can see for herself about her financial position i.e., what she owns and what she owes. This will help her in planning her future income and expenses (or making out a budget) to a great extent.

The need for accounting is all the more great for a person who is running a business. He must know:

- (i) What he owns?
- (ii) What he owes?
- (iii) Whether he has earned a profit or suffered a loss on account of running a business?
- (iv) What is his financial position i.e. whether he will be in a position to meet all his commitments in the near future or he is in the process of becoming a bankrupt

MEANING OF ACCOUNTING

The main purpose of accounting is to ascertain profit or loss during a specified period, to show financial condition of the business on a particular date and to have control over the firm's property. Such accounting records are required to be maintained to measure the income of the business and communicate the information so that it may be used by managers, owners and other interested parties. Accounting is a discipline which records, classifies, summarizes and interprets financial information about the activities of a concern so that intelligent decisions can be made about the concern.

The American Institute of Certified Public Accountants has defined the Financial Accounting as "the art of recording, classifying and summarizing in as significant manner and in terms of money transactions and events which in part, at least of a financial character, and interpreting the results thereof". American Accounting Association defines accounting as "the process of identifying, measuring, and communicating economic information to permit informed judgments and decisions by users of the information.

From the above the following attributes of accounting emerge:

(i) Recording :

It is concerned with the recording of financial transactions in an orderly manner, soon after their occurrence In the proper books of accounts.

(ii) Classifying :

It is concerned with the systematic analysis of the recorded data so as to accumulate the transactions of similar type at one place. This function is performed by maintaining the ledger in which different accounts are opened to which related transactions are posted.

(iii) Summarizing:

It is concerned with the preparation and presentation of the classified data in a manner useful to the users. This function involves the 5 preparation of financial statements such as Income Statement, Balance Sheet, Statement of

Changes in Financial Position, Statement of Cash Flow, Statement of Value Added.

(iv) Interpreting:

Nowadays, the aforesaid three functions are performed by electronic data processing devices and the accountant has to concentrate mainly on the interpretation aspects of accounting. The accountants should interpret the statements in a manner useful to action. The accountant should explain not only what has happened but also (a) why it happened, and (b) what is likely to happen under specified conditions.

ACCOUNTING PROCESS:

1. Identifying and Analyzing Business Transactions

The accounting process starts with identifying and analyzing business transactions and events. Not all transactions and events are entered into the accounting system. Only those that pertain to the business entity are included in the process.

For example, a personal loan made by the owner that does not have anything to do with the business entity is not accounted for.

The transactions identified are then analyzed to determine the accounts affected and the amounts to be recorded.

The first step includes the preparation of business documents, or source documents. A business document serves as basis for recording a transaction.

2. Recording in the Journals

A journal is a book – paper or electronic – in which transactions are recorded. Business transactions are recorded using the double-entry bookkeeping system. They are recorded in journal entries containing *at least* two accounts (one debited and one credited).

To simplify the recording process, special journals are often used for transactions that recur frequently such as sales, purchases, cash receipts, and cash disbursements. A general journal is used to record those that cannot be entered in the special books.

Transactions are recorded in chronological order and as they occur.

Journals are also known as *Books of Original Entry*.

3. Posting to the Ledger

Also known as *Books of Final Entry*, the ledger is a collection of accounts that shows the changes made to each account as a result of past transactions, and their current balances.

After the posting all transactions to the ledger, the balances of each account can now be determined.

For example, all journal entry debits and credits made to Cash would be transferred into the Cash account in the ledger. We will be able to calculate the increases and decreases in cash; thus, the ending balance of Cash can be determined.

4. Unadjusted Trial Balance

A trial balance is prepared to test the equality of the debits and credits. All account balances are extracted from the ledger and arranged in one report. Afterwards, all debit balances are added. All credit balances are also added. Total debits should be equal to total credits.

When errors are discovered, *correcting entries* are made to rectify them or reverse their effect. Take note however that the purpose of a trial balance is only test the equality of total debits and total credits and not to determine the correctness of accounting records.

Some errors could exist even if debits are equal to credits, such as double posting or failure to record a transaction.

5. Adjusting Entries

Adjusting entries are prepared as an application of the *accrual basis of accounting*. At the end of the accounting period, some expenses may have been incurred but not yet recorded in the journals. Some income may have been earned but not entered in the books.

Adjusting entries are prepared to update the accounts before they are summarized in the financial statements.

Adjusting entries are made for accrual of income, accrual of expenses, deferrals *(income method or liability method)*, prepayments *(asset method or expense method)*, depreciation, and allowances.

6. Adjusted Trial Balance

An *adjusted trial balance* may be prepared after adjusting entries are made and before the financial statements are prepared. This is to test if the debits are equal to credits after adjusting entries are made.

7. Financial Statements

When the accounts are already up-to-date and equality between the debits and credits has been tested, the financial statements can now be prepared. The financial statements are the end-products of an accounting system.

A complete set of financial statements is made up of: (1) Statement of Comprehensive Income *(Income Statement and Other Comprehensive Income)*, (2) Statement of Changes in Equity, (3) Statement of Financial Position or *Balance Sheet,* (4) Statement of Cash Flows, and (5) Notes to Financial Statements.

8. Closing Entries

Temporary or nominal accounts, i.e. income statement accounts, are closed to prepare the system for the next accounting period. Temporary accounts include *income, expense, and withdrawal* accounts. These items are measured periodically.

The accounts are closed to a summary account (usually, Income Summary) and then closed further to the appropriate capital account. Take note that closing entries are made only for temporary accounts. Real or permanent accounts, i.e. balance sheet accounts, are not closed.

9. Post-Closing Trial Balance

In the accounting cycle, the last step is to prepare a post-closing trial balance. It is prepared to test the equality of debits and credits after closing entries are made. Since temporary accounts are already closed at this point, the post-closing trial balance contains real accounts *only*.

10. Reversing Entries: Optional step at the *beginning* of the new accounting period

Reversing entries are optional. They are prepared at the beginning of the new accounting period to facilitate a smoother and more consistent recording process.

In this step, the *adjusting entries* made for accrual of income, accrual of expenses, deferrals under the income method, and prepayments under the expense method are reversed.

Accounting system

An accounting system is the system used to manage the income, expenses, and other financial activities of a business An accounting system allows a business to keep track of all types of financial transactions, including purchases (expenses), sales (invoices and income), liabilities (funding, accounts payable), etc. and is capable of generating comprehensive statistical reports that provide management or interested parties with a clear set of data to aid in the decision-making process.

Today, the system used by a company is generally automated and computer-based, using specialized software and/or cloud-based services. However, historically, accounting systems were a complex series of manual calculations and balances.

Accounting system manages

1. **Expenses:** The amount of cash that flows out of the company in exchange for goods or services from another person or company is the expenses. In older accounting software or with a manual system such as Excel, it is necessary to manually enter, balance, and categories each expense. An automatic accounting system allows quick entry, categorization and automatic balance of expenses.
2. **Invoices**: Creating a professional looking invoice is an important part of developing a positive brand image and building confidence with customers. Today, some accounting systems such as Debitoor allow for instant invoice creation with the ability to customize and automatically keep track of paid invoices and income.
3. **Funding**: All the business liabilities, whether accounts payable, bank loans taken to support the business, or mortgages, etc. An accounting system keeps track of these liabilities as payable values and automatically updates the balances as soon a payment is made and accounts are settled.

Accounting systems in history

The earliest known accounting records were found in the Middle East and date back over 7,000 years.

It was important for early rulers, businesses, and individuals to be able to keep track of income and expenditure, whether due to a desire to determine whether a particular activity was profitable, to tax citizens or to impose customs fees.

In the late 1400s, the Italian friar Luca Pacioli earned his accreditation as the 'Father of Accounting', for describing the structure of the double-entry bookkeeping system used by Venetian merchants during the Italian Renaissance, which has served as the direct predecessor of modern accounting practices. He is perhaps best known for stating the Golden Rule of Accounting:

'Do not go to bed before the debits equal the credits'

Modern accounting systems

Jumping ahead to 1880, the first accounting machine was invented by a man named Herman Hollerith. Known as the tabulating machine, it used punch cards to add numbers to a card that could then use to determine the total. Hollerith also founded a company that later merged to become a component of IBM.

In the 20th century, developments in computer technology and especially the introduction of the PC meant that it was possible for "ordinary people" to gain access to a definite system. That is: an accounting system that does it all. From the first DOS-based accounting systems such as PcPlus to today's Internet-based accounting systems such as Debitoor, which uses SaaS (or cloud computing), all serve as models for the distribution of accounting systems.

The accounting cycle, also commonly referred to as *accounting process*, is a series of procedures in the collection, processing, and communication of financial information.

As defined in earlier lessons, accounting involves recording, classifying, summarizing, and interpreting financial information.

Financial information is presented in reports called *financial statements*. But before they can be prepared, accountants need to gather information about business transactions, then record and collate them to come up with the values to be presented in the reports.

The cycle does not end with the presentation of financial statements. Subsequent steps are needed to be done to prepare the accounting system for the next cycle.

Nature of Accounting Information:

We know Accounting is the systematic recording of financial transactions and presentation of the related information of the appropriate persons. The basic features of accounting are as follows:

1. Accounting is a process: A process refers to the method of performing any specific job step by step according to the objectives, or target. Accounting is identified as a process as it performs the specific task of collecting, processing and communicating financial information. In doing so, it follows some definite steps like collection of data recording, classification summarization, finalization and reporting.

2. Accounting is an art: Accounting is an art of recording, classifying, summarizing and finalizing the financial data. The word 'art' refers to the way of performing something. It is a behavioral knowledge involving certain creativity and skill that may help us to attain some specific objectives. Accounting is a systematic method consisting of definite techniques and its proper application requires applied skill and expertise. So, by nature accounting is an art.

3. Accounting is means and not an end: Accounting finds out the financial results and position of an entity and the same time, it communicates this information to its users. The users then take their own decisions on the basis of such information. So, it can be said that mere keeping of accounts can be the primary objective of any person or entity. On the other hand, the main objective may be identified as taking decisions on the basis of financial information supplied by accounting. Thus, accounting itself is not an objective, it helps attaining a specific objective. So it is said the accounting is 'a means to an end' and it is not 'an end in itself.'

4. **Accounting deals with financial information and transactions**; Accounting records the financial transactions and date after classifying the same and finalizes their result for a definite period for conveying them to their users. So, from starting to the end, at every stage, accounting deals with financial information. Only

financial information is its subject matter. It does not deal with non-monetary information of non-financial aspect.

5. Accounting is an information system: Accounting is recognized and characterized as a storehouse of information. As a service function, it collects processes and communicates financial information of any entity. This discipline of knowledge has been evolved out to meet the need of financial information required by different interested groups.

Qualitative characteristics of accounting information

The following are the qualitative characteristics of accounting information:
1. Reliability- It means that the user can rely on the accounting information. All accounting information is verifiable and can be verified from the source document (voucher), viz. cash memos, bills, etc. Hence, the available information should be free from any errors and unbiased.

2. Relevance- It means that essential and appropriate information should be easily and timely available and any irrelevant information should be avoided. The users of accounting information need relevant information for decision making, planning and predicting the future conditions.

3. Understandability- Accounting information should be presented in such a way that every user is able to interpret the information without any difficulty in a meaningful and appropriate manner.

4. Comparability- It is the most important quality of accounting information. Comparability means accounting information of a current year can be comparable with that of the previous years. Comparability enables intra-firm and inter-firm comparison. This assists in assessing the outcomes of various policies and programmes adopted in different time horizons by the same or different businesses. Further, it helps to ascertain the growth and progress of the business over time and in comparison to other businesses.

USERS OF ACCOUNTING INFORMATION

The basic objective of accounting is to provide information which is useful for persons inside the organization and for persons or groups outside the organization. Accounting is the discipline that provides information on which external and internal users of the information may base decisions that result in the allocation of economic resources in society.

I**. External Users of Accounting Information** : External users are those groups or persons who are outside the organization for whom accounting function is performed. Following can be the various external users of accounting information:

1. Investors, Those who are interested in investing money in an organization are interested in knowing the financial health of the organization of know how safe the investment already made is and how safe their proposed investment will be. To know the financial health, they need accounting information which will help them in evaluating the past performance and future prospects of the organization. Thus, investors for their investment decisions are dependent upon accounting information included in the financial statements. They can know the profitability and the financial position of the organization in which they are interested to make that investment by making a study of the accounting information given in the financial statements of the organization.

2. Creditors. Creditors (i.e. supplier of goods and services on credit, bankers and other lenders of money) want to know the financial position of a concern before giving loans or granting credit. They want to be sure that the concern will not experience difficulty in making their payment in time i.e. liquid position of the concern is satisfactory. To know the liquid position, they need accounting information relating to current assets, quick assets and current liabilities which is available in the financial statements.

3. Members of Non-profit Organizations. Members of non-profit organizations such as schools, colleges, hospitals, clubs, charitable institutions etc. need accounting information to know how their contributed funds are being utilised and to ascertain if the organization deserves continued support or support should be withdrawn keeping in view the bad performance depicted by the accounting information and diverted to another organization. In knowing the performance of

such organizations, criterion will not be the profit made but the main criterion will be the service provided to the society.

4. Government. Central and State Governments are interested in the accounting information because they want to know earnings or sales for a particular period for purposes of taxation. Income tax returns are examples of financial reports which are prepared with information taken directly from accounting records. Governments also needs accounting information for compiling statistics concerning business which, in turn helps in compiling national accounts.

5. Consumers. Consumers need accounting information for establishing good accounting control so that cost of production may be reduced with the resultant reduction of the prices of goods they buy. Sometimes, prices for some goods are fixed by the Government, so it needs accounting information to fix reasonable prices so that consumers and manufacturers are not exploited. Prices are fixed keeping in view fair return to manufacturers on their investments shown in the accounting records.

6. Research Scholars. Accounting information, being a mirror of the financial performance of a business organization, is of immense value to the research scholars who wants to make a study to the financial operations of a particular firm. To make a study into the financial operations of a particular firm, the research scholar needs detailed accounting information relating to purchases, sales, expenses, cost of materials used, current assets, current liabilities, fixed assets, long term liabilities and shareholders' funds which is available in the accounting records maintained by the firm

II Internal Users of Accounting Information

Internal users of accounting information are those persons or groups which are within the organization. Following are such internal users :

1. Owners. The owners provide funds for the operations of a business and they want to know whether their funds are being properly used or not. They need accounting information to know the profitability and the financial position of the concern in which they have invested their funds. The financial statement prepared

from time to time from accounting records depicts them the profitability and the financial position.

2. Management. Management is the art of getting work done through others, the management should ensure that the subordinates are doing work properly. Accounting information is an aid in this respect because it helps a manager in appraising the performance of the subordinates. Actual performance of the employees can be compared with the budgeted performance they were expected to achieve and remedial action can be taken if the actual performance is not up to the mark. Thus, accounting information provides "the eyes and ears to management". The most important functions of management are planning and controlling. Preparation of various budgets, such as sales budget, production budget, cash budget, capital expenditure budget etc., is an important part of planning function and the starting point for the preparation of the budgets is the accounting information for the previous year. Controlling is the function of seeing that programmers laid down in various budgets are being actually achieved i.e. actual performance ascertained from accounting is compared with the budgeted performance, enabling the manager to exercise controlling case of weak performance. Accounting information is also helpful to the management in fixing reasonable selling prices. In a competitive economy, a price should be based on cost plus a reasonable rate of return. If a firm quotes a price which exceeds cost plus a reasonable rate of return, it probably will not get the order. On the other hand, if the firm quotes a price which is less than its cost, it will be given the order but will incur a loss on account of price being lower than the cost. So, selling prices should always be fixed on the basis of accounting data to get the reasonable margin of profit on sales.

3. Employees. Employees are interested in the financial position of a concern they serve particularly when payment of bonus depends upon the size of the profits earned. They seek accounting information to know that the bonus being paid to them is correct.

Scope of Accounting:

1. Identification

Accounting is concerned with financial transactions and events which bring 'about a change in the resources (or wealth) position of the business firm. Such transactions have to be identified first, as and when they occur. It is not difficult because. There will be proof in the form of a bill or receipt (called vouchers). With the help of these bills and receipts identification of a transaction is easy.

For example, when you purchase something you get a bill, when you make payment you gets a receipt.

2. Measurement.

These transactions are to be measured or expressed in terms of money, if not done already. Generally, this problem will not arise, because the statement of proof expresses the transaction in terms of money. For example, if ten books are purchased at the rate of Rs. 20 each, then the bill is prepared for Rs. 200. But, if an event cannot be expressed in monetary terms, it will not come under the scope of accounting.

3.Recording

The transactions which are identified and measured are to be recorded in a book called journal or in one of its sub-divisions.

4 Classification

The recorded transactions are to be classified with a view to group transactions of similar nature at one place. The work of classification is done in a separate book called ledger. In the ledger, a separate account is opened for each item so that all transactions relating to it can be brought to one place. For example, all payments of salaries are brought to salaries account.

5. Summarizing

The recording and classification of many transactions will result in a mass of financial data. It is, therefore, necessary to summaries such data periodically (at least once a year), in a significant and meaningful form. The summarization is done in the form of profit and loss account which reveals the profit made or loss incurred, and the balance sheet which reveals the financial position.

6 Analyzing, interpretation and communication:

The summary results will have to be analyzed, interpreted (critically explained) and communicated to interested parties. Accounting information is generally communicated in the form of a 'report'. Big organizations generally present printed reports, called published accounts

Accounting concepts

The first two accounting concepts, namely, Business Entity Concept and Money Measurement Concept are the fundamental concepts of accounting.

1. **Business Entity Concept**

According to this concept, the business and the owner of the business are two different entities. In other words, I and my business are separate.

For example*, *Mr. A starts a new business in the name and style of M/s Independent Trading Company and introduced a capital of Rs 2,000,000 in cash. It means the cash balance of M/s Independent Trading Company will increase by a sum of Rs 2,000,000/-. At the same time, the liability of M/s Independent Trading Company in the form of capital will also increase. It means M/s Independent Trading Company is liable to pay Rs 2,000,000 to Mr. A.

2. **Money Measurement Concept**

According to this concept, “we can book only those transactions in our accounting record which can be measured in monetary terms.”

Example

Determine and book the value of stock of the following items:

Shirts Rs 5,000/-
Pants Rs 7,500/-

Coats 500 pieces
Jackets 1000 pieces

Value of Stock =?

Here, if we want to book the value of stock in our accounting record, we need the value of coats and jackets in terms of money. Now if we conclude that the values of coats and jackets are Rs 2,000 and Rs 15,000 respectively, then we can easily book the value of stock as Rs 29,500 (as a result of 5000+7500+2000+15000) in our books. We need to keep quantitative records separately.

3. Going Concern Concept

Our accounting is based on the assumption that a business unit is a going concern. We record all the financial transaction of a business in keeping this point of view in our mind that a business unit is a going concern; not a gone concern. Otherwise, the banker will not provide loans, the supplier will not supply goods or services, the employees will not work properly, and the method of recording the transaction will change altogether.

For example, a business unit makes investments in the form of fixed assets and we book only depreciation of the assets in our profit & loss account; not the difference of acquisition cost of assets less net realizable value of the assets. The reason is simple; we assume that we will use these assets and earn profit in the future while using them. Similarly, we treat deferred revenue expenditure and prepaid expenditure. The concept of going concern does not work in the following cases:

- ***If a unit is declared sick (unused or unusable unit).***
- ***When a company is going to liquidate and a liquidator is appointed for the same.***
- ***When a business unit is passing through severe financial crisis and going to wind up.***

4. Cost Concept

It is a very important concept based on the Going Concern Concept. We book the value of assets on the cost basis, not on the net realizable value or market value of the assets based on the assumption that a business unit is a going concern. No doubt, we reduce the value of assets providing depreciation to assets, but we ignore the market value of the assets.

The cost concept stops any kind of manipulation while taking into account the net realizable value or the market value. On the downside, this concept ignores the effect of inflation in the market, which can sometimes be very steep. Still, the cost concept is widely and universally accepted on the basis of which we do the accounting of a business unit.

5. Dual Aspect Concept

There must be a double entry to complete any financial transaction, means debit should be always equal to credit. Hence, every financial transaction has its dual aspect:

- we get some benefit, and
- We pay some benefit.

6. Accounting Period Concept

The life of a business unit is indefinite as per the going concern concept. To determine the profit or loss of a firm, and to ascertain its financial position, profit & loss accounts and balance sheets are prepared at regular intervals of time, usually at the end of each year. This one-year cycle is known as the accounting period. The purpose of having an accounting period is to take corrective measures keeping in view the past performances, to nullify the effect of seasonal changes, to pay taxes, etc.

Based on this concept, revenue expenditure and capital expenditure are segregated. Revenues expenditure is debited to the profit & loss account to ascertain correct profit or loss during a particular accounting period. Capital expenditure comes in the category of those expenses, the benefit of which will be utilized in the next coming accounting periods as well.

Accounting period helps us ascertain correct position of the firm at regular intervals of time, i.e., at the end of each accounting period.

7. Matching Concept

Matching concept is based on the accounting period concept. The expenditures of a firm for a particular accounting period are to be matched with the revenue of the same accounting period to ascertain accurate profit or loss of the firm for the same period. This practice of matching is widely accepted all over the world. Let us take an

8. Accrual Concept

As stated above in the matching concept, the revenue generated in the accounting period is considered and the expenditure related to the accounting period is also considered. Based on the accrual concept of accounting, if we sell some items or we rendered some service, then that becomes our point of revenue generation irrespective of whether we received cash or not. The same concept is applicable in case of expenses. All the expenses paid in cash or payable are considered and the advance payment of expenses, if any, is deducted.

Most of the professionals use cash basis of accounting. It means, the cash received in a particular accounting period and the expenses paid cash in the same accounting period is the basis of their accounting. For them, the income of their firm depends upon the collection of revenue in cash. Similar practice is followed for expenditures. It is convenient for them and on the same basis, they pay their Taxes.

9. Objective Evidence Concept

According to the Objective Evidence concept, every financial entry should be supported by some objective evidence. Purchase should be supported by purchase bills, sale with sale bills, cash payment of expenditure with cash memos, and payment to creditors with cash receipts and bank statements. Similarly, stock should be checked by physical verification and the value of it should be verified with purchase bills. In the absence of these, the accounting result will not be trustworthy, chances of manipulation in accounting records will be high, and no one will be able to rely on such financial statements.

Accounting conventions:

Convention of Consistency

To compare the results of different years, it is necessary that accounting rules, principles, conventions and accounting concepts for similar transactions are followed consistently and continuously. Reliability of financial statements may be lost, if frequent changes are observed in accounting treatment.

For example, if a firm chooses cost or market price whichever is lower method for stock valuation and written down value method for depreciation to fixed assets, it should be followed consistently and continuously.

Consistency also states that if a change becomes necessary, the change and its effects on profit or loss and on the financial position of the company should be clearly mentioned.

Convention of Disclosure

The Companies Act, 1956, prescribed a format in which financial statements must be prepared. Every company that fall under this category has to follow this practice. Various provisions are made by the Companies Act to prepare these financial statements. The purpose of these provisions is to disclose all essential information so that the view of financial statements should be true and fair. However, the term 'disclosure' does not mean all information. It means disclosure of information that is significance to the users of these financial statements, such as investors, owner, and creditors.

Convention of Materiality

If the disclosure or non-disclosure of information might influence the decision of the users of financial statements, then that information should be disclosed.

For better understanding, please refer to General Instruction for preparation of Statement of Profit and Loss in revised scheduled VI to the Companies Act, 1956:

- A company shall disclose by way of notes additional information regarding any item of income or expenditure which exceeds 1% of the revenue from operations or Rs 1, 00,000 whichever is higher.
- A Company shall disclose in Notes to Accounts, share in the company held by each shareholder holding more than 5% share specifying the number of share held.

Conservation or Prudence

It is a policy of playing safe. For future events, profits are not anticipated, but provisions for losses are provided as a policy of conservatism. Under this policy, provisions are made for doubtful debts as well as contingent liability; but we do not consider any anticipatory gain.

Next topic:

Accounting cycle

Concept of book keeping and Record Maintainence:

A double-entry bookkeeping system is a set of rules for recording financial information in a financial accounting system in which every transaction or event changes at least two different nominal ledger The name derives from the fact that financial information used to be recorded using pen and ink in paper books – hence "bookkeeping" (whereas now it is recorded mainly in computer systems) and that these books were called journals and ledgers (hence nominal ledger, etc.) – and that each transaction was entered twice (hence "double-entry"), with one side of the transaction being called a accounts. Debit and the other a credit. **It was first codified in the 15th century by the Franciscan Friar, Luca Pacioli.** In deciding which account has to be debited and which account has to be credited, the golden rules of accounting are used. This is also accomplished using the accounting equation**: Equity = Assets − Liabilities**. The accounting equation serves as an error detection tool. If at any point the sum of debits for all accounts does not equal the corresponding sum of credits for all accounts, an error has occurred. It follows that the sum of debits and the sum of the credits must be equal in value. Double-entry bookkeeping is not a guarantee that no errors have been made – for example, the wrong ledger Accounting entries account may have been debited or credited, or the entries completely reversed.

DISTINCTION BETWEEN BOOK-KEEPING AND ACCOUNTING

Book-keeping is a part of accounting and is concerned with the recording of transactions which is often routine and clerical in nature, whereas accounting

performs other functions as well, viz., measurement and communication, besides recording. An accountant is required to have a much higher level of knowledge, conceptual understanding and analytical skill than is required of the book-keeper. An accountant designs the accounting system, supervises and checks the work of the book-keeper, prepares the reports based on the recorded data and interprets the reports. Nowadays, he is required to take part in matters of management, control and planning of economic resources.

DISTINCTION BETWEEN ACCOUNTING AND ACCOUNTANCY

Although in practice Accountancy and Accounting are used interchangeably yet there is a thin line of demarcation between them. The word Accountancy is used for the profession of accountants - who do the work of accounting and are knowledgeable persons. Accounting is concerned with 6 recording all business transactions systematically and then arranging in the form of various accounts and financial statements. And it is a distinct discipline like economics, physics, astronomy etc. The word accounting tries to explain the nature of the work of the accountants (professionals) and the word Accountancy refers to the profession these people adopt.

MEANING OF DOUBLE ENTRY SYSTEM:

Double entry system owes its origin to an Italian merchant named LUCO PACIOLI who wrote the first book entitled 'De Computis et Scripturis' on double entry accounting in the year 1494. Every business transactions has two aspects, i.e. when we receive something, we give something else in return. For example, when we purchase goods for cash, we receive goods and give cash in return. Similarly in a credit sale of goods, goods are given to the customer and the customer becomes debtor for the amount of goods sold by him. This method of writing every transaction in two accounts is known as double entry system of accounting. Of the two accounts one account is given debit while the other account is given credit with an equal amount. Thus, on any date, the total of all debits must be equal to the total of all credits because every debit has a corresponding credit.

Rules for Double Entry System

An account is statement and it is a record of transactions relating to a person, or a firm, or a property, or a liability, or an income or expenditure. There are three kinds of rules for double entry system. They are as follows:-

Personal Accounts

Under this statement, a separate account will be prepared for each person. It includes Natural person's account, artificial person's account and representative personal accounts. Some of the examples of personal account are Ram's account, Bank account, any firms account, any companies account, prepaid expense account, outstanding wages account etc.

Rule for personal Account:-

"***Debit the receiver***
Credit the giver"

Real Accounts

Under the real account, a separate account will create for each class of property or asset. There will have an account relating to a property, an asset or a possession of property. Some of the examples for real account are Cash account, Furniture account, Goodwill account etc.

Rule for Real Account:-

"***Debit what comes in***
Credit what goes out"

Nominal Account

These include the expenses and losses or incomes and gains of business. Some of the examples of Nominal account are wages account, discount received account, interest account etc.

Rule for nominal Account:-

"***Debit all expenses and losses***
Credit all incomes and gains"

Advantages of Double Entry System

Double entry system is the most scientific method of keeping accounts. In the modem age, this system is accepted as the best one.

In every organization whether big or small accounts are kept under double entry system.

The advantages of the double entry system are stated in brief;

1. **Complete accounts of transactions:** Double entry system can keep complete accounts of transactions as it is based on dual aspects of each transaction; i.e. debit and credit are recorded simultaneously. For this reason, this system maintains accounts of all parties relating transactions.
2. **Verification of arithmetical accuracy:** Arithmetical accuracy of accounting can be verified through the preparation of trial balance if the accounts are maintained under the double entry system. Under this system, every debit for a certain amount of money will have corresponding credit for an equal amount. For this reason, the total amount of debt will be equal to the total amount of credit. It can be detected through trial balance whether two sides of accounts are equal or not and thereby the arithmetical accuracy of the account is verified.
3. **Determining profit or loss:** Under double entry system, profit or loss of the company for a particular accounting period can be known by preparing an income statement. Since all accounts relating to income and expenditure are maintained properly in the ledger under the double entry system, it becomes convenient to draw income statement at the end of a particular accounting period.
4. **Determining financial position:** Under double entry system, the total assets and liabilities of a business concern are recorded properly. As a result at the closing day of the accounting period balance sheet is prepared with the help of all assets and liabilities. Through this balance sheet financial position of the business concerned can be ascertained.
5. **Knowing asset and liabilities:** Total amount of assets and liabilities can be ascertained if the account is kept under double entry system and it becomes easier to settle liability and assets.
6. **Fixation of the price of commodities:** It becomes easier to fix-up the price of commodities as the accounts are maintained systematically under double entry system.

7. **Submission of income and VAT statements:** Double entry system being the reliable system of keeping accounts the submission of reliable income and VAT statement under it are possible on the basis of which income tax and VAT are fixed and paid.
8. **Comparative analysis:** Under this system of accounting future course of action can be formulated by comparing income -expenditure, asset and liability of the current year with that of the previous year.
9. **Increase in profit:** Under this system of accounting the picture of all incomes or profits is reflected. It can be identified which item is more profitable for a business comparing the items relating to a profit of the current year with that of the previous year. In this way, attempts can be made in order to make more profit.
10. **Expenditure control:** Through comparative analysis expenditure may be controlled curtailing expensive expenditure.
11. **Detection and prevention of forgery:** Under this system of accounts errors or forgery of accounts can easily be detected. As a result moral qualities of an accountant and other employees are upheld.
12. **Supply of information:** This system helps run the business properly supplying necessary information and statistics to the management.
13. **Future reference:** Under this system as every transaction is permanently recorded properly and completely, any necessary information can be detected easily in future.
14. **Easy application:** It is easier to record the transactions properly in the books of accounts following the scientific method of double entry system.
15. **Generally accepted method:** Double entry system being a scientific method is a generally accepted system. The accounts under double entry system become reliable and acceptable to all concerned like income tax authority, creditors etc.
16. **Efficiency evaluation of business concern:** Capacity for earning a profit and repaying liabilities can be evaluated with the help of various ratios relating to accounts from financial statements. For example, creditors or loan givers evaluate the loan repaying capacity of a business concern with the help of current ratio. If the ratio is 2:1 then it is assumed that the loan repaying capacity of the business concern is sound enough.
17. **Timely step for correcting accounting errors:** Accounting errors can properly be detected and taking necessary measures for correction is possible under

double entry system of accounting; i.e. before going to next stage the errors of accounting can be corrected.

18. **Utility:** The utility and application of this system in the accounts of all business concerns whether big, medium or small are accepted by all.

Disadvantages or Limitations of Double Entry System

The double entry system is a generally accepted scientific method. In spite of its many important advantages some limitations of it exist which are stated below:

1. **Increased size of books of accounts:** Under double entry system every transaction is recorded in two sides of two accounts and in two steps (Journal & ledger) of books of accounts.
2. **Complexity in accounting process:** Complexity arises in following rules, principles, techniques, and methods etc. for keeping accounts under the double entry system.
3. **Expensive, time and labor consuming:** Since accounting process under the double entry system is extensive, a good number of books are to be kept and a large number of employees are employed for accounting work. As a result, it requires enough labor, time and money. Therefore, it becomes impossible to follow this system by the small business concerns.
4. **Persons of specialized knowledge required:** The accountant should possess both theoretical and practical knowledge of accounting for proper keeping of accounts under double entry system. An inexperienced person in accounting fails and faces problems in maintaining accounts under this double entry system
5. **Possibility of mistake:** As the accounting process under the double entry system is complex and complicated, the possibility of errors and mistakes cannot be avoided completely.
6. **Limited scope of application:** In a small business organization, daily shopping, a cultural ceremony the application of single entry system of accounting is more popular and advantageous than double entry system.
7. **Problem in maintaining secrecy:** A lot of people are engaged in maintaining accounts under double entry system since the accounting process is very wide and extensive. As a result, a problem arises in maintaining the secrecy of the accounts or business.

Though there arise some problems in maintaining accounts under double entry systems, its advantages and acceptability are so wide and comprehensive that at present age in almost all field accounts is kept under this system.

Next topic:

Journal

A journal is a place of record in which business transactions are recorded in chronological order. A firm may use several specialized journals, such as a purchases journal or sales journal, to separately record transactions in the more high-volume areas. The general journal is used to record more general, lower-volume transactions. Once entered into a journal, transactions are then posted to general ledger accounts. Journals are the best source of information when researching the nature of business transactions, since they identify source documents.

Entries made into a journal employ double-entry accounting, where balancing debits and credits are used. The entries also state the date, accounts impacted, and amounts, as well as an identifier for the source document.

LEDGER

Introduction

Ledger account is a summary statement of all the transactions relating to a person, asset, liability, expense or income which has taken place during a given period of time and it shows their net effect. From the transactions recorded in the journal, the ledger account is prepared. Ledger is known as principal book of accounts. It is a book which contains all sets of accounts, namely, personal, real and nominal accounts. Account wise balance can be determined from the ledger. The ledger accounts are prepared based on journal entries passed.

The balances in the ledger accounts show the net effect of transactions during a particular period in various accounts. The personal accounts give the net amount due to creditors and the net amount due from debtors, real accounts show the

values of assets and nominal accounts show incomes and expenses. The financial statements can be prepared from the ledger balances.

Ledger may be maintained in the business enterprises in the form of a bound register or in the form of loose sheets with spiral binding. Normally one page or one sheet may be provided for one account. An index is provided in the beginning of the ledger giving details of the accounts contained in it such as specific code for each account, page number, etc. Where computerised accounting is followed, once the transactions are recorded in the journal, ledger accounts are automatically prepared.

Utilities of ledger

Following are the utilities of ledger:

i) Quick information about a particular account

Ledger account helps to get all information about a particular account like sales, purchases, machinery, etc., at a glance. For example, where there are several transactions with a debtor, the net amount due from a debtor can be known from the ledger account.

ii)Control over business transactions

From the ledger balances extracted, a thorough analysis of account balances can be made which helps to have control over the business transactions.

iii)Trial balance can be prepared

With the balances of ledger accounts, trial balance can be prepared to check the arithmetical accuracy of entries made in the journal and ledger.

iv) Helps to prepare financial statements

From the ledger balances extracted, financial statements can be prepared for ascertaining net profit or loss and the financial position.

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Format of ledger account

The ledger account is prepared in T format. It is divided into two parts. Left side is debit side and right side is credit side. Each side contains four columns. The name or title of the account is placed at the top middle and the details are entered in the ledger. The format of ledger account is given below:

Following are the details contained in the various columns in the ledger:

Date : **Date of the transaction is recorded in this column.**

Particulars : **The account debited or credited is recorded in this column. On the debit side, the entries are made starting with 'To' and on the credit side, entries are made starting with 'By'.**

Journal Folio (J.F.): **In this column, the page number of the journal or subsidiary books from which the entry has been posted to the ledger is noted.**

Amount : **The amount of the transaction is recorded in this column.**

MEANING OF TRIAL BALANCE:

Trial balance is a statement of debit and credit totals or balances extracted from various accounts in the ledger with a view to test the arithmetical accuracy of the books. This statement is usually prepared at the end of the year and is a connecting link between the ledger accounts and the final accounts.

- **Objective of Trial Balance:**

The following are the main objective of trial balance.

1) To check the arithmetical accuracy of ledger

Trial balance is prepared on the basic of double entry systems of book keeping which states that every debit should have equal and corresponding credit and vice versa, as a result, the sum of the debit totals and credit totals of trial balances must be equal. If the debit total does not agree with the credit total, it is assumed that the transactions are not arithmetically accurate. Thus, one of the important objectives of trial balance is to provide check on the arithmetical accuracy of the financial

transactions.

2) To help in locating accounting errors

since the trial balance indicates whether there is an error committed in journal or ledger, it helps to locate errors as trial balance is the starting point of locating error. Thus locating error is one of the importance objectives of trial balance.

3) To provide the summary of transactions

A business organization performs number of financial transaction during a certain period of time. These transaction themselves cannot depict any picture of financial of the business organizations. To fulfill the purpose, the trial balance is prepared which summarized the financial transactions of business in a certain date.

4) To serve as basic for preparing final accounts

Financial statements are prepared from trial balance. Trial balance contains all ledger accounts, and provides a basis for further processing of accounting data i.e. preparation of financial statements.

5) To facilitate auditors:

Total of all debit balances must be equal to total of all credit balances. Agreement of trial balance assures auditors that all transactions have been recorded in books of accounts.

- **<u>Limitations of Trial Balance:</u>**

Following are the main limitations of trial balance:

1) Trial balance can be prepared only in those concerns where double entry system of accounting is adopted. This system is very costly and cannot be adopted by the small concerns.
2) Though trial balance gives arithmetic accuracy of the books of accounts but there are certain errors which are not disclosed by the trial balance. That is why it is said that trial balance is not a conclusive proof of the accuracy of the books of accounts.
3) If trial balance is not prepared correctly then the final accounts prepared will not reflect the true and fair view of the state of affairs of the business. Whatever conclusions and decisions are made by the various groups of person will not be correct and will mislead such persons.

- **METHODS OF PREPARATION OF TRIAL BALANCE**

  The following are the two methods of preparing trial balance:

1. **Total Method:**
   Under this method, every ledger account is totaled and that total amount (both credit and debit side) is transferred to trial balance. The difference of totals of each ledger account is the balance of that particular account. This method is not commonly used as it cannot help in the preparation of financial statements
2. **Balance Method:**
   Under this method, every ledger account is balanced and those balances only are carried forward to the trial balance. Financial statements are commonly prepared on the basis of this method
3. **Total and Balance Method:**
   As name shows it is combination of above two methods. Under this method, statement of trial balance shows to balance contains the balance in both ways as explained in the above two methods.

Next topic

Final Account

Introduction to final accounts

Business entities raise funds, acquire assets and incur various expenses for the purpose of carrying on business operations and earning income from such operations. These transactions are first recorded in the journal and then classified under common heads in the ledger. Preparation of trial balance from ledger balances helps to verify the arithmetical accuracy of entries made in the books of accounts, but it is not the end in itself. The business entities are interested in knowing periodically the results of business operations carried on and the financial soundness of the business. In other words, they want to know the profitability and the financial position of the business. These can be ascertained by preparing the final accounts or financial statements. The final accounts are usually prepared at the end of the accounting period on the basis of balances of ledger accounts shown by the trial balance.

The final accounts or financial statements include the following:

i. Income Statement or Trading and Profit and Loss Account and

ii. Position Statement or Balance Sheet.

The purposes of preparing the financial statements are:

i. To ascertain the financial performance of an enterprise and

ii. To ascertain the financial position of an enterprise.

The income statement and balance sheet are prepared for these purposes respectively. Income statement gives the manner in which the profit or loss for an accounting period is arrived at. The revenues earned and expenses incurred to earn the revenues during the period are shown in the income statement under appropriate heads as per matching principle. All the nominal accounts and accounts relating to goods during an accounting period are to be considered only in the relevant accounting period and are not to be carried forward. Moreover, only these items are to be compared for determining the financial performance. Hence, at the close of the accounting period, all nominal accounts (i.e. expenses, losses, revenues, gains, purchases, purchases returns, sales and sales returns) are to be closed by transferring to the income statement or trading and profit and loss account.

While transferring the items, it is desirable that the results of buying and selling of goods and the results of overall operations and financial performance are given separately. Hence, income statement is divided into two parts. The first part, i.e., trading account shows the results of buying and selling and the second part shows the results of overall financial performance.

The second part may also be presented in such a manner to give the operating results and overall financial performance separately. All the direct expenses and items relating to goods are transferred to trading account which is the first part of income statement. All indirect expenses and losses and indirect incomes and gains are transferred to profit and loss account along with the net result of trading account.

Manufacturing Account

The primary object of accounting is to arrange accounting data in a manner that the amount of profit or loss can be ascertained. It is prepared for a fixed period. For

this purpose, we prepare the final accounts. Non-manufacturing entities or the trading entities are engaged in the purchase and sale of goods at profit without changing the form of the goods. Generally, Manufacturing entities prepare a separate Manufacturing Account as a part of Final accounts in addition to Trading Account, Profit and Loss Account and Balance Sheet.

Manufacturing account

The main purpose of preparing Manufacturing Account is to determine manufacturing costs of finished goods. It helps in improving the cost-effectiveness of manufacturing activities. The costs of finished goods are then transferred from this Account to Trading Account.

Manufacturing Account

Particulars	Units	Amount		Particulars	Units	Amount
To Raw material consumed:				By By-products at net realizable Value		
Opening inventory				By Closing Work-in-Process		
Add: Purchases				By Trading A/c		

Less: Closing inventory				**Cost of production**		
To Direct Wages						
To Direct expenses						
Prime cost						
To Factory overheads:						
Royalty						
Hire charges						
To Indirect expenses:						
Repairs & Maintenance						

Depreciation						
Factory cost						
To Opening Work-in-process						

Following general rules in mind

(1)The Manufacturing Account should show the quantities and values. If they are not given they should be calculated. For example, if the question does not state the total number of items sold, we calculate the quantity as follows:

(Opening inventory + units manufactured- closing inventory)

(2) We show the number of raw materials in inventory at the beginning and at the end of the year and the purchases during the year in manufacturing account. Finished goods will only show the quantity manufactured and, as regards work-in-progress, the opening and closing amounts.

(3)Trading Account will show the quantities of finished goods manufactured and sold and the opening and closing balances of inventory. It will not show the number of raw materials or work-in-progress.

(4)In absence of specific information always assumed “first in-first out” basis, for closing inventory valuation.

Illustration:

Mr. Prasoon runs a factory which produces soaps. Following details were available in respect of his manufacturing activities for the year ended on 31.03.2017

Opening work-in-process (5,000 units)	8,000
Closing work-in-process (6,000 units)	10,000
Opening inventory of Raw materials	85,000
Closing inventory of Raw materials	95,000
Purchase	4,10,000
Hire charges of machine@₹0.60 per unit manufactured	
Hire charges of factory	1,10,000
Direct wages-contracted@₹0.80 per unit manufactured and @₹0.40 per unit of closing W.I.P	

Repairs and maintenance	90,000
units produced-2,50,000	

Prepare a manufacturing Account of Mr. Prasoon for the year ended 31.03.2017.

Ans:

In the Books of Mr.Prasoon

Manufacturing Account for the year ended 30.06.2017

Particulars	Units	Amount		Particulars	Units	Amount
To Raw material consumed:				By By-products at net realizable value		
Opening inventory		85000		By Closing Work-in-Process	6000	10000

Add: Purchases		410000		By Trading A/c	250000	950400
Less: Closing inventory		(95000)		**Cost of production**		
To Direct Wages		202400				
To Direct expenses						
(hire charges on machinery)		150000				
Prime cost		**752400**				
To Factory overheads:						
Hire charges of factory shed		110000				

To Indirect expenses:						
Repairs & Maintenance		90000				
Factory cost		**952400**				
To Opening Work-in-process	5000	8000				
		960400				**960400**

Working Notes

Direct Wages= 250000 units@0.80	200000
6,000 units@ 0.40	2,400
Total =	202,400

Hire charges on machinery:-250000 unit at 0.60=150000

Trading account

Trading refers to buying and selling of goods with the intention of making profit. The trading account is a nominal account which shows the result of buying and selling of goods for an accounting period.

According to J. R. Batliboi, "The trading account shows the results of buying and selling of goods. In preparing this account, the general establishment charges are ignored and only the transactions in goods are included."

Trading account is prepared to find out the difference between the revenue from sales and cost of goods sold. Cost of goods sold refers to directly related cost. Direct cost includes the purchase price of goods purchased and all other expenses which are incurred to bring the goods to the business premises or godown and to make these ready for sale. All the goods purchased during the accounting period may not be sold during the same accounting period. Hence, it is necessary to calculate the cost of goods sold during the period. Matching principle is applied here. Hence, the cost of stock not sold must be deducted, i.e., value of closing stock must be deducted. But if there is any opening stock of goods that will be sold during the accounting period, it is to be added to the cost of purchases made during the period. If there is cost of goods manufactured, it must also be added to find out the cost of goods sold.

Cost of goods sold = Opening stock + Net purchases + Direct expenses – Closing stock

If the amount of sales exceeds the cost of goods sold, the difference is gross profit. On the other hand, the excess of cost of goods sold over the amount of sales results in gross loss.

Sales – Cost of goods sold = Gross profit

Sales – Gross profit = Cost of goods sold

<u>Need for preparation of trading account</u>

Preparation of trading account serves the following purposes:

(i) Provides information about gross profit or gross loss

It shows the gross profit or gross loss of the business for an accounting year. This helps the business persons to find out gross profit ratio by expressing the gross profit as a percentage of sales. It helps to compare and analyse with the ratios of the previous years. Thus, it provides data for comparison, analysis and planning for a future period.

(ii) Provides an opportunity to safeguard against possible losses

If the ratio of gross profit has decreased in comparison to the preceding years, effective measures can be taken to safeguard against future losses.

For example, the sale price of goods may be increased or steps may be taken to analyse and control the direct expenses.

(iii) Provides information about direct expenses and direct incomes

All the expenses incurred on the purchase of goods are direct expenses. They are recorded in the trading account. Trading account also shows sales revenue, which is a direct income. With the help of trading account, percentage of such expenses on sales revenue can be calculated and compared with similar ratios of the previous years. Thus, it enables the management to have control over the direct expenses.

Preparation of trading account

Trading account is a nominal account. The opening stock, net purchases and all expenses relating to purchase of goods are shown on the debit side and the net sales and closing stock are shown on the credit side of it.

A) Items shown on the debit side of the trading account

The following are the items shown on the debit side of the trading account:

(i) Opening stock

The stock of goods remaining unsold at the end of the previous year is the opening stock of the current year. This item will not be there in a newly started business. It will not appear if it is adjusted with purchases. As opening stock would have been sold during the year, the cost of opening stock is included in trading account.

(ii) Purchases and purchases returns

Goods which have been bought for resale are termed as purchases. Goods purchased which are returned to suppliers are termed as purchases returns or returns outward. Purchases include both cash purchases and credit purchases. Net purchases, i.e., purchases minus purchases returns are shown in the debit side of the trading account.

(iii) Direct expenses

All the expenses incurred on the purchase of goods and for bringing the goods to the go down or place of business and to make them to saleable condition are known as direct expenses. They are debited to trading account. Direct expenses include the following:

(a) Carriage inwards or Freight inwards

Amount paid for transporting the goods purchased to the godown or business premises is called carriage inwards or carriage on purchases or freight inwards.

(b) Wages

Amount paid to workers who are directly engaged in loading, unloading and handling of goods purchased is known as wages.

(c) Dock Charges

These are the charges levied for shipping the cargo while entering or leaving docks. When they are paid on import of goods, they are treated as direct expenses.

(d) Octroi

This is a tax levied by the local authority when the purchased goods enter the municipal limits.

(e) Import duty

Taxes paid on import of goods are known as import duties.

(f) Royalty

This is the amount paid to the owner of a mine or a patent for using owner's right. When the royalty is based on cost of production or output, it is treated as a direct expense.

(g) Coal, gas, fuel and power

Cost incurred towards coal, gas and fuel to make the goods saleable is also considered as direct expenses.

(iv) Cost of goods manufactured

If the sole proprietor is also engaged in manufacture of goods, a separate account, namely, manufacturing account is to be prepared in which expenses incurred for manufacture of goods will be entered. Examples of such expenses are raw materials, coal, gas, fuel, water, power, factory rent, packaging, factory lighting, royalty on manufactured goods, etc. The total cost of goods manufactured is transferred to the debit side of trading account.

B) Items shown on the credit side of the trading account

Following are the items shown on the credit side of the trading account:

(a) Sales and Sales returns

Both cash and credit sales of goods will be included in sales. The sales account will show credit balance whereas the sales returns account will show debit balance. The amount of net sales is shown on the credit side of the trading account by deducting sales returns from sales.

(b) Closing stock

The goods remaining unsold at the end of the accounting period are known as closing stock. They are valued at cost price or net realisable value (market price) whichever is lower as per Accounting Standard 2 (Revised).

3. Closing of trading account

The difference between the totals of two sides of the trading account indicates either gross profit or gross loss. If the total of the credit side is more, the difference represents gross profit. On the other hand, if the total of the debit side is higher, the difference represents gross loss. The gross profit or gross loss is transferred to profit and loss account.

Profit and loss account

Profit and loss account is the second part of income statement. It is a nominal account in nature. A business entity is interested in knowing not only the gross profit or loss but also the net profit earned or net loss incurred during the year. Hence, profit and loss account is prepared to ascertain the net profit or net loss during the year. Profit and loss account contains all the items of indirect expenses and losses and indirect incomes and gains in addition to gross profit or gross loss pertaining to the accounting period. The difference is net profit or net loss.

According to Prof. Carter, "A Profit and Loss Account is an account into which all gains and losses are collected, in order to ascertain the excess of gains over the losses or vice-versa".

Need for preparing profit and loss account

Profit and loss account is prepared for the following purposes:

(i) Ascertainment of net profit or net loss

The profit and loss account discloses the net profit available to the proprietor or net loss to be borne by him. Ascertainment of profitability helps in planning for the growth and efficiency of a business enterprise. Inter-firm comparison and intra-firm comparison of profit and loss account items help in assessing efficiency in comparison with other enterprises and other departments of the same enterprise respectively.

(ii) Comparison of profit

The net profit of the current year can be compared with the profit of the previous years. It helps to know whether the business is conducted efficiently or not.

(iii) Control on expenses

Profit and loss account helps in comparing various expenses with the expenses of the previous years. The percentage of individual expenses to net sales can be calculated and compared with the similar ratios of previous years. Such a comparison will be helpful in taking effective steps for controlling unnecessary expenses.

(iv) Helpful in the preparation of balance sheet

A balance sheet can be prepared only after ascertaining the net profit or loss through profit and loss account. Net profit or loss is shown in the balance sheet. Thus, it facilitates preparation of balance sheet.

Preparation of profit and loss account

The amount of gross profit or gross loss brought down from the trading account is the first item in the profit and loss account. All the indirect expenses and losses are debited to profit and loss account. Indirect expenses include office and administrative expenses, selling expenses, distribution expenses, etc. As the profit and loss account is a nominal account, all the indirect expenses and losses are shown on the debit side and all the indirect incomes and gains are shown on the credit side.

Items shown on the debit side of profit and loss account are as follows:

(i) Gross loss

If trading account discloses gross loss, it is shown on the debit side of the profit and loss account.

(ii) Indirect expenses

Expenses which are not connected with purchase of goods are indirect expenses, i.e., expenses incurred in administration; office, selling and distribution of goods are indirect expenses.

(a) Office and administrative expenses

Expenses incurred for office and administration such as salary of office employees, office rent, lighting, postage, printing, legal charges, audit fee, depreciation and maintenance of office equipment, etc. are classified as office and administrative expenses.

(b) Selling and distribution expenses

Expenses incurred for selling, promotion of sales and distribution of goods such as advertisement charges, commission to salesmen, carriage outwards, bad debts, godown rent, packing charges, etc., are classified as selling and distribution expenses.

(c) Other indirect expenses and losses

The expenses such as interest on loan, repair charges, depreciation, charity, loss on sale of fixed assets and abnormal losses such as loss due to fire, theft, etc. not covered by insurance are shown under this category.

<u>Items shown on the credit side of profit and loss account are as follows:</u>

(i) Gross profit

The first item on the credit side of profit and loss account is the gross profit brought down from the trading account if there is gross profit.

(ii) Other incomes and gains

All items of indirect incomes and gains are shown on the credit side of the profit and loss account. Income from investments, rent earned, discount received, commission earned, interest earned and dividend received are indirect incomes. Profit on sale of fixed assets and investments are examples of gains.

Closing of profit and loss account

After debiting indirect expenses and losses and crediting all indirect incomes and gains, if the total of the credit side of the profit and loss account exceeds the debit side, the difference is termed as net profit. On the other hand, if the total in the debit side exceeds the credit side, the difference is termed as net loss. Net profit or net loss is transferred to the capital account.

Balance sheet

Balance sheet is a statement which gives the position of assets and liabilities on a particular date. Assets are the resources owned by the business. Liabilities are the claims against the business. After ascertaining the net profit or net loss of the business enterprise, a business person would like to know the financial position of the business. For this purpose, balance sheet is prepared which contains amounts of all the assets and liabilities of the business enterprise as on a particular date. The statement so prepared is called 'balance sheet' because it gives the balances of ledger accounts which are still there, after the closure of all nominal accounts by transferring to the trading and profit and loss account. Balances of all the personal and real accounts are grouped into assets and liabilities. In the balance sheet, liabilities are shown on the left hand side and assets on the right hand side.

According to J.R. Batliboi, "A Balance Sheet is a statement prepared with a view to measure the exact financial position of a business on a certain fixed date."

Need for preparing a balance sheet

The purposes of preparing a balance sheet are as follows:

i. The main purpose of preparing a balance sheet is to ascertain the true financial position of the business at a particular point of time.

ii. It helps in comparing the cost of various assets of the business such as the amount of closing stock, amount due from debtors, amount of fictitious assets, etc. Moreover as assets and liabilities of similar nature are grouped and presented in balance sheet, a comparative study of these assets and liabilities is facilitated. It helps in comparing the various liabilities of the business.

iii. It helps in finding out the solvency position of the firm. The firm's solvency position is favourable if the assets exceed the external liabilities. The firm's solvency position is not favourable it the external liabilities exceed the assets.

Characteristics of balance sheet

The following are the characteristics of a balance sheet:

i. A balance sheet is a part of the final accounts. However, the balance sheet is a statement and not an account. It has no debit or credit sides and as such

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the words 'To' and 'By' are not used before the names of the accounts shown therein.

ii. A balance sheet is a summary of the personal and real accounts, which have balances. Personal and real accounts having debit balances are shown on the right hand side known as assets side, whereas personal and real accounts having credit balances are shown on the left hand side known as liabilities side.

iii. The totals of the two sides of the balance sheet must be equal. If the totals are not equal, it indicates existence of error. It must satisfy the accounting equation, ie., Assets = Capital + Liabilities, following the dual aspect concept.

iv. Balance sheet is prepared on a particular date and not for a fixed period. It discloses the financial position of a business on a particular date. It gives the balances only for the date on which it is prepared.

v. It shows the financial position of the business according to the going concern concept.

Grouping and Marshalling of assets and liabilities in a balance sheet

The assets and liabilities shown in the balance sheet are grouped and presented in a particular order. The term 'grouping' means showing the items of similar nature under a common heading. For example, the amount due from various customers will be shown under the head 'Sundry debtors.' Similarly, under the head 'Current assets', the balance of cash, bank, debtors, stock and other current assets will be shown.

'Marshalling' is the arrangement of various assets and liabilities in a proper order. Marshalling can be made in one of the following two ways:

(a) In the order of liquidity

According to this method, an asset which is most easily convertible into cash, i.e., cash in hand is shown first and then will follow those assets which are comparatively less easily convertible, so that the least liquid asset i.e., goodwill is shown last. In the same way, the liabilities which are to be paid at the earliest will be shown first. In other words, current liabilities are shown first, then fixed or long-term liabilities and finally the proprietor's capital.

(b) In the order of permanence

This method is exactly the reverse of the first method. Asset which is more permanent, i.e., goodwill is shown first followed by assets which are less permanent. Similarly, those liabilities which are to be paid last will be shown first. In other words, the proprietor's capital is shown first, then fixed or long-term liabilities and lastly the current liabilities. Joint stock companies are required under the Companies Act to prepare their balance sheet in the order of permanence.

Preparation of Balance Sheet

There is no prescribed format for preparing the balance sheet of sole proprietor and partnership. For Joint Stock Company, the format of preparing balance sheet is given under Schedule III of Indian Companies Act, 2013. After transferring all nominal accounts, the items left out in trial balance are real account and personal accounts. These are grouped under assets (debit balance) and liabilities (credit balance) and presented in a balance sheet.

Classification of assets and liabilities

The resources acquired by the business entity out of funds provided by owners or creditors are called assets. These are the resources owned by the business. Assets of a business include cash, stock, plant and machinery, etc.

A) Classification of assets

According to the nature of assets, they may be classified into the following:

a) Fixed assets

Fixed assets are those assets which are acquired or constructed for continued use in the business and last for many years such as land and building, plant and machinery, motor vehicles, furniture, etc. According to Finney and Miller, "Fixed assets are assets of a relatively permanent nature used in the operations of business and not intended for sale." As the purpose of keeping such assets is not to sell but to use them, changes in their realisable values are ignored and these are always shown in the balance sheet at cost less depreciation. Fixed assets can be classified into i) Tangible fixed assets ii) Intangible fixed assets.

i) Tangible fixed assets

Tangible fixed assets are those which have physical existence or which can be seen and felt.

Examples: plant and machinery, building and furniture.

ii) Intangible fixed assets

Intangible fixed assets are those which do not have any physical existence or which cannot be seen or touched.

Examples: goodwill, trade-marks, copy rights and patents. Intangible assets are as much valuable as tangible assets because they also help the firm in earning profits. For example, goodwill helps in attracting customers and patents represent the know-how which helps in producing the goods.

b) Current assets

Current assets are those assets which are either in the form of cash or can be easily converted into cash in the normal course of business or within one year. In the words of Hovard and Upton, "The current assets are usually defined as those assets which are convertible into cash through the normal course of business within a short time, ordinarily in a year."

Current assets include cash in hand, cash at bank, short-term investments, bills receivable, debtors, prepaid expenses, accrued income, closing stock, etc. Among these, closing stock is valued at cost or realisable value whichever is lower and debtors are shown after deducting a reasonable provision for bad and doubtful debts.

c) Liquid assets

Liquid assets are the assets which are either in the form of cash or which can be immediately converted into cash within a very short period of time, such as cash at bank, bills receivable, short-term investments, debtors and accrued incomes. In other words, if prepaid expenses and closing stock are excluded from current assets, the balance is known as liquid assets.

d) Investments

Amount invested outside the business in shares, debentures, bonds and other securities is called investments. If it is invested for a period more than a year they are called long-term investments. If they are invested for a period less than a year they are short term investments and shown under current assets.

e) Wasting assets

These are the assets which get exhausted gradually in the process of excavation. ***Examples: mines and quarries.***

f) Fictitious or Nominal assets

These are assets only in name but not in reality. These assets are not really assets but are shown on the assets side only for the purpose of writing off by transferring them to the profit and loss account gradually over a period of time in future. Such assets include the expenditures, the benefit of which lasts for more than a year, not yet written off, such as advertisement expenses, preliminary expenses, etc.

B) Classification of liabilities

Liabilities or equities are claims against the business entity. These are the amounts owed by a business entity to the outsiders (outsider's equity) and owners (owners' equity).

Liabilities may be classified according to their nature as follows:

(a) Fixed or long-term liabilities

The liabilities which are to be repaid after one year or more are termed as long-term liabilities.

Example: Long-term loans.

(b) Current or short-term liabilities

The liabilities which are expected to be paid within the normal operating cycle or one year are termed as current or short-term liabilities. These include bank overdraft, creditors, bills payable, outstanding expenses, etc.

(c) Contingent liabilities

These are the liabilities which are not certain at the time of preparation of balance sheet. These liabilities may or may not occur. These are the liabilities which will become payable only on the happening of some specific event which itself is not certain, otherwise these need not be paid. Such liabilities are as follows:

Liabilities for bills discounted

In case a bill discounted with the bank is dishonoured by the acceptor on the due date, the firm will become liable to the bank.

Liability in respect of a suit pending in a court of law

This would become an actual liability if the suit is decided against the firm.

Liability in respect of a guarantee given for another person

The firm would be liable to pay the amount if the person for whom the guarantee is given fails to meet his obligation.

Cash flow statement

Meaning:

A Cash Flow Statement is a statement which is prepared by acquiring Cash from different sources and the application of the same for different payments throughout the year.

It is prepared from analysis of cash transactions, or it converts the financial transactions prepared under accrual basis to cash basis.

The information about the amount of resources provided by operational activities or net income after the adjustment of certain other charges can also be obtained from it. The changes in Cash—both at the beginning and at the end—can also be known with the help of this statement and that is why it is called Cash Flow Statement.

<u>Objectives of Cash Flow Statement:</u>

The primary objective of cash flow statement is to supply the necessary information relating to generation of cash to the users of financial statement. It also highlights the future or prospective cash positions i.e. cash or cash equivalent. The inflows and outflows of cash can be represented with the help of this statement.

However, the main objectives of cash flow statement are:

(a) Measurement of Cash:

Inflows of cash and outflows of cash can be measured annually which arise from operating activities, investing activities and financial activities.

(b) Generating inflow of Cash:

Timing and certainty of generating the inflow of cash can be known which directly helps the management to take financing decisions in future.

(c) Classification of activities:

All the activities are classified into operating activities, investing activities and financial activities which help a firm to analyse and interpret its various inflows and outflows of cash.

(d) Prediction of future:

A cash flow statement, no doubt, forecasts the future cash flows which helps the management to take various financing decisions since synchronisation of cash is possible.

(e) Assessing liquidity and solvency position:

Both the inflows and outflows of cash and cash equivalent can be known, and as such, liquidity and solvency position of a firm can also be maintained as timing and certainty of cash generation is known i.e. it helps to assess the ability of a firm to generate cash.

(f) Evaluation of future cash flows:

Whether the cash flow from operating activities are quite sufficient in future to meet the various payments e.g. payment of expense/debts/dividends/taxes.

(g) Supply necessary information to the users:

A cash flow statement supplies various information relating to inflows and outflows of cash to the users of accounting information in the following ways:

(i) To assess the ability of a firm to pay its obligations as soon as it becomes due;

(ii) To analyse and interpret the various transactions for future courses of action;

(iii) To see the cash generation ability of a firm;

(iv) To ascertain the cash and cash equivalent at the end of the period.

(h) Helps the management to ascertain cash planning:

No doubt, a cash flow statement helps the management to prepare its cash planning for the future and thereby avoid any unnecessary trouble.

Features of Cash Flow Statement:

The significant features are:

(i) Cash Flow Statement is very dynamic in character since it records the investment of cash from the beginning of the period to the end of the period.

(ii) It is a periodical statement as it covers a particular period.

(iii) This statement does not recognize matching principles.

(iv) This statement helps to calculate Cash from Operations/Cash Flows from Operational activities.

(v) It exhibits the changes of financial positions relating to operational activities, investing activities and financial activities respectively, by which an analyst can draw his conclusion.

Utility or Importance of Cash Flow Analysis:

Cash Flow Statement is particularly useful in short-term planning. In order to meet the various obligations, a firm needs sufficient amount of cash (e.g. payment for expenses, purchase of fixed assets, payments for dividend and taxes etc.).

It helps the financial manager to make a cash flow projection for immediate future taking the data, relating to cash from the past records. As such, it becomes easy for him to know the cash position which may either result in a surplus or a deficit one. However, Cash Flow Statement is an important financial tool for the management to make an estimate relating to cash for the near future.

(a) Helps to make Cash Forecast:

Cash Flow Statement, no doubt, helps the management to make a cash forecast for the near future. A projected Cash Flow Statement helps the management about the cash position which is the basis for all operations and, thus, the management sees light relating to cash position, viz. how much cash is needed for a specific purpose, sources of internal and external issues etc.

(b) Helps the Internal Management:

It helps the internal management to determine the financial policy to be adopted in future since it supplies information relating to funds, e.g. taking decision about the replacement of fixed assets or repayment of long-term liabilities etc.

(c) Reveal the Cash Position:

It is a significant pointer about the movement of cash, i.e. whether there is any increase in cash or decrease in cash and the reasons thereof which helps the management. Moreover, it explains the reasons for small cash balance even though there is sufficient profit or vice versa.

Besides, the management can compare the original forecast with the actual one in order to understand the trend of movement of cash and the variation therefore.

(d) Reveals the result of Cash Planning:

How far and to what extent the cash planning becomes successful is revealed by the analysis of Cash Flow Statement. The same is possible by making a comparison between the projected Cash Flow Statement/Cash Budget and the actual one, and the measures to be taken accordingly.

Classification of Cash Flows:

According to AS-3 (Revised), the cash flow statement should report cash flows during the period classified by operating, investing and financing activities.

Thus, cash flows are classified into three main categories:

1. Cash flows from operating activities.

2. Cash flows from investing activities.

3. Cash flows from financing activities.

1. Cash Flows from Operating Activities:

Operating activities are the principal revenue-producing activities of the enterprise and other activities that are not investing or financing activities. The amount of cash flows arising from operating activities is a key indicator of the extent to which the operations of the enterprise have generated sufficient cash flows to maintain the operating capability of the enterprise, pay dividends, repay loans, and make new investments without recourse to external sources of financing. Information about the specific components of historical operating cash flows is useful, in conjunction with other information, in forecasting future operating cash flows.

Cash flows from operating activities are primarily derived from the principal revenue-producing activities of the enterprise. Therefore, they generally result from the transactions and other events that enter into the determination of net profit or loss.

Examples of cash flows from operating activities are:

(a) Cash receipts from the sale of goods and the rendering of services;

(b) Cash receipts from royalties, fees, commissions, and other revenue;

(c) Cash payments to suppliers of goods and services;

(d) Cash payments to and on behalf of employees;

(e) Cash receipts and cash payments of an insurance enterprise for premiums and claims, annuities and other policy benefits;

(f) Cash payments or refunds of income taxes unless they can be specifically identified with financing and investing activities; and

(g) Cash receipts and payments relating to futures contracts, forward contracts, option contracts, and swap contracts when the contracts are held for dealing or trading purposes.

Some transactions, such as the sale of an item of plant, may give rise to a gain or loss which is included in the determination of net profit or loss. However, the cash flows relating to such transactions are cash flows from investing activities.

2. Cash Flows from Investing Activities:

Investing activities are the acquisition and disposal of long-term assets and other investments not included in cash equivalents. The separate disclosure of cash flows arising from investing activities is important because the cash flows represent the extent to which expenditures have been made for resources intended to generate future income and cash flows.

Examples of cash flows arising from investing activities are:

(a) Cash payments to acquire fixed assets (including intangibles). These payments include those relating to capitalized research & development costs and self constructed fixed assets;

(b) Cash receipts from disposal of fixed assets (including intangibles);

(c) Cash payments to acquire shares, warrants, or debt instruments of other enterprises and interests in joint ventures (other than payments for those instruments considered to be cash equivalents and those held for dealing or trading purposes);

(d) Cash receipts from disposal of shares, warrants, or debt instruments of other enterprises and interests in joint venture (other than receipts from those instruments considered to be cash equivalents[1] and those held for dealing or trading purposes);
(e) Cash advances and loans made to third parties (other than advances and loans made by a financial enterprise);

(f) Cash receipts from the repayment of advances and loans made to third parties (other than advances and loans of a financial enterprise);

g) Cash payments for futures contracts, forward contracts, option contracts, and swap contracts except when the contracts are held for dealing or trading purposes, or the payments are classified as financing activities; and

(h) Cash receipts from futures contracts, forward contracts, option contracts, and swap contracts except when the contracts are held for dealing or trading purposes, or the receipts are classified as financing activities.

3. <u>Cash Flows from Financing Activities:</u>

Financing activities are activities that result in changes in the size and composition of the owners' capital (including preference share capita! in the case of a company) and borrowings of the enterprise. The separate disclosure of cash flows arising from financing activities is important because .it is useful in predicting claims on future cash flows by providers of funds (both capital and borrowings) to the enterprise.

Examples of cash flows arising from financing activities are:

(a) Cash proceeds from issuing shares or other similar instruments:

(b) Cash proceeds from issuing debentures, loans, notes, bonds, and other short-or long-term borrowings; and

(c) Cash repayments of amounts borrowed such as redemption of debentures, bonds, preference shares.

<u>Limitations of Cash Flow Statement:</u>

Despite a number of uses, cash flow statements suffer from the following limitations:

(i) As cash flow statement is based on cash basis of accounting, it ignores the basic accounting concept of accrual basis.

(ii) Some people feel that as working capital is a wider concept of funds, a funds flow statement provides a more complete picture than cash flow statement.

(iii) Cash flow statement is not suitable for judging the profitability of a firm as non-cash charges are ignored while calculating cash flows from operating activities.

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(iv) A cash flow statement is not a substitute of an income statement it is complementary to an income statement. Net cash flow does not mean the net income of a firm.

(v) A cash flow statement is also not a substitute of funds flow statement which provides information relating to the causes that lead to increase or decrease in working capital.

(vi) A comparative study of cash flow statements may give misleading results.

GROUP - B

Introduction to Management Accounting

MANAGEMENT ACCOUNTING

Management accounting is not a specific system of accounting. It could be any form of accounting which enables a business to be conducted more effectively and efficiently. It is largely concerned with providing economic information to mangers for achieving organizational goals. It is an extension of the horizon of cost accounting towards newer areas of management. Much management accounting information is financial in nature but has been organized in a manner relating directly to the decision on hand.

Management Accounting is comprised of two words „Management" and „Accounting". It means the study of managerial aspect of accounting. The emphasis of management accounting is to redesign accounting in such a way that it is helpful to the management in formation of policy, control of execution and appreciation of effectiveness.

Management accounting is of recent origin. This was first used in 1950 by a team of accountants visiting U. S. A under the auspices of Anglo-American Council on Productivity

Definition:

The Institute of Chartered Accountants of India defines Management Accounting as follows: "Such of its techniques and procedures by which accounting mainly seeks to aid the management collectively has come to be known as management accounting"

OBJECTIVES OF MANAGEMENT ACCOUNTING:

The fundamental objective of management accounting is to enable the management to maximize profits or minimize losses. The evolution of management accounting has given a new approach to the function of accounting. The main objectives of management accounting are as follows:

1. **Planning and policy formulation:**
   Planning involves forecasting on the basis of available information, setting goals; framing polices determining the alternative courses of action and deciding on the programme of activities. Management accounting can help greatly in this direction. It facilitates the preparation of statements in the light of past results and gives estimation for the future.

2. **Interpretation process:**
   Management accounting is to present financial information to the management. Financial information is technical in nature. Therefore, it must be presented in such a way that it is easily understood. It presents accounting information with the help of statistical devices like charts, diagrams, graphs, etc.

3. **Assists in Decision-making process:**
   With the help of various modern techniques management accounting makes decision-making process more scientific. Data relating to cost, price, profit and savings for each of the available alternatives are collected and analysed and provides a base for taking sound decisions.

4. **Controlling:**

Management accounting is a useful for managerial control. Management accounting tools like standard costing and budgetary control are helpful in controlling performance. Cost control is affected through the use of standard costing and departmental control is made possible through the use of budgets. Performance of each and every individual is controlled with the help of management accounting.

5. **Reporting:**
   Management accounting keeps the management fully informed about the latest position of the concern through reporting. It helps management to take proper and quick decisions. The performance of various departments is regularly reported to the top management.

6. **Facilitates Organizing:**
   "Return on Capital Employed" is one of the tools of management accounting. Since management accounting stresses more on Responsibility Centres with a view to control costs and responsibilities, it also facilitates decentralization to a greater extent. Thus, it is helpful in setting up effective and efficiently organization framework.

7. **Facilitates Coordination of Operations:**
   Management accounting provides tools for overall control and coordination of business operations. Budgets are important means of coordination.

8. **Motivating employees.**
   Management accounting helps the management in selecting best alternatives of doing the things; targets are laid down for the employees. They feel motivated in achieving their targets and further incentives may be given for improving their performance.

9. **Helpful in tax administration:**
   The complexities of tax system are increasing every day. Management accounting helps in assessing various tax liabilities and depositing correct amount of taxes with the concerned authorities. Various tax returns are to be

filed under different tax laws. Tax administration is carried on with the advice and guidance of the management accountant.

NATURE OF MANAGEMENT ACCOUNTING:

Management accounting involves furnishing of accounting data to the management for basing its decisions. It helps in improving efficiency and achieving the organizational goals. The following paragraphs discuss about the nature of management accounting.

1. **Provides accounting information:**
   Management accounting is based on accounting information. Management accounting is a service function and it provides necessary information to different levels of management. Management accounting involves the presentation of information in a way it suits managerial needs. The accounting data collected by accounting department is used for reviewing various policy decisions.

2. **Cause and effect analysis.**
   The role of financial accounting is limited to find out the ultimate result, i.e., profit and loss; management accounting goes a step further. Management accounting discusses the cause and effect relationship. The reasons for the loss are probed and the factors directly influencing the profitability are also studied. Profits are compared to sales, different expenditures, current assets, interest payables, share capital, etc.

3. **Use of special techniques and concepts.**
   Management accounting uses special techniques and concepts according to necessity to make accounting data more useful. The techniques usually used include financial planning and analyses, standard costing, budgetary control, marginal costing, project appraisal, control accounting, etc.

4. **Taking important decisions.**
   It supplies necessary information to the management which may be useful for its decisions. The historical data is studied to see its possible

impact on future decisions. The implications of various decisions are also taken into account.

5. **Achieving of objectives.**
   Management accounting uses the accounting information in such a way that it helps in formatting plans and setting up objectives. Comparing actual performance with targeted figures will give an idea to the management about the performance of various departments. When there are deviations, corrective measures can be taken at once with the help of budgetary control and standard costing.

6. **No fixed norms.**
   No specific rules are followed in management accounting as that of financial accounting. Though the tools are the same, their use differs from concern to concern. The deriving of conclusions also depends upon the intelligence of the management accountant. The presentation will be in the way which suits the concern most.

7. **Increase in efficiency.**
   The purpose of using accounting information is to increase efficiency of the concern. The performance appraisal will enable the management to pin-point efficient and inefficient spots. Effort is made to take corrective measures so that efficiency is improved. The constant review will make the staff cost – conscious.

8. **Supplies information and not decision.**
   Management accountant is only to guide and not to supply decisions. The data is to be used by the management for taking various decisions. „How the data to be utilized‟ is will depend upon the caliber and efficiency of the management.

9. **Concerned with forecasting.**
   The management accounting is concerned with the future. It helps the management in planning and forecasting. The historical information is

used to plan future course of action. The information is supplied with the object to guide management for taking future decisions.

SCOPE OF MANAGEMENT ACCOUNTING:

Management accounting is a new approach to accounting. It provides techniques for the interpretation of accounting data. It also helps in developing realistic approach to future course of action. The main aim is to help management in its functions of planning, directing and controlling. Management accounting is related to a number of fields. At the Seventh International Conference of Accountants held in Amsterdam in 1957, the main emphasis was on Cost Accounting, Budgetary Control, Materials Control, Interim Reporting, Determination of the most efficient and economical accounting system, Special cost and economic studies and assisting management in interpreting financial data. The following facts of management accounting are of a great significance and form the scope of this subject.

1. **Financial Accounting.**

   Financial accounting deals with the historical data. The recorded facts about an organization are useful for planning the future course of action. Though planning is always for the future but still it has to be based on past and present data. The control aspect too is based on financial data. The performance appraisal is based on recorded facts and figures. So management accounting is closely related to financial accounting.

2. **Cost Accounting.**

   Cost accounting provides various techniques for determining cost of manufacturing products or cost of providing service. It uses financial data for finding out cost of various jobs, products or processes. The systems of standard costing, marginal costing, differential costing and opportunity costing are all helpful to the management for planning various business activities. Cost accounting also helps in finding out economical and none—economical fields of production. The efficiency of different departments is judged by setting up standards

and finding out variances. So cost accounting is an essential part of management accounting.

3. **Financial Management.**
Financial management is concerned with the planning and controlling of the financial resources of the firm. It deals with rising of funds and their effective utilization. Its main aim is to use business funds in such a way that earnings are maximized. Finance has become so much important for every business undertaking that all managerial activities are connected with it. Financial viability of various propositions influences decisions on them. Although. Financial management has emerged as a separate subject management accounting includes and extends to the operation of financial management also.

4. **Budgeting and Forecasting.**
Budgeting means expressing the plans, policies and goals of the enterprise for a definite period in future. The targets are set for different departments and responsibility is fixed for achieving these targets. The comparison of actual performance with budgeted figures will give an idea to the management about the performance of different departments.

   Forecasting, on the other hand, is a prediction of what will happen as a result of a given set of circumstances. Forecasting is a judgment whereas budgeting is an organizational object. Both budgeting and forecasting are useful for management accountant in planning various activities.

5. **Inventory Control.**
Inventory is used to denote stock of raw materials, goods in the process of manufacture and finished products. Inventory has a special significance in accounting for determining correct income for a given period. Inventory control is significant as it involves large sums. The management should determine different levels of stocks, i.e., minimum level, maximum level, re—ordering level for inventory

control. The control of inventory will help in controlling costs of products. Management will need effective inventory control for controlling stocks. Management accountant will guide management as to when and from where to purchase and how much to purchase. So the study of inventory control will be helpful for taking managerial decisions.

6. **Reporting to Management.**

   One of the functions of management accountant is to keep the management informed of various activities of the concern so as to assist it in controlling the enterprise. The reports are presented in the form of graphs, diagrams, index numbers or other statistical techniques so as to make them easily understandable. The management accountant sends interim reports to the management and these reports may be monthly, quarterly, half—yearly. The reports may cover profit and loss statement, cash and fund flow statements, stock reports, absentee reports aid reports on orders in hand, etc. These reports are helpful in giving a constant review of the working of the business.

7. **Interpretation of Data.**

   The management accountant interprets various financial statements to the management. These statements give an idea about the financial and earning position of the concern. These statements may be studied in comparison to statements of earlier periods or in comparison with the statements of similar other concerns. The significance of these reports is explained to the management in a simple language. If the statements are not properly interpreted then wrong conclusions may be drawn. So interpretation is as important as compiling of financial statements.

8. **Control procedures and Methods.**

   Control procedures and methods are needed to use various factors of production in a most economical way. The studies about cost,

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relationship of cost and profits are useful for using economic resources efficiently and economically

9. **Internal Audit**

Internal audit system is necessary to judge the performance of every department- The actual performance of every department and individual is compared with the pre—determined standards. Management is able to know deviations in performance. Internal audit helps management in fixing responsibility of different individuals.

10. **Tax Accounting.**

In the present complex tax systems, tax planning is an important part of management accounting. Income statements are prepared and tax liabilities are calculated. The management is informed about the tax burden from central government, state government and local authorities. Various tax returns are to be filed with different departments and tax payments are to be made in time. Tax accountant comes under the purview of management accountants duties.

11. **Office Services.**

Management accountant may be required to control an office. He be expected to deal with data processing, filing, copying, duplicating, communicating, etc. He also be reporting about the utility of different office machines

RELATIONSHIP OF MANAGEMENT ACCOUNTING WITH FINANCIAL ACCOUNTING

Financial accounting and management accounting are the ty,'0 branches of the accounting information system of business enterprises. Financial accounting is concerned with the recording of day-to-day transactions of the business. These transactions are classified according to their nature. These transactions enable

the concern to find out profit and loss for a particular period and financial position of the concern is also judged on a particular date through profit and loss account and balance sheet respectively. On the other hand, management accounting uses financial accounts and taps other sources of information too. The accounts are used in such a way that they are helpful to the management in planning and forecasting various policies. Thus, financial accounting has a significant influence on management accounting. Further the principles of financial accounting are equally useful in management accounting also. It should also be noted that management accounting is only an off-shoot of financial accounting. Both financial and management accounting are complementary and are necessary in running the concern efficiently. Despite the close relationship, there are certain points of distinction between financial accounting and management accounting. The main points of distinction between financial and management accounting are discussed as below:

1. Object. The object of financial accounting is to record various transactions with the purpose of maintaining accounts and to know the financial position and to find out profit loss at the end of the financial year. These records are useful to shareholders, creditors, bankers, debenture holders, etc. On the other hand, management accounting is essential to help management in formulating policies and plans.

2. **Nature.** Financial accounting is mainly concerned with the historical data. It records only those transactions which have already taken place. Management accounting deals with projection of data for the future. It uses historical data only for taking decisions for the future. In financial accounting actual figures

are used whereas in management accounting projected or estimated figures are used.

3. **Subject-matter**. Financial accounting is concerned with assessing the results of the whole business while management accounting deals separately with different units, Departments and cost centers. In financial accounting overall performance is judged, while in management accounting the results of different departments are evaluated separately to find out their performance differently. Financial accounts are concerned with details whereas management accounting is concerned in analyzing data from different angles,

4**. Compulsion**. The preparation of financial accounts is compulsory in certain undertakings white these are a necessity in others. Management accounting is not compulsory. It is only a service function and is helpful to the management in administration of the business. The management is free to use or not to use management accounting. Under certain laws a particular procedure is to be followed for preparing financial accounts whereas there are no such procedures in management accounting. It is the suitability of the management which is important while using management accounting.

5. **Precision.** In management accounting no emphasis is given to actual figures. The approximate figures are considered more useful than the exact figures. In financial accounting only actual figures are recorded and there is no room for using approximate figures. The transactions are recorded only when they have taken place so exact figures are used.

6. **Reporting**. Financial accounts are prepared to find out profitability and financial position of the concern. These reports are useful for outsiders like

bankers, investors, shareholders, Government agencies, etc. These reports are prepared not only for the benefit of the concern but also for outsiders. Management accounting reports are meant for internal use only. These are prepared for the benefit of different levels of management. Financial reports such as profit and loss account and balance sheet are prepared for a specific period and on a particular date. On the other hand, there is no such binding for preparing management accounting reports. The main idea for preparing these reports is to enable the management to have a view about the position of the concern and no consideration is given to the period. Management accounting reports are rather future projections of figures.

7**. Description.** Only those things are recorded in financial accounting which can be measured in monetary terms. Anything which cannot be recorded in figures is outside the scope of financial accounting. Management Accounting uses both monetary and none—monetary events. The competition in the market, impact of political changes, a situation of trade cycles and such other factors are also considered in management accounting, though these cannot be measured in monetary' terms.

8. **Quickness.** Reporting of management accounting is very quick. Management is fed with reports at regular intervals. Various figures are required to take managerial decisions at different levels of management. On the other hand, reporting of financial accounting is slow and time consuming. Profit and loss account and balance sheet are prepared at the end of the financial year. Management is able to know the profitability and financial position only after the preparation of final accounts.

9. **Accounting Principles.** Financial accounts are governed by the generally accepted principles and conventions. No set principles are followed' in management accounting. Management accounting is used for taking policy decisions, so, form and method of presenting figures differs from concern to concern. The requirement and expediency of the situation determines the mode of information to be presented.

10. **Period.** Financial accounts are prepared for a particular period. Profit and Loss Account is generally prepared for one year. All the items relating to that year are taken to P/L Account. Balance Sheet is prepared on a particular date. It reveals the financial position of the concern on that date. Management accountant supplies information from time to time during the whole year. There are no specific periods for which management accounts are prepared.

11. **Publication.** Financial accounts like profit and loss account and balance sheet are published for the of the Under companies law every registered company is supposed to supply a copy of Profit Less Ed Balance Sheet to the Registrar of Companies at the end of the financial year. Management statements prepared for the benefit of the management only and these are not published.

12. **Audit.** Financial accounts can be got audited. Under Company Law, auditing of financial accounts is Management accounts cannot be audited. They are not based on actual figures and projected are also used in management accounting. So, it is not possible to get management accounts audited.

It is clear from the earlier discussion that financial accounts are based on historical data and only actual facts and figures are recorded. Management accounting too uses historical data but the purpose is to use it for planning and

forecasting. Both financial and management accounting are complementary and are necessary in running the concern efficiently

RATIO ANALYSIS

MEANING OF RATIO ANALYSIS:

Ratio analysis is a technique of analysis and interpretation of financial statements. It is the process of establishing and interpreting various ratios for helping in making certain decisions. However, ratio analysis is not an end in itself. It is only a means of better understanding of financial strengths and weaknesses of a firm.

Calculation of mere ratios does not serve any purpose, unless several appropriate ratios are analyzed and interpreted. There are a number of ratios which can be calculated from the information given in the financial statements, but the analyst has to select the appropriate data and calculate only a few appropriate ratios from the same keeping in mind the objective of analysis. **The ratios may be used as a symptom like blood pressure, the pulse rate or the body temperature and their interpretation depends upon the caliber and competence of the analyst.**

The following are the four steps involved in the ratio analysis:

(i) Selection of relevant data from the financial statements depending upon the objective of the analysis.

(ii) Calculation of appropriate ratios from the above data.

(iii) Comparison of the calculated ratios with the ratios of the same firm in the past, or the ratios developed from projected financial statements or the ratios of some other firms or the comparison with ratios of the industry to which the firm belongs.

(iv) Interpretation of the ratios.

Uses of Ratio Analysis:

The ratio analysis is one of the most powerful tools of financial analysis. It is used as a device to analyze and interpret the financial health of enterprise.

For example:

Just like a doctor examines his patient by recording his body temperature, blood pressure, etc. before making his conclusion regarding the illness and before giving his treatment, a financial analyst analyses the financial statements with various tools of analysis before commenting upon the financial health or weaknesses of an enterprise.

'A ratio is known as a symptom like blood pressure, the pulse rate or the temperature of an individual.' It is with help of ratios that the financial statements can be analyzed more clearly and decisions made from such analysis. The use of ratios is not confined to financial managers only. There are different parties interested in the ratio analysis for knowing the financial position of a firm for different purposes.

The supplier of goods on credit, banks, financial institutions, investors, shareholders and management all make use of ratio analysis as a tool in evaluating the financial position and performance of a firm for granting credit, providing loans or making investments in the firm. With the use of ratio analysis one can

measure the financial condition of a firm and can point out whether the condition is strong, good, questionable or poor. The conclusions can also be drawn as to whether the performance of the firm is improving or deteriorating.

Thus, ratios have wide applications and are of immense use today:

(a) Managerial Uses of Ratio Analysis:

1. Helps in decision-making:

Financial statements are prepared primarily for decision-making. But the information provided in financial statements is not an end in itself and no meaningful conclusion can be drawn from these statements alone. Ratio analysis helps in making decisions from the information provided in these financial statements.

2. Helps in financial forecasting and planning:

Ratio Analysis is of much help in financial forecasting and planning. Planning is looking ahead and the ratios calculated for a number of years work as a guide for the future. Meaningful conclusions can be drawn for future from these ratios. Thus, ratio analysis helps in forecasting and planning.

3. Helps in communicating:

The financial strength and weakness of a firm are communicated in a more easy and understandable manner by the use of ratios. The information contained in the financial statements is conveyed in a meaningful manner to the one for whom it is meant. Thus, ratios help in communication and enhance the value of the financial statements.

4. Helps in co-ordination:

Ratios even help in co-ordination which is of utmost importance in effective business management. Better communication of efficiency and weakness of an enterprise results in better coordination in the enterprise.

5. Helps in Control:

Ratio analysis even helps in making effective control of the business. Standard ratios can be based upon perform financial statements and variances or deviations, if any, can be found by comparing the actual with the standards so as to take a corrective action at the right time. The weaknesses or otherwise, if any, come to the knowledge of the management which helps in effective control of the business.

6. Other Uses:

These are so many other uses of the ratio analysis. It is an essential part of the budgetary control and standard costing. Ratios are of immense importance in the analysis and interpretation of financial statements as they bring the strength or weakness of a firm.

(b) Utility to Shareholders/Investors:

An investor in the company will like to assess the financial position of the concern where he is going to invest. His first interest will be the security of his investment and then a return in the form of dividend or interest. For the first purpose he will try to assess the value of fixed assets and the loans raised against them. The investor will feel satisfied only if the concern has sufficient amount of assets.

Long-term solvency ratios will help him in assessing financial position of the concern. Profitability ratios, on the other hand, will be useful to determine profitability position. Ratio analysis will be useful to the investor in making up his

mind whether present financial position of the concern warrants further investment or not.

(c) Utility to Creditors:

The creditors or suppliers extend short-term credit to the concern. They are interested to know whether financial position of the concern warrants their payments at a specified time or not. The concern pays short- term creditor, out of its current assets. If the current assets are quite sufficient to meet current liabilities then the creditor will not hesitate in extending credit facilities. Current and acid-test ratios will give an idea about the current financial position of the concern.

(d) Utility to Employees:

The employees are also interested in the financial position of the concern especially profitability. Their wage increases and amount of fringe benefits are related to the volume of profits earned by the concern. The employees make use of information available in financial statements. Various profitability ratios relating to gross profit, operating profit, net profit, etc. enable employees to put forward their viewpoint for the increase of wages and other benefits.

(e) Utility to Government:

Government is interested to know the overall strength of the industry. Various financial statements published by industrial units are used to calculate ratios for determining short-term, long-term and overall financial position of the concerns. Profitability indexes can also be prepared with the help of ratios. Government may base its future policies on the basis of industrial information available from various units. The ratios may be used as indicators of overall financial strength of public as well as private sector, in the absence of the reliable economic information, governmental plans and policies may not prove successful.

(f) Tax Audit Requirements:

Section 44 AB was inserted in the Income Tax Act by the Finance Act, 1984. Under this section every assesee engaged in any business and having turnover or gross receipts exceeding Rs. 40 lakh is required to get the accounts audited by a chartered accountant and submit the tax audit report before the due date for filing the return of income under Section 139 (1). In case of a professional, a similar report is required if the gross receipts exceed Rs 10 lakh.

Ratio Analysis

Profitability Ratios

Introduction: Profitability Ratios

The capacity of a business concern to earn profit can be termed as profitability. Thus, profit earning can be ascertained on the basis of the volume of profit margin of any activity and is calculated by subtracting costs from the total Revenue accruing to a firm during a particular period. The overall efficiency or performance of a business can be ascertained with the help of profitability ratios. Generally, a large number of ratios can also be put to implementation for determination of the profitability, as the same is in consonance with the sales or investments.

The important profitability ratios are discussed below:

- Gross Profit Ratio
- Operating Ratio
- Operating Profit Ratio
- Net Profit Ratio
- Return on Investment Ratio
- Return on Capital Employed Ratio
- Earnings Per Share Ratio
- Dividend Payout Ratio
- Dividend Yield Ratio
- Price Earnings Ratio
- Net Profit to Net worth Ratio

1. Gross Profit Ratio

Gross Profit Ratio is the formative component in relationship between gross profit and net sales. Higher Gross Profit Ratio is a precursor to the business concern that the firm has higher profitability. It is also reflective of the standard of performance of firm's business apropos to its effectiveness.

Advantages

- The relationship between gross profit and net sales is adequately ascertained by it
- It reflects the efficiency and productivity of a firm
- This ratio highlights to the management, that a low gross profit ratio can be a precursor to the adverse purchasing and mark-up policies
- A low gross profit ratio also underlines the incapacitated state of the management to increase sales

2. Operating Ratio:

Operating Ratio measures the relationship between total operating expenses and sales. The total operating expenses is the sum total of cost of goods sold, office and administrative expenses and selling and distribution expenses. This ratio equips the firm with the ability to cover total operating expenses.

3. Operating Profit Ratio:

It indicates the operational efficiency of the firm and is a measure of the firm's ability to cover the total operating expenses.

4. Net Profit Ratio

This ratio tells us the overall efficiency in operating the business. It is used to measure the relationship between net profit and sales. It includes non-operating incomes and profits.

Advantages

- This is the best yardstick to gauge profitability and liquidity
- It aids in evaluation of overall operational efficiency of the business concern
- It facilitates better decision making ability
- It leverages the process of determination of the managerial efficiency to utilize a firm's resources to generate income on its invested capital

- Net profit Ratio is an indispensable tool of investment evaluation

5. Return on Investment Ratio

This ratio measures a return on owner's or shareholders' investment. It establishes the relationship between net profit after interest and taxes and the owner investment.

Advantages

- This ratio indicates the owner's viewpoint pertaining to the success of the business
- It aids in measuring an income on the shareholders' or proprietor's investments
- This ratio equips the management with the important decisions making with respect to the business concern
- It facilitates in efficient handling of owner's investment

6. Return on Capital Employed Ratio

It measures the relationship between profit and capital employed. Return means profits or net profits. Capital employed means total investment made in the business.

7. Earning Per Ratio

It measures the earning capacity of the firm from the owners view and helps in determining the price of the equity share in the market.

Advantages

- It measures the price of shares in the market
- It measures the capacity of the firm to pay dividend to its shareholders
- It is used as yardstick to measure the overall performance of the concern

8. Dividend Payout Ratio

It is the relationship between payment of dividend on equity share capital and the profits available after meeting tax and preference dividend. Indication of the dividend policy, as incorporated by the top management is underlined by this ratio.

It highlights the utilization of divisible profit to pay dividend or pertaining to the retention of both.

9. Dividend Yield Ratio

It is the relationship is established between dividend per share and market value per share. This ratio is a major factor that determines the dividend income from the investor point of view.

10. Price Earnings Ratio:

It highlights the earning per share reflected by market share. It establishes the relationship between the market price of an equity share and the earning per equity share. It helps to find out whether the equity shares of a company are undervalued or not. It is also useful in financial forecasting.

11. Net Profit to Net worth Ratio:

It measures the profit return on investment. It indicates the established relationship between net profit and Shareholders net worth.

Advantages

- It determines the incentive to owners.
- It measures the profit as well as net worth.
- It indicates the overall performance & effectiveness of the firm.

Profitability is the very essence of any business. What a pulse to a human being, Profitability is to a business. It is the first vital sign of a business. Hence, Profitability ratios form an important part of financial analysis Of Any firm.

LIQUIDITY RATIOS

The scope to which there is quick convertibility of assets in to money, for the purpose of paying obligation of short-term nature can be termed as liquidity. Apropos to obtaining an indication of a firm’s ability to meet its current liabilities, the utility of the liquidity ratios is instrumental. As a flipside, however, it does not bring to the light, the effectiveness of the optimal management of cash resources. It is also termed as **Short-Term Solvency Ratios**. To measure the liquidity of a firm, the following Liquidity ratios are commonly used:

1) Current Ratio:

The relationship between current assets and current liabilities is established by Current Ratios. . It attempts to measure the ability of a firm to meet its current obligations. Current assets and current liabilities comprise of two pivotal components of this ratio. Assets that can be easily converted into cash, within the time frame of less than a year, can be termed as current assets. While, conversely, current liabilities encompass those liabilities which can be paid off with in a year.

The ideal current ratio is **2: 1**. It is a stark indication of the financial soundness of a business concern. When Current assets double the current liabilities, it is considered to be satisfactory. Higher value of current ratio indicates more liquid of the firm's ability to pay its current obligation in time.

Advantages of Current Ratio:

- It measures the liquidity of the firm
- It represents the working capital position of a firm
- It represents the liquidity of a company
- It represents margin of safety
- Its tells us the short term solvency of a firm.

Disadvantages of Current Ratio:

- Its accuracy can be deterred as, pertaining to different businesses, depending on a variant of factors
- Over-valuation of stock also contributes to its tipping accuracy
- It measures the firm liquidity on the basis of quantity and not quality, which comes across as a crude method.

2) Quick Ratio or Acid Test Ratio:

The acid test ratio is a stringent and meticulous test of a firm's ability to pay its short-term obligations 'as and when they are due. Quick assets and current liabilities can be associated with the help of Quick Ratio.

The ideal Quick Ratio is **1: 1** and is considered to be appropriate. High Acid Test Ratio is an accurate indication that the firm has relatively better financial position and adequacy to meet its current obligation in time.

Advantages of Quick Ratio:

- It tells us the liquidity position of a firm
- It is used to remove the errors of current ratio
- It is used as supplementary to the current ratio.

3. Absolute Liquid Ratio:

The relationship between the absolute liquid assets and current liabilities is established by this ratio. Absolute Liquid Assets take into account cash in hand, cash at bank, and marketable securities or temporary investments. The most favorable and optimum value for this ratio should be **1: 2**. It indicates the adequacy of the 50% worth absolute liquid assets to pay the 100% worth current liabilities in time. If the ratio is relatively lower than one, it represents the company's day-to-day cash management in a poor light. If the ratio is considerably more than one, the absolute liquid ratio represents enough funds in the form of cash in order to meet its short-term obligations in time.

So that were the 3 important Liquidity ratios that one must know in order to find out the short term solvency position of a company.

Solvency Ratios

A company usually does not only run on owner's fund. Most companies have a debt factor, whether it is loans, deposits, debentures etc. So a check has to be kept on the cost of such debt and whether the company is capable of meeting such costs. This is where solvency ratios are useful.

Solvency Ratios

Solvency ratios also known as leverage ratios determine an entity's ability to service its debt. So these ratios calculate if the company can meet its long-term debt. It is important since the investors would like to know about the solvency of the firm to meet their interest payments and to ensure that their investments are safe. Hence solvency ratios compare the levels of debt with equity, fixed assets, earnings of the company etc.

One thing to make note of is the difference between solvency ratios and liquidity ratios. These two are often confused for the other. Liquidity ratios compare current assets with current liabilities, i.e. short-term debt. Whereas solvency ratios analyze the ability to pay long-term debt. Here we will be looking at the four most important solvency ratios. Let us start.

1. Debt to Equity Ratio

The debt to equity ratio measures the relationship between long-term debt of a firm and its total equity. Since both these figures are obtained from the balance sheet itself, this is a balance sheet ratio. Let us take a look at the formula.

Debt to Equity Ratio = Long-Term Debt /Shareholders Funds

Long Term Debt = Debentures + Long Term Loans

Shareholders' Funds = Equity Share Capital + Preference Share Capital + Reserves – Fictitious Assets

The debt-equity ratio holds a lot of significance. Firstly it is a great way for the company to measure its leverage or indebtedness. A low ratio means the firm is more financially secure, but it also means that the equity is diluted.

In contrast, a high ratio indicates a risky business where there are more creditors of the firm than there are investors. In fact, a high debt to equity ratio may deter more investors from investing in the firm, and even deter creditors from lending money.

While there is no industry standard as such it is best to keep this ratio as low as possible. The maximum a company should maintain is the ratio of 2:1, i.e. twice the amount of debt to equity.

2] Debt Ratio

Next, we learn about debt ratio. This ratio measures the long-term debt of a firm in comparison to its total capital employed. Alternatively, instead of capital employed, we can use net fixed assets. So the debt ratio will measure the liabilities (long-term) of a firm as a percent of its long-term assets. The formula is as follows,

Debt Ratio = Long-Term Debt/Capital employed

Capital Employed = Long Term Debt + Shareholders Funds

Capital employed =Net Assets- Non-Fictitious Assets – Current Liabilities

This is one of the more important solvency ratios. It indicates the financial leverage of the firm. A low ratio points to a more financially stable business, better for the creditors. A higher ratio points to doubts about the firm's long-term financial stability. But a higher ratio helps the management with trading on equity, i.e. earn more income for the shareholders. Again there is no industry standard for this ratio.

3] Proprietary Ratio

The third of the solvency ratios is the proprietary ratio or equity ratio. It expresses the relationship between the proprietor's funds, i.e. the funds of all the shareholders and the capital employed or the net assets. Like the debt ratio shows us the comparison between debt and capital, this ratio shows the comparison between owners funds and total capital or net assets. The ratio is as follows,

Proprietary Ratio = Shareholders Funds/Net Assets

A high ratio is a good indication of the financial health of the firm. It means that a larger portion of the total capital comes from equity. Or that a larger portion of net assets is financed by equity rather than debt. One point to note, that when both ratios are calculated with the same denominator, the sum of debt ratio and the proprietary ratio will be 1.

4] Interest Coverage Ratio

All debt has a cost, which we normally term as an interest. Debentures, loans, deposits etc all have an interest cost. This ratio will measure the security of this interest payable on long-term debt. It is the ratio between the profits of a firm available and the interest payable on debt instruments. The formula is,

Interest Coverage Ratio = Net Profit before Interest and Tax /Interest on Long-Term Debt

Leverage Ratio

This ratio focus on the long-term solvency of the company with regards to how much capital comes in the form of debt or assessing the ability of the company to meet its financial obligation. We can also say that this ratio measures long-term stability and structure of the firm.

2. Importance of Leverage Ratio

This ratio helps the company to determine how much amount they can borrow so as to increase the profitability of the company. This ratio also helps in determining the quantum of debt that can be borrowed.

3. Types of Leverage Ratio

A. Capital Structure Ratio

I. EQUITY RATIO

II. DEBT RATIO

III. DEBT TO EQUITY RATIO

B. Coverage Ratio

I. DEBT SERVICE COVERAGE RATIO

II. INTEREST COVERAGE RATIO

III. CAPITAL GEARING RATIO

A. Capital Structure Ratio

This ratio provides details about which type of financing to be used so as to focus on long-term solvency position of the company

I. EQUITY RATIO

This ratio indicates total owner contribution in the company.

Formula: Shareholder Equity/ Total Capital Employed

Shareholders Equity = Equity share capital + Reserve and Surplus

Total Capital Employed = Shareholders Equity + Debentures + Long-Term Loan

II. DEBT RATIO

This ratio indicates total leverage used in the company.

Formula: Total Debt/ Total Capital Employed

Total Debt= Short Term and Long Term Borrowings, Debentures and Bonds

III. DEBT TO EQUITY RATIO

This ratio indicates total debt used in the business in comparison to equity. A higher ratio represents insecurity to the creditors and other lenders and the low ratio represents more safety or cushion to lenders.

Formula: Total Debt/ Shareholders Fund

B. Coverage Ratio

This ratio is used to check how much margin is available after paying off the obligation which arises in the course of leveraging the business.

I. DEBT SERVICE COVERAGE RATIO

At the time of leveraging, lenders/banks use this ratio to know whether the company will be able to pay their dues in due course or not. Generally, 1.5 to 2 is treated as an ideal ratio.

Formula: Earning Available for debt service/ Interest + Installments of debt

Earnings Available for debt service = Net Profit after Tax +Non Cash Expenditure + Interest + other Abnormal Adjustment

II. INTEREST COVERAGE RATIO

This ratio is used by the lenders to check whether the company will be able to pay off interest due on the installment on time or not. This ratio also indicates the extent to which fall in earning won't impact the payment of interest.

A high ratio means the company can easily meet its interest obligation. A low ratio indicates inefficient operation.

Formula: EBIT/Interest

Where, EBIT= Earnings before Income And Taxes

III. CAPITAL GEARING RATIO

This is an important tool used to check the capital structure of the company. This ratio describes the relationship between the owner's capital and the amount borrowed by the company on which periodic payment is made.

Formula: (Preference share capital + debentures + Long term loan) / (Equity share capital + Reserve and surplus)

Example:

Particulars	Amount
Shareholder Equity	19802
Total Assets	30011
Total Capital Employed	21976
Total Debt	2174
Earnings Available for debt service	4932
Installment amount	364
EBIT	4932
Interest	25
Preference Share Capital + Debenture + Long	1321

Term Loan	
Equity share capital + Reserve and Surplus	491

Equity ratio = Shareholder Equity/ Total Capital Employed

= 19802/21976

= 0.90:1

Debt ratio = Total Debt/ Total Capital Employed

= 2174/21976

= 0.10:1

Debt to equity ratio = Total Debt/ Shareholders fund

= 2174/19802

= 0.11:1

Debt Service coverage ratio = Earnings Available for debt service/ (Interest + Installments of debt)

= 4932/364

= 13.55

Interest Coverage ratio = EBIT/Interest

= 4932/25

= 197.28

Capital Gearing Ratio = (Preference share capital + debentures + Long term loan) / (Equity share capital + Reserve and surplus)

= (1321+491)/ 19802

 © S B S Propriety

= 0.09

Q: Calculate Liquid Ratio from the given details.

Current Liabilities	65,000
Current Assets	85,000
Stock	20,000
Advance Tax	5,000
Prepaid Expense	10,000

Solution:

Quick Ratio = Quick Assets/Current Liabilities

Quick Assets = All Current Assets – Stock – Prepaid Expenses = 85000 – (20000+5000+10000) = 50,000

Quick Liabilities = All Current Liabilities – Bank Overdraft – Cash Credit = 65,000

Quick Ratio = 50000/65000= 0.77:1

Cost Behavior

Cost Behavior

Cost behavior is an indicator of how a cost will change in total when there is a change in some activity. In cost accounting and managerial accounting, three types of cost behavior are usually discussed:

- **Variable costs**. The total amount of a variable cost increases in proportion to the increase in an activity. The total amount of a variable cost will also decrease in proportion to the decrease in an activity.
- **Fixed costs**. The total amount of a fixed cost will not change when an activity increases or decreases.
- **Mixed or semi variable costs**. These costs are partially fixed and partially variable.

Examples of Cost Behavior

An example of a **variable cost** ***is the cost of flour for a bakery that produces artisan breads. The greater the number of loaves produced, the greater the total cost of the flour used by the bakery.***

An example of a **fixed cost** ***is the depreciation and insurance on the bakery facility and equipment. Regardless of the quantity of artisan breads produced in a month, the total amount of depreciation and insurance cost for the month will remain the same***.

An example of a **mixed cost** ***or semi variable cost is the bakery's cost of natural gas. Some of the monthly gas bill is a flat fee charged by the utility and some of the gas bill is the cost of heating the building. These two components of the gas bill are fixed since they will not change when the bakery produces more or less loaves of its bread. However, a third component of the gas bill is the cost of operating the ovens. This component is a variable cost since it will increase when the ovens must operate for a longer time in order to produce additional loaves of bread.***

CVP Analysis

Cost-Volume-Profit Analysis (CVP analysis), also commonly referred to as Break-Even Analysis, is a way for companies to determine how changes in costs (both variable and fixed) and sales volume affect a company's profit. With this information, companies can better understand overall performance by looking at how many units must be sold to break even or to reach a certain profit threshold or the margin of safety.

Components of CVP Analysis

There are several different components that together make up CVP analysis.

The main components of CVP analysis are:

1. CM ratio and variable expense ratio
2. Break-even point (in units or dollars)
3. Margin of safety
4. Changes in net income
5. Degree of operating leverage

In order to properly implement CVP analysis, we must first take a look at the contribution margin format of the income statement.

CVP Analysis Setup

The regular income statement follows the order of revenues minus cost of goods sold and gives gross margin, while revenues minus expenses lead to net income. A contribution margin income statement follows a similar concept but uses a different format by separating fixed and variable costs.

The contribution margin is the product's selling price, less the variable costs associated with producing that product. The value can be given in total dollars or per unit.

Contribution Margin (CM) Income Statement Example:

Consider the following example in order to calculate the five important components listed above.

XYZ Company has the following contribution margin income statement:

	Total	Per Unit
Sales (20,000 units)	1,200,000	60
Less: Variable costs	900,000	45
Contribution Margin	300,000	15
Less: Fixed costs	240,000	
Net income	60,000	

1.CM Ratio and Variable Expense Ratio

CM ratios and variable expense ratios are numbers that companies generally want to see to get an idea of how significant variable costs are.

CM Ratio = Contribution Margin / Sales

Variable Expense Ratio = Total Variable Costs / Sales

A high CM ratio and a low variable expense ratio indicate low levels of variable costs incurred.

2 Break-Even Point

The break-even point (BEP), in units, is the number of products the company must sell to cover all production costs. Similarly, the break-even point in dollars is the amount of sales the company must generate to cover all production costs (variable and fixed costs).

The formula for break-even point (BEP) is:

BEP =Total Fixed Costs / CM per Unit

The BEP, in units, would be equal to 240,000/15 = 16,000 units. Therefore, if the company sells 16,000 units, the profit will be zero and the company will "break even" and only cover its production costs.

3 Changes in Net Income (What-if Analysis)

It is quite common for companies to want to estimate how their net income will change with changes in sales behavior. For example, companies can use sales performance targets or net income targets to determine their effect on each other.

In this example, if management wants to earn a profit of at least $100,000, how many units must the company sell?

We can apply the appropriate what-if formula below:

No. of units = (Fixed Costs + Target Profit) / CM Ratio

Therefore, to earn at least $100,000 in net income, the company must sell at least 22,666 units.

4 Margin of Safety

In addition, companies may also want to calculate the margin of safety. This is commonly referred to as the company's "wiggle room" and shows by how much sales can drop and yet still break even.

The formula for the margin of safety is:

Margin of Safety = Actual Sales – Break-even Sales

The margin of safety in this example is:

Actual Sales – Break-even Sales = $1,200,000 – 16,000*$60 = $240,000

This margin can also be calculated as a percentage in relation to actual sales: 240,000/1,200,000 = 20%.

Therefore, sales can drop by $240,000, or 20%, and the company is still not losing any money.

5 Degree of Operating Leverage (DOL)

Finally, the degree of operating leverage (DOL) can be calculated using the following formula:

DOL = CM / Net Income

So, the DOL in this example is $300,000 / 60,000 = 5.

The DOL number is an important number because it tells companies how net income changes in relation to changes in sales numbers. More specifically, the number 5 means that a 1% change in sales will cause a magnified 5% change in net income.

Many might think that the higher the DOL, the better for companies. However, the higher the number, the higher the risk, because a higher DOL also means that a 1% decrease in sales will cause a magnified, larger decrease in net income, ultimately decreasing its profitability.

CVP Analysis and Decision Making

Putting all the pieces together and conducting the CVP analysis, companies can then make decisions on whether to invest in certain technologies that will alter their cost structures, and determine the effects on sales and profitability much quicker.

For example, let's say that XYZ Company from the previous example was considering investing in new equipment that would increase variable costs by $3 per unit but could decrease fixed costs by $30,000. In this decision-making scenario, companies can easily use the numbers from the CVP analysis to determine the best answer.

The hardest part in these situations involves determining how these changes will affect sales patterns – will sales remain relatively similar, will they go up, or will they go down? Once sales estimates become somewhat reasonable, it then

becomes just a matter of number crunching and optimizing the company's profitability.

Marginal Costing

Definition: Marginal Costing is a costing technique wherein the marginal cost, i.e. variable cost is charged to units of cost, while the fixed cost for the period is completely written off against the contribution.

The term **marginal cost implies the additional cost involved in producing an extra unit of output**, which can be reckoned by total variable cost assigned to one unit. It can be calculated as:

Marginal Cost = Direct Material + Direct Labor + Direct Expenses + Variable Overheads

Characteristics of Marginal Costing

- **Classification into Fixed and Variable Cost**: Costs are bifurcated, on the basis of variability into fixed cost and variable costs. In the same way, semi variable cost is separated.
- **Valuation of Stock**: While valuing the finished goods and work in progress, only variable cost is taken into account. However, the variable selling and distribution overheads are not included in the valuation of inventory.
- **Determination of Price**: The prices are determined on the basis of marginal cost and marginal contribution.
- **Profitability**: The ascertainment of departmental and product's profitability is based on the contribution margin.

In addition to the above characteristics, marginal costing system brings together the techniques of cost recording and reporting.

Facts Concerning Marginal Costing

- **Cost Ascertainment**: The basis for ascertaining cost in marginal costing is the nature of cost, which gives an idea of the cost behavior that has a great impact on the profitability of the firm.
- **Special technique**: It is not a unique method of costing, like contract costing, process costing, and batch costing. But, marginal costing is a different type of technique, used by the managers for the purpose of decision making. It provides a basis for understanding cost data so as to gauge the profitability of various products, processes and cost centers.
- **Decision Making**: It has a great role to play, in the field of decision making, as the changes in the level of activity pose a serious problem to the management of the undertaking.

Marginal Costing assists the managers in taking end number of business decisions, such as replacement of machines, discontinuing a product or service, etc. It also helps the management in ascertaining the appropriate level of activity, through break even analysis, that reflect the impact of increasing or decreasing production level, on the company’s overall profit.

Formulas used in Marginal Costing:

Sales — Variable cost + Fixed cost + Profit

Sales – Variable cost = Contribution

Sales – Variable cost = Fixed cost + Profit

Contribution = Fixed cost + Profit

Contribution – Fixed cost = Profit

Absorption Costing and Marginal Costing: Impact on Profit:

In absorption costing, stock is valued at total cost while in marginal costing stock valuation is done at variable cost only. This means that in absorption costing, stock valuation is higher than in marginal costing. When production exceeds sales, profit under absorption costing is higher than that of marginal costing. But when sales

exceed production, profit under absorption costing is lower than that of marginal costing.

Absorption costing is a principle whereby fixed, as well as, variable costs are allotted to cost units and total overheads are absorbed according to activity level. Absorption costing confirms with the accrual concept by matching costs with revenue for a particular accounting period. Stock valuation complies with the accounting standard and fixed production costs are absorbed into stocks.

Absorption costing method avoids separation of costs into fixed and variable elements, which is not easily and accurately achieved. Cost plus pricing under absorption costing ensures that all costs are covered.

Pricing at the marginal cost may, in the long-run, result in failing to cover the fixed costs. It is important to note that in absorption costing sales must be equal to or exceed the budgeted level of activity otherwise fixed costs will be under absorbed.

The absorption of production overheads under absorption costing has the following impacts:

(i) When production exceeds sales during the period, a higher profit is shown under absorption costing, since the fixed overhead is absorbed over more number of units produced, and carried to next accounting period along with closing inventory.

(ii) When sales are in excess of production, a lower profit is reported under absorption costing. Since, less portion of fixed production overhead is recovered in valuation of closing stock and current period's cost of production is higher.

The following generalizations to be made on the impact on profit of these two different methods of costing:

(a) Where sales and production levels are constant through time, profit is the same under the two methods.

(b) Where production remains constant but sales fluctuate, profit rises or falls with the level of sales, assuming that costs and prices remain constant, but the fluctuations in net profit figures are greater with marginal costing than with absorption costing.

(c) Where sales are constant but production fluctuates, marginal costing provides for constant profit, whereas under absorption costing, profit fluctuates.

(d) Where production exceeds sales, profit is higher under absorption costing than under marginal costing for the reason that absorption of fixed overheads into closing stock increases their value thereby reducing the cost of goods sold.

(e) Where sales exceed production, profit is higher under marginal costing. The fixed costs, which previously were part of stock values, are now charged against revenue under absorption costing. Therefore, under absorption costing the value of fixed costs charged against revenue is greater than that incurred for the period.

The choice between using absorption costing and marginal costing will be determined by the following factors:
(a) The system of financial control in use e.g., responsibility accounting is inconsistent with absorption costing.

(b) The production methods in use e.g., marginal costing is favored in simple processing situations in which all products receive similar attention; but when different products receive widely differing amounts of attention, the absorption costing may be more realistic.

(c) The significance of prevailing level of fixed overhead costs.

<u>Question 1.</u>
A company producing 500 units its variable cost $200 per unit and sale price 250 per unit, fixed expenses are $12,000 per month.

Required
Calculate BEP in units and <u>sales</u> and show profit at 90% capacity.
Answer
(i). BEP (units) = Fixed Expenses / C

= ($5, 42,000 + $2, 52,000) / 6

= 7, 92,000 / 6 = 1, 32,000 units

BEP (Sales) = 1, 32,000 x 20 = $26, 40,000

(ii) Sales for examining profit $60,000

BEP (units) = (Fixed Exp. + Desired Profit) / C

= (7, 92,000 + 60,000) / 6

= 8, 52,000 / 6

= 1, 42,000 units

BEP Sales = 1, 42,000 x 20 = $28, 40,000

Question 2

How would you calculate the following?

(i). PVR (ii). BEP (Sales) (iii). Margin of Safety (IV). Profit
When sales are $80,000, variable costs $4,000 and Fixed Costs $ 4,000.

Answer

(i). PVR = (C / $) x 100 = (4,000 x 100) / 8,000 = 50%

C = 8,000 – (4,000) = $4,000

(ii). BEP (Sales) = Fixed Cost / PVR

= (4,000 x 100) / 50

= $8,000

(iii). MOS = Actual Sales – BEP Sales

= 8,000 – 8,000

= Nil

Or

MOS = Profit / PVR = 0 / 8,000 = Nil

(iv). Profit = Sales – Variable Cost – Fixed Cost

= 8,000 – 4,000 – 4,000

= Nil

Question 3
From the following information find out sales at BEP and PVR

Variable cost per unit = $15
Sales per unit = $20
Fixed expenses = $54,000

What should be the new selling price if BEP unit is brought down to 6,000 units.

PVR = (C x 100) / S

Thus,

= ((20 – 15) x 100) / 20

PVR = 25%

BEP (Sales) = Fixed expenses / PVR

= (54,000 x 100) / 25

= $2, 16,000

(iii). New selling price if BEP is brought down to 6,000 units.

New SP = (Fixed Exp. + Variable Cost) / New BEP (units)

= (54,000 + 15) / 6,000

= $24

Answer
Question 4
Calculate (i). PV Ratio (ii) BEP (iii) Margin of Safety when:

Sales = $1, 00,000
Total Cost = $80,000

Fixed Cost = $20,000
Net Profit = 80,000

Answer
(i). PVR = (C x 100) / S

C = Sales – Variable Cost

1, 00,000 – 60,000 = 40,000

Variable cost = Sales – Profit – Fixed Cost

(1, 00,000 – 20,000 – 20,000) = 60,000

Thus,

PVR = (C / S) x 100

= (40,000 / 1, 00,000) x 100

= 40%

(ii). BEP = Fixed Exp. / PVR

= 20,000 / 40%

= (20,000 x 100) / 40

= $50,000

(iii). Margin of Safety = Present Sales – Break-Even Sales

= 1, 00,000 – 50,000

= 50,000

Profitability = (40 x 50,000) / 100

= $20,000

Break-Even Analysis

A break-even analysis is a financial tool which helps a company to determine the stage at which the company, or a new service or a product, will be profitable. In

other words, it is a financial calculation for determining the number of products or services a company should sell or provide to cover its costs (particularly fixed costs). Break-even is a situation where an organization is neither making money nor losing money, but all the costs have been covered.
Break-even analysis is useful in studying the relation between the variable cost, fixed cost and revenue. Generally, a company with low fixed costs will have a low break-even point of sale.

For example, say Happy Ltd has fixed costs of Rs. 10,000 vs. Sad Ltd has fixed costs of Rs. 1,00,000 selling similar products, Happy Ltd will be able to break even with the sale of lesser products as compared to Sad Ltd.

Components of Break Even Analysis

Fixed costs

Fixed costs are also called overhead costs. These overhead costs occur after the decision to start an economic activity is taken and these costs are directly related to the level of production, but not the quantity of production. Fixed costs include (but are not limited to) interest, taxes, salaries, rent, depreciation costs, labour costs, energy costs etc. These costs are fixed respective of the production. In case of no production also the costs must be incurred.

Variable costs

Variable costs are costs that will increase or decrease in direct relation to the production volume. These costs include cost of raw material, packaging cost, fuel and other costs that are directly related to the production.

Calculation of Break-Even Analysis

The basic formula for break-even analysis is derived by dividing the total fixed costs of production by the contribution per unit (price per unit less the variable costs).

For an example:

Variable costs per unit: Rs. 400 Sale price per unit: Rs. 600 Desired profits: Rs. 4,00,000 Total fixed costs: Rs. 10,00,000 First we need to calculate the break-even point per unit, so we will divide the Rs.10,00,000 of fixed costs by the Rs. 200 which is the contribution per unit (Rs. 600 – Rs. 200). Break Even Point = Rs. 10,00,000/ Rs. 200 = 5000 units Next, this number of units can be shown in rupees by multiplying the 5,000 units with the selling price of Rs. 600 per unit. We get Break Even Sales at 5000 units x Rs. 600 = Rs. 30,00,000. (Break-even point in rupees)

Contribution Margin

Break-even analysis also deals with the contribution margin of a product. The excess between the selling price and total variable costs is known as contribution margin. For an example, if the price of a product is Rs.100, total variable costs are Rs. 60 per product and fixed cost is Rs. 25 per product, the contribution margin of the product is Rs. 40 (Rs. 100 – Rs. 60). This Rs. 40 represents the revenue collected to cover the fixed costs. In the calculation of the contribution margin, fixed costs are not considered.

When is Break even analysis used?

Starting a new business: To start a new business, a break-even analysis is a must. Not only it helps in deciding whether the idea of starting a new business is viable, but it will force the startup to be realistic about the costs, as well as provide a basis for the pricing strategy.

Creating a new product: In the case of an existing business, the company should still perform a break-even analysis before launching a new product—particularly if such a product is going to add a significant expenditure.

Changing the business model: If the company is about to the change the business model, like, switching from wholesale business to retail business, then a break-even analysis must be performed. The costs could change considerably and breakeven analysis will help in setting the selling price.

Breakeven analysis is useful for the following reasons:

- It helps to determine remaining/unused capacity of the company once the breakeven is reached. This will help to show the maximum profit on a particular product/service that can be generated.
- It helps to determine the impact on profit on changing to automation from manual (a fixed cost replaces a variable cost).
- It helps to determine the change in profits if the price of a product is altered.
- It helps to determine the amount of losses that could be sustained if there is a sales downturn.

  Additionally, break-even analysis is very useful for knowing the overall ability of a business to generate a profit. In the case of a company whose breakeven point is near to the maximum sales level, this signifies that it is nearly impractical for the business to earn a profit even under the best of circumstances.
  Therefore, it's the management responsibility to monitor the breakeven point constantly. This monitoring certainly reduces the breakeven point whenever possible.

Ways to monitor Breakeven point

- **Pricing analysis:** Minimize or eliminate the use of coupons or other price reductions offers, since such promotional strategies increase the breakeven point.
- **Technology analysis:** Implementing any technology that can enhance the business efficiency, thus increasing capacity with no extra cost.
- **Cost analysis:** Reviewing all fixed costs constantly to verify if any can be eliminated can surely help. Also, review the total variable costs to see if they can be eliminated. This analysis will increase the margin and reduce the breakeven point.

- **Margin analysis:** Push sales of the highest-margin (high contribution earning) items and pay close attention to product margins, thus reducing the breakeven point.
- **Outsourcing:** If an activity consists of a fixed cost, try to outsource such activity (whenever possible), which reduces the breakeven point.

Benefits of Break-even analysis

 Catch missing expenses: When you're thinking about a new business, it's very much possible that you may forget about a few expenses. Therefore, a break-even analysis can help you to review all financial commitments to figure out your break-even point. This analysis certainly restricts the number of surprises down the road or at least prepares a company for them.

 Set revenue targets: Once the break-even analysis is complete, you will get to know how much you need to sell to be profitable. This will help you and your sales team to set more concrete sales goals.

 Make smarter decisions: Entrepreneurs often take decisions in relation to their business based on emotion. Emotion is important i.e. how you feel, though it's not enough. In order to be a successful entrepreneur, decisions should be based on facts.

 Fund your business: This analysis is a key component in any business plan. It's generally a requirement if you want outsiders to fund your business. In order to fund your business, you have to prove that your plan is viable. Furthermore, if the analysis looks good, you will be comfortable enough to take the burden of various ways of financing.

 better Pricing: Finding the break-even point will help in pricing the products better. This tool is highly used for providing the best price of a product that can fetch maximum profit without increasing the existing price.

 Cover fixed costs: Doing a break-even analysis helps in covering all fixed cost.

Break-even point examples

Break-even point in units

Check out some examples of calculating your break-even point in units.

Example 1

Break-even point in units is the number of goods you need to sell to reach your break-even point. As a reminder, use the following formula to find your break-even point in units:

Fixed Costs / (Sales Price per Unit – Variable Costs per Unit)

Say you own a toy store and want to find your break-even point in units. Your fixed costs total is $6,000, your variable costs per unit are $25, and your sales price per unit is $50. Plug your totals into the break-even formula to find out your break-even point in units.

$6,000 / ($50 – $25) = 240 units

You need to sell 240 units to break even.

Example 2

Let's take a look at how cutting costs can impact your break-even point. Say your variable costs decrease to $10 per unit, and your fixed costs and sales price per unit stay the same.

$6,000 / ($50 – $10)
$6,000 / $40 = 150 units

When you decrease your variable costs per unit, it takes fewer units to break even. In this case, you would need to sell 150 units (instead of 240 units) to break even.

Break-even point in sales dollars

The break-even point in dollars is the amount of income you need to bring in to reach your break-even point. Determine the break-even point in sales by finding your contribution margin ratio.

Again, here's the break-even point for sales dollars formula:

Fixed Costs / [(Sales – Variable Costs) / Sales]

The following part of the above formula is for your contribution margin ratio: [(Sales – Variable Costs) / Sales]

To simplify things, let's use the same amounts from the last example:

- Fixed costs: $6,000
- Variable costs per unit: $25
- Sales price per unit: $50

First, find your contribution margin. Again, this is your sales price per unit minus your variable costs per unit.

Contribution Margin = $50 – 25
Contribution Margin = $25

Next, find your contribution margin ratio. Divide your contribution margin by your sales price per unit.

Contribution Margin Ratio = $25 / $50
Contribution Margin Ratio = 50% (or 0.50)

To find your break-even point, divide your fixed costs by your contribution margin ratio.

Break-even point in sales = $6,000 / 0.50

You would need to make $12,000 in sales to hit your break-even point.

Cost Controlling Techniques

Meaning and Definition of Budgetary Control:
Budgetary control is the process of preparation of budgets for various activities and comparing the budgeted figures for arriving at deviations if any, which are to be eliminated in future. Thus budget is a means and budgetary control is the end result. Budgetary control is a continuous process which helps in planning and coordination. It also provides a method of control.

According to Brown and Howard "Budgetary control is a system of coordinating costs which includes the preparation of budgets, coordinating the work of departments and establishing responsibilities, comparing the actual performance with the budgeted and acting upon results to achieve maximum profitability".

Following are the features of budgetary control as per the above definitions:

1. The pre-requisite for budgetary control is to set different kinds of budgets and fix the responsibility of personnel for the successful implementation of the policy.
2. Actual performance is compared with budgets to reveal deviations for the purpose of cost control.
3. Corrective action is initiated to set right the unfavorable deviations.

Objectives of Budgetary Control:

Budgetary control is inevitable for policy formulation, planning, control and coordination. The essence of budgeting is to plan and control.
Following are the main objectives of budgetary control:
1. Planning:
Budgeting ensures effective planning by setting up of budgets.
2. Coordination:
Budgets are helpful in coordination of business activities.
3. Efficiency and Economy:
Effective budgetary control results in cost control and cost reduction.
4. Increase in Profitability:
Costs are controlled with help of budgets and profits targeted are achieved.
5. Anticipation of Future Capital Expenditure:

Estimated increases in sales necessitating higher production capacity provides advance warning for the possible capital expenditure in near future.

6. Control:

Controlling function is made to be effective as the control is centralized while budgets are prepared and implemented.

7. Deviations:

Ascertainments of deviations are essential to fix responsibility and correct the deviations as far as possible.

Essentials of Successful Budgetary Control:

A business budget is a detailed plan covering phases of operations for a definite future period. It is lying down of policies, plans, objectives and goals set in advance by the top management for the enterprise as a whole and for each segment.

The following are the essential requisites for implementing budgetary control successfully:

1. Top Management Support:

The budgetary control system should have continuous support of top management which can ensure its all-round acceptance.

2. Clearly Defined Organizational Structure:

The authority and responsibilities are to be properly defined to pin-point the responsibility of specific individuals in key positions.

3. Efficient Accounting System:

The accounting system should provide the required information in time.

4. Reporting of Deviations:

Efficient system has to be devised to reduce the differences between the budgets and actual performance.

5. Motivation:

Staff is to be appraised of the budgets and benefits they are going to derive directly and indirectly.

6. Realistic Targets:

The targets set should be realistic so that they are achievable and budgets should not frustrate the workers by fixing unrealistic targets.

7. Participation of All Departments Concerned:

Budgets are to be set for all the departments so that their participation in implementation will be effective.

8. Flexibility:
Budgets are prepared on the basis of certain conditions. If there is change in conditions budgets also should be adjusted to accommodate the changes.

Advantages of Budgetary Control:

Budgetary control is helpful in setting targets for the whole concern and achievement of the targets. It also makes the various operations of the enterprises economical.

Following are some of the advantages of budgetary control:

1. Maximization of Profits:
Budgetary control aims at increasing the over-all profits of the organization. This is achieved through planning, coordination and control of various activities in a programmed manner.

2. Effective Coordination:
Performance and working of various activities is effectively coordinated through budgetary control. Budgets of the various functions are interlinked and dependent. Effective implementation of budgets depends on cooperation of concerned personnel of various departments. Emphasis on co-ordination and cooperation helps in achieving the predetermined targets and goals.

3. Evaluation of Executive Performance:
Goals are set for each department. Actual performance is compared with standards and deviations are reported to top management for action against unfavorable deviations. Thus, the performance of the department heads and other executives is constantly monitored.

4. Clear-Cut Goals and Targets:
Through the process of budgeting the goals of different departments are set in advance in consultation with those in charge of them. This makes the vision of the organization clear and employee motivation and morale boosted by achievement of clearly set objectives.

5. Economy in Operations:
Expenses are properly planned and financial resources are put to optimum use. The benefits are extended to the industry and then to national economy. Budgetary control is helpful in conservation, effective utilization and elimination of wastage in scarce resources.

6. Revelation of Ineffectiveness:

Comparison of actual performance with budgeted performance reveals week spots so that attention is focused on them to improve the performance.

7. Correction of Performance Continuously:

The deviations of actual performance compared with budgets are frequently reported and corrections are made to rectify the unfavorable deviations immediately. In the absence of budgetary control this may be done at the end of the accounting year by which time corrections may not be fruitful or practicable.

8. Introduction of Incentive Schemes of Remuneration:

Incentive schemes can be easily introduced as the predetermined targets act as base to compare actual performance and determine efficiency. Higher and lower efficiency are suitably rewarded or discouraged respectively.

9. Shutting Down of Unprofitable Products and Activities:

Budgetary control reveals inefficiencies in products, processes and departments. This is helpful in closing down of loss making divisions to improve the overall profitability.

Limitations of Budgetary Control:

Budgetary control is an effective tool for management control. However it has certain limitations while operating it as a technique.

1. Prediction of Uncertain Future:

Budgeting is a process of forecasting and estimation. Forecasting may not be accurate. Therefore budgets based on inaccurate forecasts and estimates may not be accurate and effective.

2. Changes of Conditions:

Budgets are prepared on the basis of certain prevailing conditions. If the conditions change budgets are also to be revised. Constant changes in budgets may frustrate the employees and the charm in budgeting and implementation may be lost.

3. Complacence:

General tendency of employees is to achieve the targets as budgeting fixes the targets. Some of the employees who are highly skillful may also be satisfied in performing up to the goals set without showing full potential, which will be a loss to the enterprise as well as the employee in terms of productivity.

4. Difficulty in Coordination:

Effective implementation of budgetary control depends upon proper coordination among various departments as the performance of a department depends on the

work of other departments and vice versa. It requires budgetary officer to oversee the integration of various activities to successfully implement the budgets. Ineffective coordination leads to inefficient performance.

5. Conflict among Different Departments:

Budgetary control sets targets for different departments individually. This will make the departmental heads to be selfish to get maximum funds and think in terms of achieving their own set targets, thereby raising conflict among different departments. Inter-departmental rivalries may endanger the performance of the whole organization.

Steps of Budgetary Control

Budgetary control has the following stages.

1. **Developing Budgets**

The first stage in budgetary control is developing various budgets. It will be necessary to identify the budget centers in the organization and budgets will have to develop for each one of them.

Thus budgets are developed for functions like purchase, sale, production, manpower planning as well as for cash, capital expenditure, machine hours, labor hours and so on.

Utmost care should be taken while developing the budgets. The factors affecting the planning should be studied carefully and budgets should be developed after a thorough study of the same.

2. **Recording Actual Performance**

There should be a proper system of recording the actual performance achieved. This will facilitate the comparison between the budget and the actual. An efficient accounting and cost accounting system will help to record the actual performance effectively.

3. **Comparison of Budgeted and Actual Performance**

One of the most important aspects of budgetary control is the comparison between the budgeted and the actual performance. The objective of such a comparison is to find out the deviation between the two and provide the base for taking corrective action.

4. **Corrective Action**

Taking appropriate corrective action based on the comparison between the budgeted and actual results is the essence of budgeting.

A budget is always prepared for the future and hence there may be a variation between the budgeted results and actual results.

There is a need for investigation of the same and take appropriate action so that the deviations will not repeat in the future. Responsibilities can be fixed on proper persons so that they can be held responsible for any such deviations.

<u>Preparation for Budgetary Control</u>

Budgetary control is extremely useful for planning and control as described above. However, forgetting these benefits, sufficient preparation should be made.

For complete success, a solid foundation should be laid down and given this the following aspects are of crucial importance.

1. **Budget Committee**

For the successful implementation of the budgetary control system, there is a need for a budget committee. In small or medium-sized organizations, the budget-related work may be carried out by the Chief Accountant himself.

Due to the size of the organization, there may not be too many problems in the implementation of the budgetary control system.

However, in large size organization, there is a need for a budget committee consisting of the chief executive, budget officer and heads of main departments in the organization.

The main functions of the budget committee are to get the budgets prepared and then scrutinize the same, to lay down broad policies regarding the preparation of

budgets, to approve the budgets, to suggest for revision, to monitor the implementation and to recommend the action to be taken in a given situation.

2. **Budget Centers**

The establishment of budget centers is another important pre-requisite of a sound budgetary control system. A budget center is a group of activities or a section of the organization for which budget can be developed.

For example, manpower planning budget, research and development cost budget, production and production cost budget, labor hour budget and so on.

Budget centers should be defined clearly so that preparation becomes easy.

3. **Budget Period**

A budget is always prepared before a defined period. This means that the period for which a budget is prepared is decided in advance.

Thus a budget may be prepared for three years, one year, six months, one month or even for one week. The point is that the period for which the budget is prepared should be certain and decided in advance.

Generally, it can be said that functional budgets like sales, purchase, production, etc. are prepared for one year and then broken down monthly. Budgets like capital expenditure are generally prepared for a period from 1 year to 3 years.

Thus depending upon the type of budget, the period of the same is decided and it must be decided well in advance.

4. **Preparation of an Organization Chart**

There should be an organization chart that shows clearly defined authorities and responsibilities of various executives. The organization chart will define clearly the functions to be performed by each executive relating to the budget preparation and his relationship with other executives.

The organization chart may have to be adjusted to ensure that each budget center is controlled by an appropriate member of the staff.

5. **Budget Manual**

A budget manual is defined by ICMA as ‘a document which sets out the responsibilities of the person engaged in, the routine of and the forms and records required for budgetary control’.

The budget manual thus is a schedule, document or booklet, which contains different forms to be used, procedures to be followed, budgeting organization details, and set of instructions to be followed in the budgeting system.

It also lists out details of the responsibilities of different persons and the managers involved in the process.

6. **Principal Budget Factor or Key Factor**

A key factor or a principal budget factor [also called constraint] is that factor the extent of whose influence must first be assessed to prepare the functional budgets.

Normally sales are the key factor or principal budget factor but other factors like production, purchase, and skilled labor may also be the key factors.

For example, a company has the production capacity to produce 30,000 tons per annum but if the sales forecast tells that the market can absorb only 20,000 units, there is no point in producing 30,000 units.

Thus the sale is the key factor in this case.

On the other hand, if the company can produce 30,000 units and the market can absorb the entire production which means that sales are not the key factor but if the raw material is available in limited quantity so that only 25,000 units can be produced, the raw material will become the key factor.

The key factor puts restrictions on the other functions and hence it must be considered carefully in advance. So continuous assessment of the business situation becomes necessary.

In all conditions, the key factor is the starting point in the process of preparation of budgets.

7. **Establishment of Adequate Accounting Records**

The accounting system must be able to record and analyze the transactions involved.

A chart of accounts or accounts code should be maintained which may correspond with the budget centers for the establishment of budgets and finally control through budgets.

Difference between Budget and Budgetary Control

Point of Difference	Budget	Budgetary Control
Nature	Budgeting is the formulation of the plan of the organization.	Budgetary control refers to the control of business activities.
Aims	The budget sets the target to be achieved	Budgetary control aims at attaining that target.
Dependency	Budget can be set without follow up action i.e., without budgetary control.	But budgetary control is not possible without a budget. However budget without the budgetary control will not be of much
Assumption and Actual	The budget is forward-looking. It charts out the course of action to be followed in the future.	But budgetary control is concerned with actual performance. Its objective is to make the actual performance confirm
Continuity	Budgeting is a one time job done before the budget period. However, due to the changing situation, the budget may	Implementation of budgetary control involves the measurement of actual performance and comparison of the same with the target to analyze the

	require revision during the budget period.	variance. The process is continuous and carried out throughout the budget period.

Making Budgetary Control Effective

Budgetary control can be made effective if an organization can ensure the following:

1. **Setting appropriate standard**

This is key to successful budgeting. Many budgets fail for lack of such standards, and some upper-level managers hesitate to allow subordinates to submit budget plans for fear that they may have no logical basis for reviewing budget requests.

2. **Ensuring top-management support**

Budget making and administration must receive the whole-hearted support of top ‘management.

If top management supports budget making, requires departments and divisions to make and defend their budgets, and participate in this review, then budgets encourage alert management throughout the organization.

3. **Participation by users in budget preparation**

Besides the support of top management, the concerned managers at lower levels should also participate in its preparation. Real participation in budget preparation is necessary to ensure success.

It may also prove worthwhile to give department managers a reasonable degree of latitude in changing their budgets and in shifting funds, as long as they meet their total budgets.

4. **Providing information to managers about performance under budget**

If budgetary control is to work well, managers need ready information about actual and forecast performance under budgets by their departments. Such information must be so designed as to show them how well they are doing.

Conclusion

Budgeting is the formulation of plans for a given future period in numerical terms. Organizations may establish budgets for units, departments, divisions, or the whole organization.

The usual period for a budget is one year and is generally expressed in financial terms. Budgets are the foundation of most control systems.

They provide yardsticks for measuring performance and facilitate comparisons across divisions, between levels in the organization, and from one period to another.

Cash budget

Meaning of Cash Budgeting:

Cash budget is a detailed budget of income and cash expenditure incorporating both revenue and capital items. The cash flow budget should be prepared in the same format in which the actual position is to be presented. The year's budget is usually phased into shorter periods for control e.g., monthly or quarterly.

Cash budget is concerned with liquidity must reflect changes between opening and closing debtor balances and between opening and closing creditor balances, as well as, focusing attention on other inflows and outflows of cash. The cash budget shows the cash flows arising from the operational budgets and the profit and assets structure.

The working capital is effectively managed through preparation of cash budget wherein the estimated receipts and disbursements for a period into the future are drawn up. Such a budget will open out avenues for efficient management of components that go into the operating cycle.

In preparation of cash budget the following points are considered:
(a) Credit periods allowed to customers.

(b) Credit periods allowed by suppliers to the company for goods and services.

(c) Payments of dividends, taxation and capital expenditure etc., and the months when cash payments are expected to be made.

(d) Non-consideration of transactions which have no impact on cash flow e.g., depreciation.

(e) Minimum cash balance required.

(f) The bank overdrafts limits allowed.

(g) Dealing with the surplus cash e.g., by putting in marketable securities.

(h) Dealing with the cash deficit e.g., arrangements to borrow funds from outside or sale of marketable securities.

(i) Trend of sales.

(j) Periods of debt repayments.

(k) Raising long-term funds during the course of cash budget etc

Methods of Cash Budgeting:

A cash budget can be prepared in the following ways:
i. Adjusted Income Method:
In this method, the annual cash flows are calculated by adjusting the sales revenues and cost figures for delays in receipts and payments (changes in debtors and creditors) and eliminating noncash items such as depreciation.

ii. Adjusted Balance Sheet Method:
In this method, the budgeted balance sheet is predicted by expressing each type of asset and short-term liabilities as percentage of the expected sales. The profit is

also calculated as a percentage of sales, so that the increase in owners equity can be forecast. Known adjustments, may be made to long-term liabilities and the balance sheet will then show if additional finance is needed.

iii. Receipts and Payments Method:
In this method, all the expected receipts and payments for budget period are considered. All the cash inflow and outflow of all functional budgets including capital expenditure budgets are considered.

It is important to note that the capital budget will also be considered while preparation of cash flow budget because the annual budget may disclose a need for new capital investments and also, the costs and revenues of any new projects coming on stream will need to be incorporated in the short- term budgets. A number of additional financial statements, such as sources and application of funds statement or schedules or loan service payments or capital raising schedules may be produced.

MASTER BUDGET:

MASTER BUDGET
All the functional division of the organization prepares the budget for the particular division. The master budget is the sum total of all the divisional budgets that is prepared by all the divisions. Further, it also includes the financial planning, cash-flow forecast and budgeted profit and loss account and balance sheet of the organization. It is the goal of the organization to reach a level in a particular period. Normally master budget is prepared for a year.
Sometimes, it may be misunderstood that master budget is one large budget of the organization. However, it is not the case. Master Budget is the summary of the divisional budget. It is a continuous financial plan.

STEPS TO PREPARE MASTER BUDGET

SALES BUDGET

The sales budget is the foundation of the master budget. All the procurements, staff requirements and administration cost are based on the sales. First and foremost, the

number of units to be sold and price per unit are derived. On the basis of that, the value of sales is calculated.
The sales budget is prepared based on considering the following factors:

- Market demand estimation
- Production capacity or an infrastructure facility
- Current supply facility
- Industry analysis

Market demand and production capacity are determined with the help of Marketing division and production division respectively.

PRODUCTION BUDGET

The production budget is mainly based on the sales budget. However, following factors shall be considered;

- Inventory at the beginning of the year
- Inventory to be maintained at the end of the year
- Number of units manufactured
- Buffer stock to be maintained throughout the year

The production budget is divided into further three parts:

- Direct material budget
- Direct labor budget
- Manufacturing overhead budget

If the company is not having manufacturing unit, we require a number of units to purchase instead of the production budget.

CAPITAL ASSET ACQUISITION BUDGET

The plant, machinery, and equipment require periodical maintenance and replacement. If the sales target is higher than the previous period, new plant and machinery also need to be introduced. Therefore, careful planning of the capital asset has to be done. A financial budget is an integral part of Master Budget.

CASH BUDGET

For all the divisional budgets, the organization requires cash. It needs to ensure that during the year it does not run out of the cash due to poor planning in preparation for the budget.

On the basis of the sales and production budget, it is derived that what is the expected receipts and what are the expected payment. Receipt and payment cycle

of the customer and supplier need to be analyzed. At this stage, the organization decides whether the external borrowing is required or not.
All the administration expenses such as interest on borrowing, staff cost, office rent, legal expenses, office supplies etc are to be considered while preparing cash budget. Some factors also are dependent on the sales budget such as CEO's salary based on performance or the performance bonus to sales staff.

BUDGETED INCOME STATEMENT

On the basis of the above budgets, the budgeted income statement is prepared. Budgeted Income statement includes following;

Particulars	Amount
Budgeted Income	–
Less: Budgeted Expenses	–
Budgeted profitability	–

BUDGETED BALANCE SHEET

The budgeted balance sheet is prepared once the Budgeted Income Statement is prepared. Budgeted balance sheet indicates following:

Particulars	Amount
Budgeted Assets	
Plants & Machinery	–
Equipment	–
Accounts receivables	–

Inventory	–
Total Assets	**—**

Budgeted Liabilities

Share Capital	–
Retained Earnings	–
Accounts payable	–
Income tax payable	–
Short term loans	–
Long-term loans	–
Total Liabilities	**—**

All the divisional budgets are interrelated. A mistake in preparation for any budget leads to a mistake in the master budget. Hence, it is recommended to prepare the budget which is ambitious but achievable and not a fairy tale.

APPLICATIONS OF MASTER BUDGET

IMPORTANT PLANNING TOOL

The master budget is considered one of the most important planning tools for an organization. While planning, top-level management discusses the overall profitability and the asset and liability position of the company. For which, the master budget is being used.

MEASURES PERFORMANCE

Master budget measures the performance of the organization as a whole. It helps in departmental control and setting in departmental accountability. It helps in improving the efficiency.

INTERDIVISION COORDINATION:

The master budget is used for the interdivisional coordination amongst the divisions of the organization. It helps and ensures that coordination with the other divisions is properly made.

ADVANTAGES OF MASTER BUDGET

MOTIVATION TO STAFF

The master budget serves as a motivation tool on the basis of which the employees can compare the actual performance with the budgeted performance. The Master Budget helps staff in getting job satisfaction as well as a good contribution to the growth of the business.

SUMMARY OF THE DIVISIONAL BUDGET

Master budget works as a summary budget for the overview of the business owners and the management. The master budget indicates how much the organization is earning and what the expenses are incurred as a whole.

PLANNING IN ADVANCE

The master budget identifies the unusual problems in advance and fixes the same. For instance, one of the company divisions is not performing well and the expenses incurred are exceeding the set budget limit. This results in the lower profitability of the company.

HELPS IN THE ACHIEVEMENT OF GOAL

The organization has short, medium and long-term goals. A master budget helps in achieving the long-term goal of the organization. All the resources of the organization are channelized and controlled for optimization of the profit.

CONTINUOUS IMPROVEMENT

The master budget is a continuous process. Each year the organization prepares the master budget and it works as a tool of analytics. The variances are identified and the worked upon for better results on a continuous basis.

DISADVANTAGES OF MASTER BUDGET

RIGIDITY

The divisional staff is forced for the achievement of the target despite having practical difficulties in achieving the same. It is because of the pressure from the top management. This leads to low revenue estimates and higher expense estimates. Managers may not consider new opportunities for the growth of the organization.

DIFFICULT TO UPDATE

The master budget is not easy to modify. To add, alter or delete small change requires a lot of steps in the entire budget. It includes lengthy descriptions and charts. Hence, a master budget cannot be easily understood as a layman.[1–3]

Flexible Budget

Flexible Budget

The Chartered Institute of Management Accountants, England, defines a flexible budget (also called sliding scale budget) as a budget which, by recognizing the difference in behavior between fixed and variable costs in relation to fluctuations in output, turnover, or other variable factors such as number of employees, is designed to change appropriately with such fluctuations.

Thus, a flexible budget gives different budgeted costs for different levels of activity. A flexible budget is prepared after making an intelligent classification of all expenses between fixed, semi-variables and variable because the usefulness of such a budget depends upon the accuracy with which the expenses can be classified.

Flexible budgets represent the amount of expense that is reasonably necessary to achieve each level of output specified. In other words, the allowances given under

flexible budgetary control system serve as standards of what costs should be at each level of output.

Such a budget is prescribed in the following cases:

1. Where the level of activity during the year varies from period to period, either due to the seasonal nature of the industry or due to variation in demand.

2. Where the business is a new one and it is difficult to foresee the demand.

3. Where the undertaking is suffering from shortage of a factor of production such as materials, labour, plant capacity etc. The level of activity depends upon the availability of such a factor of production.

4. Where an industry is influenced by changes in fashion.

5. Where there are general changes in sales.

6. Where the business units keep on introducing new products or make changes in the design of its products frequently.

7. Where the industries are engaged in make to order business like ship-building.

Utility (or Importance) of Flexible Budget:

The main importance of flexible budget is that it reflects the expenditure appropriate to various levels of output. The expenditure established through a flexible budget is suitable for comparison of the actual expenditure incurred with the budgeted level applicable for that particular level of activity attained.

Following points show the utility or importance of flexible budget:

1. Flexible budget provides a logical comparison of budgeted allowances with the actual cost i.e., a comparison with like basis.

2. Flexible budget reckons operational realities and streamlines control function and profit planning. It gives balanced perspective on comparison. When flexible budget is prepared, actual cost at actual activity is compared with budgeted cost at actual activity i.e., two things to a like basis.

3. Flexible budget recognizes concept of variability and provides logical comparison of expenditure with actual expenditure as a means of control.

4. With flexible budget, it is possible to establish budgeted cost for any range of activity.

5. A flexible budget is very useful for purposes of budgetary control because it corresponds with changes in the level of activity.

6. It is helpful in assessing the performance of departmental heads because their performance can be judged in relation to the level of activity attained by the organization.

7. Cost ascertainment at different levels of activity is possible because a flexible budget is prepared for various levels of activity.

8. It is helpful in price fixation and for sending quotations.

To conclude, a flexible budget is more useful, elastic and practical.

Preparation of Flexible Budgets:

There are three methods of preparing a flexible budget:

1. Tabular Method or Multi-Activity Method.

2. Charting Method.

3. Formula Method or Ratio Method.

1. Tabular Method:

According to this method, a flexible budget is prepared for different levels of activity showing different activity or capacity levels in horizontal columns and budgeted figures against different activity or capacity levels in the vertical columns.

The expenses are usually recorded under three groups, namely, variable, semi-variable and fixed. Budgeted figures for any level of activity not specifically covered in the flexible budget can be obtained by interpolation.

Charting Method:

Under this method, an estimate of expenses is made for different levels of activity by classifying the expenses into three categories, namely, variable, semi-variable, and fixed. The estimated expenses are plotted on a graph paper on Y-axis and level of activity is plotted on X-axis. The budgeted expenses corresponding to the level of activity attained can then be read out from the chart and the performance of departmental heads can be assessed.

Formula Method or Ratio Method:

Under this method, a budget is prepared for the expected normal level of activity and variable cost per unit of activity is ascertained.

Expense budget allowed for a particular level of activity attained will be as follows:

Fixed cost + (Actual units of activity x variable cost per unit of activity)

For example, the overhead expenses budget for a normal level of 80% activity is Rs 90,000. Assuming that the expenses budget consists of fixed cost Rs 50,000 and variable expenses Rs 40,000, then variable cost per 1% activity is Rs 500 (i.e., Rs 40,000/ 80).

Suppose actual level of activity is 75%, the expense budget allowed will be:
50,000 (fixed) + 75 x Rs 500 (variable) = Rs 87,500.

ZERO BASED BUDGETING

Meaning of ZBB:

ZBB is a new approach to budgeting, it is defined by Peter A. Pyhor as an "operating planning and budgeting process, which requires each manager to justify his entire budget 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."

This approach requires that all activities should be identified in "decision packages', which should be evaluated by systematic analysis and ranked in order of importance.

Leonard Mereunit and Stephen Sosmick define, "ZBB is a technique, which complements and links the existing planning, budgeting and review processes, it identifies alternative efficient methods of utilizing limited resources in effective attainment of selected benefits. It is a flexible management approach, which provides credible rationale for reallocating resources by focusing on the systematic review and justification of the funding and performance levels of current programmes or activities."

ZBB thus examines a programme or activity from scratch (i.e., zero-base). The manager proposing the activity should prove that the activity is essential and his budgeting request for funds is reasonable.

Nothing can be taken for granted, for it was being done or allowed in the past. Hence, ZBB is a technique whereby each programmes, whether new or existing must be justified in its entirety each time a new budget is formulated.

Features of ZBB:

The essential features of ZBB are as follows:

(a) The budget allotment to any decision unit should be first justified by the manager of that decision unit. He should justify his request without making any reference to previous level of spending in his decision unit.

(b) Activities are identified as decision packages and then the latter are ranked in order of priority.

(c) Decision packages are evaluated by systematic analysis linking them with clearly laid down corporate objectives.

(d) A frank relationship exists between superiors and subordinates.

(e) Available resources are directed towards alternatives in order of priority to ensure optimum results.

Process of ZBB:

The important steps in ZBB are:

(i) Identification of decision units in order to justify each item of expenditure in their proposed budget.

(ii) Preparation of Decision Packages. Each package is a separate and identifiable activity. These packages are linked with corporate objectives.

(iii) Ranking of decision packages based on cost benefit analysis.

(iv) Allotment of funds based on the above resulting by following pyramid ranking system to ensure optimum results.

Decision packages are self contained modules or proposals seeking funds. Each decision package will clearly explain the activity, the need for the item, the amount involved, the benefit of implementing the proposal, the loss that may be incurred, if it is not done etc.

Advantages of Zero Base Budgeting:

Following are the advantages of ZBB:

(1) Zero-base budgeting 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. Past inefficiencies are not repeated.

(2) Zero-base budgeting is most appropriate for the staff and support areas (i.e., non- manufacturing overheads) of an organization because the inputs of these areas are not directly related to the final outputs of the organization.

(3) Zero-base budgeting considers every time alternative ways of performing the same job because zero is taken as a base every time at the preparation of a budget. Thus management has an opportunity to get a critical appraisal of its activities.

(4) It focuses management process on analysis and decision-making because it requires managers to review their activities every time when a budget is developed.

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(4) It focuses management process on analysis and decision-making because it requires managers to review their activities every time when a budget is developed.

(5) 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. Funds are used on priority basis and hence there is better allocation of resources.

(6) Coordination within the firm is improved and communication channels are strengthened.

(7) Increased participation in ZBB creates a motivational impact.

(8) ZBB is particularly useful for service departments and Governments.

(9) It makes managers cost conscious and helps them in identifying priorities in the overall interest of the organization.

Thus, it provides a systematic approach to the evaluation of different activities for ranking them for resource allocation, ensures that the activities undertaken for achievement of the company's objectives are performed in the best possible way, enables allocation of resources after a thorough cost-benefit analysis, enables the management to identify and eliminate wasteful expenditure, helps in the introduction of the system of 'Management by Objectives' and ensures that the departmental budgets are linked to corporate objectives.

To conclude, ZBB is not a panacea, but it can certainly increase the usefulness of the budgeting process because it tries to overcome the weaknesses of conventional budgeting.

Defects of ZBB:

Following are defects of ZBB:

(i) The paper work will increase periodically due to large number of decision packages. So it is time consuming and costly exercise.

(ii) The cost of preparing the various packages may be very high in large firms involving vast number of decision packages.

(iii) Ranking of packages is very often subjective and may give risk to conflicts.

(iv) Bad managers may resist new ideas and changes as they feel threatened by ZBB.

(v) Some activities may have qualitative rather than quantitative benefits as it is very difficult to quantify such activities as research and development and general administration.

(vi) It may lay more emphasis on short term benefits to the determinant of long term objectives of the organization.

(vii) Costs and benefits on each package must be continually up-to-dated to be relevant and new packages are to be developed as soon as new activities emerge.

(viii) The success depends on top management support.

In spite of these defects, ZBB was adopted by several Governments all over the world to improve their budgeting skills. It finds application in control of service department costs. But for control of direct costs as direct materials and direct labour expenses etc. standard costing may be more useful.

Behavioral Aspects of Budgeting

Here in, some behavioral implications of budgeting have been discussed:

(1) Dysfunctional Behavior:

Budgets can bring positive behavior among the people when the goals of individual managers are found in conformity with the goals of the organization. The perfect matching (or near perfect matching) between the organizational and managerial goals is often referred to as goal congruence. The managers who participate in the budget making process may feel happy in producing a fair budget in terms of organisational goals and objectives.

Such a budget may induce and motivate others to bring excellence in their performance. But sometimes, due to improper implementation of the budget and unrealistic management expectations, the reaction of subordinate managers are found to be negative, which in turn has adverse impact on achieving the organisational goals. Such a negative behaviour is known as dysfunctional behaviour which is defined as an individual behaviour that is in basic conflict with the goals of the organisation.

In order to create and promote a reasonable degree of positive behaviour among the people in an organisation, a budgeting system should possess the following important features or elements:

1. Frequent feedback on performance.

2. Flexible budgeting capabilities.

3. Monetary and non-monetary incentives.

4. Participation.

5. Realistic standards.

6. Controllability of costs (Non-controllable costs, if included in a budget, should be separated from controllable costs and labelled as non-controllable).

(2) Participative Budgeting:

Budgeting processes are either top down or bottom up. In a top-down budgeting process, top management prepares budgets for the entire organization, including those for lower-level operations. This process often is referred to as authoritative budgeting. A participative budgeting process, on the other hand, is a bottom-up approach that involves the people affected by the budget, including lower-level employees, in the budget preparation process.

Participation by employees in the budget preparation can provide them the feeling that "this is our budget," rather than the feeling generally noticed among employees that "this is the budget imposed by the top on us."

Participation by the subordinate managers in preparing the budget is considered to increase employee motivation and reduce organizational conflict. One indication that an organization encourages active employee participation is the existence of good superior-subordinate relationships fostered by (i) frequent person-to-person contact (ii) the use of results in performance appraisal (iii) the use of departmental meetings to review actual results and (iv) the creation of a "game" spirit (margin for error, tolerance and slack).

Participative budgeting increases employee initiative, performance and morale. This budgeting communicates a sense of responsibility to subordinate managers and fosters creativity. Such budgeting process often gives top management a better grasp of the problems their employees face and provides the employees a better understanding of the dilemmas that the top management deals with. Since the

subordinate manager creates the budget, it is more likely that the budget's goals will become the manager's personal goals, resulting in a higher degree of goal congruence.

The increased responsibility and challenge inherent in the (participative budgeting) process provide non-monetary incentives that lead to a higher level of performance. Individuals involved in setting their own standards will work harder to achieve them. In addition to the behavioral benefits, participative budgeting has the advantage of involving individuals whose knowledge of local conditions may enhance the entire planning process.

Participative budgeting has some problems and negative consequences which should be avoided. Firstly, when top management has total control of the budgeting process and simultaneously seeks superficial participation from lower level managers, pseudo participation exists in the budgeting process. Pseudo participation, which pretends to be participation but is not is a form of deceit. The result can be a decrease in motivation. In such a situation, top management is only seeking formal acceptance of the budget from subordinate managers and is not seeking their real input.

Secondly, too much participation and discussion can lead to delay in budget making and can result into significant and irreconcilable differences among the members involved in the budgeting process. Thirdly, participative budgeting can lead to easy budget targets or targets which do not match with the organization's strategy and goals.

(3) Excessive Pressure Created by Budgets:

Budgets are used in to direct control and coordinate all activities in the organisation. In this task, budgets should not generate excessive pressure and stress on the subordinate managers, supervisors and the people working in the organisation. In order to eliminate undesirable pressure, the budget goals and standards should be set which are neither too high (tight) nor too low (loose). If the standards and the budgeted goals are too high, motivation becomes poor and failing to achieve them may frustrate the managers and in turn, this frustration can result into poorer performance.

Similarly, if the goals and standards are too easily achieved, a manager may lose interest and his performance may decline. As goals and standards are tightened (but not made too tight), motivation will increase. In fact, the objective should be to get subordinate managers in a participative setting to set high but achievable goals and standards. This is one that is tight enough to motivate, yet still realistic. Supervisors and upper level managers must make careful judgments about how tight the budget goals and standards should be for each manager. Further, direct, clear feedback allows the employee to adjust aspiration levels and strive to achieve desired rewards.

It can be concluded that no budget can be successful as long as people are unwilling to accept it. The problem of motivating a company's personnel, however, is difficult to solve.

Motivational requirements that have been suggested include the following:

1. A compensation system that builds and maintains a clearly understood relationship between results and rewards.

2. A system for performance appraisal that employees understand with regard to their individual effectiveness and key results, their tasks and their responsibilities, their degree and span of influence in decision-making, as well as the time allowed to judge their results.

3. A system of communication that allows employees to query their superiors with trust and honest communication.

4. A system of promotion that generates and sustains employee faith in its validity and judgment.

5. A system of employee support through coaching, counseling, and career planning.

6. A system that not only considers company objectives, but also employees skills and capacities.

7. A system that will not settle for mediocrity, but which reaches for realistic and attainable standards, stressing improvement and providing an environment in which the concept of excellence can grow.

(4) Budgetary Slack (Cushion):

Budgetary slack, also known as padding the budget, takes place when a manager deliberately underestimates revenues, overestimates costs and requests more funds than needed to support the budgeted level of activities. The difference between the revenue or cost projections that a person provides and a realistic estimate of the revenue or cost is called budgetary slack.

In all organisations, there is a tendency to introduce slack or a cushion in the budget. For instance, subordinate managers can know on the basis of past experiences that their budget proposals will be cut by senior managers and therefore will be tempted to pad certain expenses or make low-revenue estimates. On the contrary, the senior managers knowing the padding habits of their subordinate managers may be tempted to increase the level of expected revenues and reduce the budgeted expenses.

Similarly, the sales managers underestimate their sales projections; the controller introduces slack by maintaining excessive cash balances, etc. The degree of slack tends to grow in good years, when satisfactory profits are easily attainable, in bad years slack is voluntarily decreased throughout the organisation.

According to Hilton, there are three primary reasons for padding the budget or budgetary slack. First, people often perceive that their performance will look better in their superiors' eyes if they can "beat the budget."

Second, budgetary stack often is used to cope with uncertainty. A departmental supervisor may feel confident in the cost projections for 10 cost items. However, the supervisor also may feel that some unforeseen event during the budgetary period could result in unanticipated costs. For example, an unexpected machine breakdown could occur. One way of dealing with that unforeseen event is to pad the budget. If nothing goes wrong, the supervisor can beat the cost budget. If some negative event does occur, the supervisor can use the budgetary slack to absorb the impact of the event and still meet the cost budget.

The third reason why cost budgets are padded is that budgetary cost projections are often cut in the resource-allocation process. Thus, we have a vicious circle.

Budgetary projections are padded because they will likely be cut, and they are cut because they are likely to have been padded.

In order to reduce excessive slack, top management may introduce strenuous cost-cutting measures and put too much pressure to decrease the slack. However, in reality, their attempts may create conflict in the organization, may widen differences among managers, and top management can be looked upon as being arbitrary, and ignorant and insensitive of the needs of lower-level managers in their achieving budgetary goals.

The solution lies in finding a level of slack that maintains efficiency and avoids the conflict caused by excessive pressure to reduce the slack. Further, top management should carefully review budgets proposed by subordinate managers and provide input, where needed, in order to decrease the effects of building slack into the budget.

Also, managers can be given incentives not only to achieve budgetary projections but also to provide accurate projections. This can be done by asking managers to justify all or some of their projections and by rewarding managers who consistently provide accurate estimates.

(5) Top Management Support:

The attainment of budget goals and standards at the lower and middle level management depends to a large extent on the support, participation and cooperation extended by top management in the preparation and execution of budgets. Top managers by their actions should create an environment and give impression to the subordinate managers about their commitment and support to the budget goals and objectives. Otherwise, the planning and control function will be

damaged in case subordinate managers think that their top managers are not sincere while preparing and using the budgets.

Anderson and Sollenberger list the following four important ingredients to demonstrate the existence of top management support:

(i) Top management must establish clearly delineated lines of authority and responsibility.

(ii) Appropriate goals and objectives that other management levels can easily translate into activities must be developed.

(iii) Top management must actively review and approve budgets and follow-up on budget variances. This conveys the importance they attach to budgeting.

(iv) Top management must exhibit a positive attitude toward involving lower management levels in the process.

(6) Inter-Departmental Conflict:

The budgeting process is rightly considered a technical and formal one. However, in reality, the budgeting process becomes most often an informal bargaining process or wherein managers of different departments compete for organisation scarce resources. According to Hopwood this can lead to a dilution of original goals, as managers try (and fight) for power and recognition. Departmental conflict or conflict between the managers are also due to the fact that different departments are found blaming each other when they fail to achieve their targets.

Further, a feeling of 'them' and 'us' exists between the budget staff, i.e., accounts departments (them). And the other departments (us). This is because the budget

staff's success is the other's failure, e.g., the accountant's success in finding an adverse variance identifies another employee's failure to achieve his budget.

Introduction to New Developments in Management Accounting

Meaning of Activity-Based Costing (ABC):

Activity-based costing (also popularly known as ABC) is a new and scientific approach developed by Rabin Cooper and Roberk Kaplan (1988) of the Harvard University for assigning overhead costs to end-products, jobs and processes.

It refines a costing system by focusing on individual activities as the fundamental cost objectives. In the course of accumulating costs, this system takes into consideration not only volume-related but also non-volume-related activities (i.e., support activities) such as material procurement, material handling, machine set-ups, etc.

In the words of Cooper and Kaplan, ABC systems calculate the costs of individual activities and assign costs to cost objects such as products and services on the basis of activities undertaken to produce each product or service. In this system overhead costs are assigned to activities or grouped into cost pools before they are charged to cost objects (i.e., products or services).

CIMA, London defines ABC as **"cost attribution to cost units on the basis of benefits received from indirect activities e.g., ordering, setting up, assuring quality."**
Activity-based costing is not a distinct method of costing like job costing and process costing. It is only a modern tool of charging overhead costs in which costs are first traced to the activities and then to products or jobs.

The heart of ABC is the activity concept and the basic premise of ABC approach is that a firm's products or services are the results of activities and activities consume resources which incur costs. In short, in activity-based costing, overhead costs are

first assigned to activities and then absorbed by cost objects on the basis of activities consumed by these cost objects.

Steps in Activity-Based Costing:

There are two primary stages in ABC—first, tracing costs to activities, second, tracing activities to products or jobs.

The different steps in the two stages of ABC are given below:

(i) Identification of the main activities:

The first stage is to identify the functional areas or major activities involved in the production. In ABC system an organization is viewed as a collection of activities.

All the major activities in the organization are grouped under two categories, viz., volume-related activities (e.g., machine-related activities, labour-related activities) and non-volume-related or support activities like material ordering, material receiving, material handling, machine set-up, production scheduling, packing, dispatch etc.

Both these categories are performed to design, produce, sell and distribute to individual products or services of the organization. These activities convert input resources acquired from suppliers to output intended for customers. The number of activities in an organization should neither be too large or too small. Total cost involved in the activity should be significant enough to justify giving an activity a separate entity.

(ii) Creation of cost pool:

The next step in activity-based costing is the creation of a cost pool for each major activity. Cost pool is like a cost centre or activity centre around which costs are accumulated. For example, the total of machine set-up might constitute are cost pool for all set-up related costs.

(iii) Determination of the activity cost driver:

The next step in the application of activity-based costing is the ascertainment of the factors that influence the cost of each major activity. The factors or the forces that cause costs are known as cost drivers. A cost driver not merely causes cost but also

explains its behavior.Thus a cost driver is a factor which causes a change in the cost of an activity. Examples of cost drivers are number of machine set-ups, number of purchase orders, number of customer orders placed etc.

(iv) Calculation of the activity cost driver rate:
After cost pool is defined and cost drivers identified, the cost per unit of the cost driver is computed for that pool. This is called the pool rate. The pool rate links costs and cost drivers with the resource use.

(v) Charging the costs of activities to products:
This is the last step in application of activity-based Costing. Here, the costs of activities are traced to products on the basis of demand by products. The cost drivers are used to measure product demand of activities. For example, if the total costs of purchasing materials were Rs. 1, 00,000 and there were 1,000 purchase orders (the chosen cost driver) during the period.

The rate per purchase order is Rs. 1, 00,000 /1,000 = Rs. 100. If a particular product needs 2 purchase orders, charge to that product will be Rs. 100 x Rs. 2 = Rs. 200.

Advantages of Activity-Based Costing:

Activity-based costing has primarily developed on account of the limitations of traditional system of charging overhead costs. It became an increasing important tool for a large majority of organizations throughout the world.

It offers the following advantages:
(i) Determination of product/service cost:
ABC is a modern tool of charging overhead costs in which costs are first identified with activities and then allocated to products or services based on appropriate cost drivers. Cost drivers reflect the cause and effect relationship between activity consumption and cost incurrence. As a result, it gives more accurate cost information for determination of product/service cost.

(ii) Supplies cost information:

It provides more accurate and reliable cost information about production and support activities and product costs so that the management can focus its attention on the products and processes with the most effective manner for increasing profit.

(iii) Better pricing decisions:
By switching over from volume-base to activity-base, ABC helps in overcoming the problem of over-costing and under-costing as result of which management is able to make judicious pricing decisions in a more competitive business environment.

(iv) Realistic:
Under ABC distribution of overhead costs is done on the basis of activities which are considered to be more realistic. It is said to be an objective approach. The traditional costing uses more arbitrary bases for apportionment of overhead costs and is a subjective approach.

(v) Control of cost:
ABC gives better understanding of cost behavior and a more rational approach to fixed and variable costs. It enables management to control many fixed overheads by exercising more control over those activities which cause these fixed overheads. This is possible since behavior of many fixed overhead costs in relation to activities now become more visible and clear.

(vi) Better performance measurement and cost reduction:
Pooling of resource costs and use of suitable cost drivers highlights the problem areas leading to better performance measurement and cost reduction. Regrouping costs from traditional cost centers to activity cost pools focuses attention to inefficient operations where costs can be reduced.

(vii) Improvement of cost objects:
Manager's do not manage cost, they manage activities causes cost. Changes in activities lead to changes in cost. Therefore, if the activities are managed well, costs will fall and resulting products will be more competitive.

(viii) Greater cost efficiency:
ABC helps to identify unnecessary or non-value-added activities so that these may be weeded out and thus achieving greater cost efficiency.

(ix) <u>Better decision-making:</u>
It helps management in taking better decisions about product design, pricing, process technology, marketing product-mix and encouraging continual operating environments. ABC which is now being called Activity-Based Management (ABM) used cost information generated by ABC about an activity for controlling the activity itself rather than just using cost information of the final product.

Problems with the ABC Approach:

ABC is not free from certain weaknesses as argued by the critics. They are stated below:

(i) ABC fails to obtain support at all levels of management about changing in work processes to make business more competitive.

(ii) Selection of multiple cost drivers to assign overhead costs to products or services is a difficult task. It involves trade-offs between accuracy and cost, as well as the difficulties of operating a more complex costing system.

(iii) Wrong selection of cost drivers would nullify the benefits of ABC.

(iv) Cost of change will be high as everything will have to be worked out from the scratch.

(v) It rejects marginal cost analysis and the benefits thereof.

(vi) It takes no account of opportunity cost in decision-making.

(vii) The system will require a change due to changes associated with new products and new technology. This will put strain on the costing system,

(viii) It fails to capture the complexity of actual operations and took too long time to implement.

(ix) The system encourages allocation of non-product costs such as research and development to products while committed product costs such as factory depreciation are not allocated to products.

Target costing

Target costing is a system under which a company plans in advance for the price points, product costs, and margins that it wants to achieve for a new product. If it cannot manufacture a product at these planned levels, then it cancels the design project entirely. With target costing, a management team has a powerful tool for continually monitoring products from the moment they enter the design phase and onward throughout their product life cycles. It is considered one of the most important tools for achieving consistent profitability in a manufacturing environment.

The primary steps in the target costing process are:

1. ***Conduct research.*** The first step is to review the marketplace in which the company wants to sell products. The design team needs to determine the set of product features that customers are most likely to buy, and the amount they will pay for those features. The team must learn about the perceived value of individual features, in case they later need to determine what impact there will be on the product price if they drop one or more features. It may be necessary to later drop a product feature if the team decides that it cannot provide the feature while still meeting its target cost. At the end of this process, the team has a good idea of the target price at which it can sell the proposed product with a certain set of features, and how it must alter the price if it drops some features from the product.
2. ***Calculate maximum cost.*** The company provides the design team with a mandated gross margin that the proposed product must earn. By subtracting the mandated gross margin from the projected product price, the team can easily determine the maximum target cost that the product must achieve before it can be allowed into production.
3. ***Engineer the product***. The engineers and procurement personnel on the team now take the leading role in creating the product. The procurement staff is particularly important if the product has a high proportion of purchased parts; they must determine component pricing based on the necessary quality, delivery, and quantity levels expected for the product. They may also be

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involved in outsourcing parts, if this results in lower costs. The engineers must design the product to meet the cost target, which will likely include a number of design iterations to see which combination of revised features and design considerations results in the lowest cost.

4. ***Ongoing activities*.** Once a product design is finalized and approved, the team is reconstituted to include fewer designers and more industrial engineers. The team now enters into a new phase of reducing production costs, which continues for the life of the product. For example, cost reductions may come from waste reductions in production (known as kaizen costing), or from planned supplier cost reductions. These ongoing cost reductions yield enough additional gross margins for the company to further reduce the price of the product over time, in response to increases in the level of competition.

Key Features of Target Costing:

- The price of the product is determined by market conditions. The company is a **price taker** rather than a **price maker.**
- The minimum required profit margin is already included in the target selling price.
- It is part of management strategy to focus on cost reduction and effective cost management.
- Product design, specifications, and customer expectations are already built in while formulating the total selling price.
- The difference between the current cost and the target cost is the **"cost reduction,"** which management wants to achieve.
- A team is formed to integrate activities such as designing, purchasing, manufacturing, marketing, etc. to find and achieve the target cost.

Advantages of Target Costing:

- It shows management's commitment to process improvements and product innovation to gain competitive advantages.
- The product is created from the expectation of the customer and hence cost is also based on similar lines. Thus, the customer feels more value is delivered.
- With the passage of time, the company's operations improve drastically, creating economies of scale.

- The company's approach to designing and manufacturing products becomes market-driven.
- New market opportunities can be converted into real savings to achieve the best value for money rather than to simply realize the lowest cost.

Example:
ABC Inc. is a big FMCG player that operates in a very competitive market. It sells packaged food to end customers. ABC can only charge $20 per unit. If the company's intended profit margin is 10% on the selling price, calculate the target cost per unit.

Solution:
Target Profit Margin = 10% of 20 = $2 per unit

Target Cost = Selling Price – Profit Margin ($20 – $2)

Target Cost = $18 per unit

Life cycle costing

Meaning of Life Cycle Costing:
Life cycle costing is a system that tracks and accumulates the actual costs and revenues attributable to cost object from its invention to its abandonment. Life cycle costing involves tracing cost and revenues on a product by product base over several calendar periods.

Life cycle costing is different from traditional cost accounting system which reports cost object profitability on a calendar basis (i.e. monthly, quarterly and annually) whereas life cycle costing involves tracing costs and revenues of a cost object (i.e. product, project etc.) over several calendar periods (i.e. projected life of the cost object).

Thus, product life cycle costing is an approach used to provide a long-term picture of product line profitability, feedback on the effectiveness of the life cycle planning and cost data to clarify the economic impact on alternative chosen in the design, engineering phase etc.

It is also considered as a way to enhance the control of manufacturing costs. It is important to track and measure costs during each stage of a product's life cycle.

2. Characteristics of Life Cycle Costing:

a. Product life cycle costing involves tracing of costs and revenues of a product over several calendar periods throughout its life cycle.

b. Product life cycle costing traces research and design and development costs and total magnitude of these costs for each individual product and compared with product revenue.

c. Each phase of the product life-cycle poses different threats and opportunities that may require different strategic actions.

d. Product life cycle may be extended by finding new uses or users or by increasing the consumption of the present users.

3. Stages of Product Life Cycle Costing:

Following are the main stages of Product Life Cycle:

(i) Market Research:

It will establish what product the customer wants, how much he is prepared to pay for it and how much he will buy.

(ii) Specification:

It will give details such as required life, maximum permissible maintenance costs, manufacturing costs, required delivery date, expected performance of the product.

(iii) Design:

Proper drawings and process schedules are to be defined.

(iv) Prototype Manufacture:

From the drawings a small quantity of the product will be manufactured. These prototypes will be used to develop the product.

(v) Development:

Testing and changing to meet requirements after the initial run. This period of testing and changing is development. When a product is made for the first time, it rarely meets the requirements of the specification and changes have to be made until it meets the requirements.

(vi) Tooling:

Tooling up for production can mean building a production line; building jigs, buying the necessary tools and equipment's requiring a very large initial investment.

(vii) Manufacture:
The manufacture of a product involves the purchase of raw materials and components, the use of labour and manufacturing expenses to make the product.

(viii) Selling

(ix) Distribution

(x) Product support

(xi) Decommissioning:
When a manufacturing product comes to an end, the plant used to build the product must be sold or scrapped.

4. Benefits of Product Life Cycle Costing:

Following are the main benefits of product life cycle costing:
(i) It results in earlier action to generate revenue or lower costs than otherwise might be considered. There are a number of factors that need to be managed in order to maximize return in a product.

(ii) Better decision should follow from a more accurate and realistic assessment of revenues and costs within a particular life cycle stage.

(iii) It can promote long term rewarding in contrast to short term rewarding.

(iv) It provides an overall framework for considering total incremental costs over the entire span of a product.

5. Life Cycle Costing Process:

Life cycle costing is a three-staged process. The first stage is life cost planning stage which includes planning LCC Analysis, Selecting and Developing LCC Model, applying LCC Model and finally recording and reviewing the LCC Results. The Second Stage is Life Cost Analysis Preparation Stage followed by third stage Implementation and Monitoring Life Cost Analysis.

The three stages are:

Life Cycle Costing Process:

LCC Analysis is a multi-disciplinary activity. An analyst, involved in life cycle costing, should be fully familiar with unique cost elements involved in the life cycle of asset, sources of cost data to be collected and financial principles to be applied.

He should also have clear understanding of methods of assessing the uncertainties associated with cost estimation. Number of iteration may be required to perform to finally achieve the result. All these iterations should be documented in detail to facilitate the interpretations of final result.

Stage 1: LCC Analysis Planning:

The Life Cycle Costing process begins with development of a plan, which addresses the purpose, and scope of the analysis.

The plan should:

i. Define the analysis objectives in terms of outputs required to assist a management decision.

ii. Make the detailed schedule with regard to planning of time period for each phase, the operating, technical and maintenance support required for the asset.

iii. Identify any underlying conditions, assumptions, limitations and constraints (such as minimum asset performance, availability requirements or maximum capital cost limitations) that might restrict the range of acceptable options to be evaluated. Identify alternative courses of action to be evaluated.

iv. Identify alternative courses of action to be evaluated. The list of proposed alternatives may be refined as new options are identified or as existing options are found to violate the problem constraints.

v. Provide an estimate of resources required and a reporting schedule for the analysis to ensure that the LCC results will be available to support the decision-making process for which they are required.

Next step in LCC Analysis planning is the selection or development of an LCC model that will satisfy the objectives of the analysis. LCC Model is basically an accounting structure which enables the estimation of an asset components cost.

Stage 2: Life Cost Analysis Preparation:
The Life Cost Analysis is essentially a tool, which can be used to control and manage the ongoing costs of an asset or part thereof. It is based on the LCC Model developed and applied during the Life Cost Planning phase with one important difference: it uses data on real costs.

The preparation of the Life Cost Analysis involves review and development of the LCC Model as a **"real-time"** or actual cost control mechanism. Estimates of capital costs will be replaced by the actual prices paid. Changes may also be required to the cost breakdown structure and cost elements to reflect the asset components to be monitored and the level of detail required.
Targets are set for the operating costs and their frequency of occurrence based initially on the estimates used in the Life Cost Planning phase. However, these targets may change with time as more accurate data is obtained, from the actual asset operating costs or from the operating cost of similar other asset.

Stage 3: Implementing and Monitoring:
Implementation of the Life Cost Analysis involves the continuous monitoring of the actual performance of an asset during its operation and maintenance to identify areas in which cost savings may be made and to provide feedback for future life cost planning activities.

For example, it may be better to replace an expensive building component with a more efficient solution prior to the end of its useful life than to continue with a poor initial decision.

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THANK YOU