UNIT 1 - CHAPTER 1

INTRODUCTION TO ACCOUNTING

1.0 OBJECTIVE

- Understand the meaning of some important accounting terminologies.
- Know the basic concepts and objectives of Accounting
- Know the important, need and usefulness of recording of business transactions.
- Understand the meaning of Book-keeping and Accountancy.
- Get the basic knowledge of Accounting Concepts, conventions
- Understand the qualitative characteristics of accounting information with various branches of accounting like financial accounting , cost accounting and management accounting.

1.1 INTRODUCTION:-

Once upon time, every person was happy, as wants were limited. But as wants have increased, every person tried to adjust the resources available for him. In the beginning, commodities were exchanged for commodities. But later on there was evolution of money, commodities were exchanged for money. Activities involving money increased. Overall development took place.

Business activities have also increased along with it and it was very difficult for any business person to remember all the transactions of the day. So there was there was a need to record all business happening in a systematic way and this job recording of transaction has been later on called “book-keeping”.

Definition:-

1) J.R.Batilobi: “Book keeping is an art of recording business dealings in a set of books.”
2) R.N.carter: “Book keeping is the science and art of correctly recording in the books of accounts, all those business transactions that result in transfer of money’s worth.”
3) NoethCott:- “Book keeping is an art of recording in the books of accounts the monetary aspects of commercial or financial transactions.”

1.2 MEANING AND DEFINITION OF ACCOUNTANCY:

Accounting is a wider concept than book-keeping. Book-keeping is the recording branch of Accountancy. Accountancy includes Book-keeping and classifying summarizing and interpreting of the business transactions. It makes easy to take decision relating to business. Accountancy starts where book-keeping ends.

Definitions:

1)“Accountancy refers to the entire body of the theory and process of accounting.” By **Kohler.**

2)“An act of recording, classifying and summarizing the business transaction, balancing of accounts, drawing conclusions and interpreting the results thereof”.

3)**Prof.Robert N.Anthony** has defined accounting as “Nearly every business enterprise has an accounting system. It is a means of collecting, summarising, analyzing and reporting in monetary terms information about the business transactions.”

1.3 BASIS OF ACCOUNTING:

Cash Basis: Accounts are maintained on various basis. Cash basis is one of the most popular basis whereby income is recorded when cash is actually received and expenses are recorded when cash is actually paid. Every cash comes in business and every cash goes out from business is recorded.

Accrual Basis: Income is recorded when it accrues (is earned) and expenses are recorded when they become payable. Cash as well as credit transactions are recorded. Accrual basis records income and expenses they are earned or incurred and not as per amount received or paid. This is also known as "Mercantile Basis of Accounting".

1.4 QUALITATIVE CHARACTERISTICS OF ACCOUNTING INFORMATION:

Accounting means the numerical qualitative presentation of business transactions of financial nature. While recording accounting information in the books of accounts, we must observe the following qualitative characteristics of accounting:

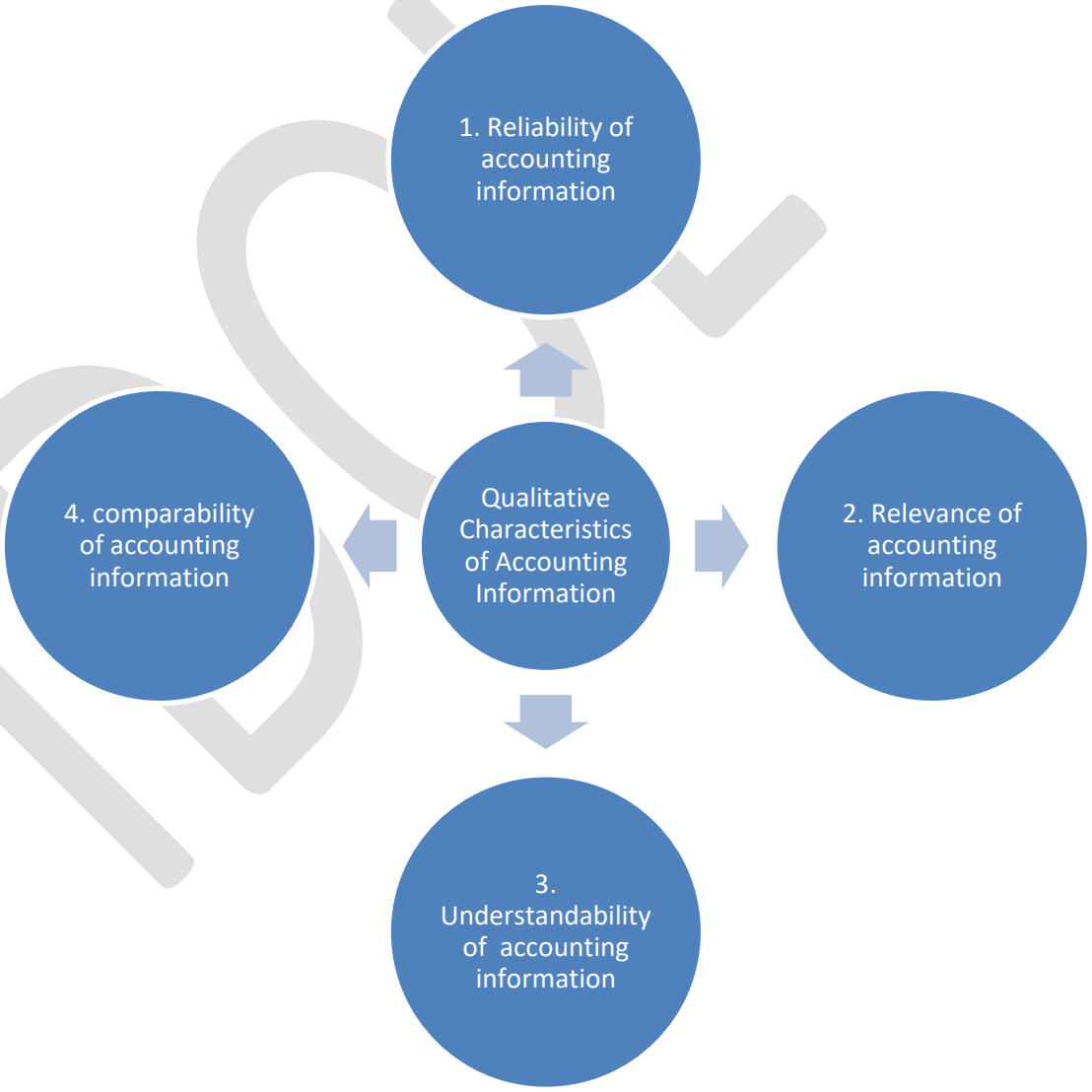

Figure 1.1 : Qualitative characteristics of Accounting Information

1. Reliability of the accounting information:

The important qualitative characteristic is its reliability. It means that every accounting information should be based upon verifiable documentary evidence. It shows that accounting

facts should be presented in an unbiased way. The reliability requires that the accounting facts should be presented in an unbiased way. The reliability requires that the accounting information must possess the features of verifiability, neutrality and faithfulness.

2. Relevance of the accounting information:

The accounting information disclosed by the books of accounts and financial statements must be relevant. It means that accounting information should not contain unnecessary and irrelevant information. All the information is said to be relevant which would have changed the results of the business if disclosed i.e. every useful important and relevant information must find a place in the books of accounts and the information must have timelessness, dedicative and feedback value.

3. Understandability of the accounting information:

Accounting information should be recorded presented and interpreted in such a way that it should be easily understood by its users. The information must be concise, clear, brief, exact and suitable to its users like management, shareholders, workers, employees, economist, analyst's researchers, government, etc.

4. Comparability of the accounting information:

It is one of the important characteristics of accounting information. In order to bring accuracy in the comparison methods and practice of recording and presenting accounts, information should be consistent and must not change from year otherwise comparability will suffer.

1.5 BRANCHES OF ACCOUNTING:

In order to satisfy the needs of different people interested in the accounting information, different branches of accounting have been developed.

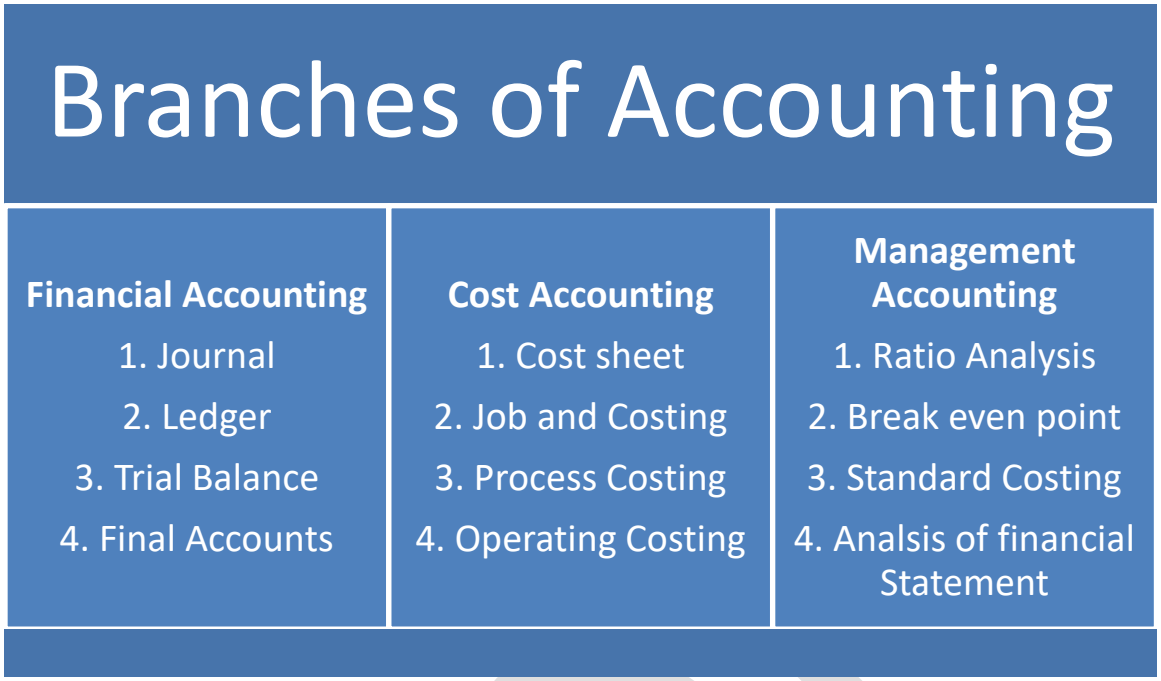

Figure 1.2: Branches of Accounting

1. Financial Accounting:-

It is the original form of accounting. It is mainly confined to the presentation of financial statements for the use of outsiders like creditors, banks and financial institutions. It is the process of identifying, measuring recording. Classifying, summarizing, analyzing, interpreting and communicating the financial transactions and events through financial statements.

The purpose of this branch of accounting is to keep systematic records to ascertain financial performance and financial position and to communicate the accounting information to the interested parties. The financial statements i.e. profit and loss Account and the Balance Sheet show them the manner in which operations of the business have been carried out during a specified period.

2. Cost Accounting:- It is the process of accounting and controlling the cost of a product, operation or function. The purpose of this branch of accounting is to ascertain the cost, to control the cost and communicate information for decision.

3. Management Accounting:-It is an accounting for the management i.e. accounting which provides necessary information to the top level management for discharging its functions. Management accounting covers various areas such as cost accounting, budgetary control, inventory control, statistical methods, internal auditing etc. the purpose of this branch of evaluate the impact of its decision and actions.

1.6 BASIC ACCOUNTING TERMINOLOGIES:-

It is very much essential to understand some common terms which are frequently used in the world of Accountancy

1.6.1 Business Transaction:

Any dealing of a business that involves buying and selling of goods and services in exchange of value may be called as business transaction. Every transaction should affect the financial position of the business and it should be measured in terms of money.

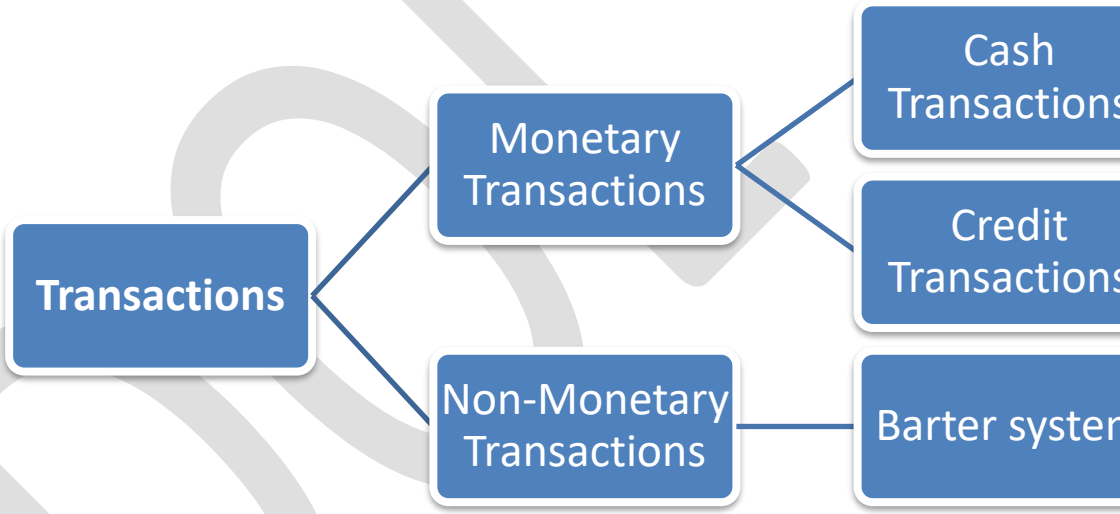

Figure1.3: Transaction Type

1. Monetary Transactions:

The transaction which involves an exchange of money's worth directly or indirectly is called monetary transactions. Only monetary transactions are recorded in the books of accounts.

I) **Cash Transactions:**

Financial benefit is exchanged for cash only. Payment or Receipt or Chequeis involved at the time of transaction only.

e.g. : i) Paid Salary ₹5,000/-

ii) Purchase of machinery on cash for ₹40,000/-

II)Credit Transaction:

In business transaction where payment or receipt of money is postponed to a future date, it is called as a credit transaction. It does not involve receipt or payment of cash on the spot. The financial benefit is exchanged for cash receivable or payable in future.

e.g.: i) Purchased goods worth ₹10,000/- from Sunita on credit

ii) Sold furniture to Minakshi on credit ₹20,000/-

2. Non-Monetary Transaction:

The transactions which do not involve an exchange of Money are Money's worth directly or indirectly are called as Non-Monetary transactions. Non-monetary transactions are not recorded in the books of accounts. e.g. An exchange of one thing against another thing called Barter System.

i) Entry:

Recording of a transaction in the proper form or method in the books of accounts is called an entry. It is first record of any business transaction in the books of accounts.

ii) Narration:

A brief explanation of the business transaction for which an entry is passed is called as a narration. It is always given in a bracket just below the entry and it starts with a word 'Being'.

1.6.2 Goods:

The commodities or articles in which the trader deals are called as goods for that business. These are purchased or manufactured for the purpose of sale to earn profit.

e.g.: 1) Tables, Chairs are the goods for furniture dealers.

2) Cloth is kind of goods for a cloth merchant.

3) Books are the goods for the Bookseller.

1.6.3 Profit or loss

1.Profit: Excess of income over the expenses during the accounting year is called profit.

e.g.: If goods are sold for ₹1, 00,000/- and all expenses during the period amounted to ₹60,000/- Then the profit is ₹40,000/-.

2. Loss: Excess of expenses over the income is called loss.

e.g.: If good are sold for ₹1, 00,000/- and all expenses during the period amount to ₹1, 20,000/- then the loss will be ₹20,000/-.

3. Operating Profit: It is the excess of gross profit over operating expenses. Gross Profit is the excess of net sales revenues over cost of goods sold. Operation expenses include office and administration expenses, selling and distribution expenses, financial expenses etc. net Sales means Cash Sales+ Credit sales –Sales Return.

i) Operating Profit = Gross Profit- Operating cost

ii) Operating Cost = Administrative and office and selling and distribution Expenses and Financial Expenses.

4. Non-operating profit:

The excess of non operating revenues over non operating expenses is called as non operating. It arises as result of carrying out non-operating activities. Selling of 'Asset' is not a normal activity but if an organization is selling an asset and earning a profit, it will be a non-operating profit.

e.g.: machinery costing ₹1, 00,000/- sold for ₹1, 40,000/- Here a profit of ₹40,000/- will be a non- operating profit.

5. Normal Profit: When goods are manufactured through various steps, or process output is expected from every process, actual output of one process becomes input of next process. During the normal course, if the quantity is increased it is called as normal gain. It happens under normal circumstances. Normal gain does not affect the normal cost of production.

6. Abnormal Gain:

When goods under production are transferred from one process to another, it is possible that quantity may increase to much more than expectation which is called as 'Abnormal Gain 'Under this situation the actual output is more than the normal or expected output of production. It is also possible when actual wastage is less than the normal wastage. Abnormal gain arises due to rise in the efficiency of the production department.

7. Income: It is revenue arising as result of business transactions.

e.g.: Amount received from sale of goods or providing services to customers. It also includes other items of revenues common to many businesses like: receipt of rent, interest, commission, dividend, etc….

8. Differentiate Profit and Income

Point	**Profit**	**Income**
Meaning	Amount received over and above the cost is called as profit	Any revenue is called as an income.
Equation	Profit= Selling price – Cost price	No such equation is required for income.
Example	Goods costing ₹5,000/- sold for ₹7,000/- in the said transaction ₹2,000/- is profit.	A portion of the office is subletted for ₹1,000/- per month. ₹12,000/- will be an income for the year on account of rent received.

1.6.4 Assets, Liabilities, Net Worth:

1.6.4.1 Assets

Property of any kind owned by businessman is called an asset. The ownership of the Asset must be with business unit. Example:- Land, Building, Plant, Machinery, Furniture, Motor car etc.

1.6.4.2Types of Asset:

a)Fixed Assets:-The assets which give benefit to the business for a long time. These assets are purchased for long use of the business and not for the sale purpose.

E.g: Building, Machinery, Furniture etc.

b) Current Assets:- Assets which emain in the business for only a short time and can be converted into cash very easily are called as current assets

e.g.: Debtors, Bills Receivable etc.

c) Fictitious Assets:- These assets are not represented by tangible possession or property. They are imaginary assets but do not have any exchange value.

e.g: Preliminary Expenses, Deferred revenue expenses like advertisement paid for 4 years.

1.6.4.3 Liabilities: Total amount payable by the business to others is known as liability. It is a debt or amount due from the business to others for the benefit received by the business unit.

e.g.: Loan taken, Creditors, Bank Overdraft, etc.

1.6.4.4 Types of Liabilities

a)Fixed Liabilities:-One of the major source of funds in the business is fixed liabilities. It may be in the form of secured loan like debentures, bonds, loans from banks, loans from financial institutions, etc.

b) Current liabilities:- Short term liabilities payable within a year are called current liabilities. They constitute short term source of finance. Current liabilities arise in the regular current operations of the business. These liabilities are not normally secured.

e.g: Creditors, Bills Payable etc…

1.6.4.5 Net worth or Owners Equity or Capital:

The amount of fund provided by the proprietor in the business is called as "capital" as well as the excess of assets over liabilities of the business is known as "Capital" or "Net Worth". According to business entity concept business and its owners have separate entities.

Net worth includes Capital and reserves. Net worth= Owner's Equity= Capital

OR

Owner's Equity (Capital) = Total Equity (Assets)- Creditors Equity (liabilities)

e.g: a) If the Capital of the business is ₹3,00,000 and Creditors ₹1,00,000 then

b)Total Equity (Assets) = Liabilities+ Capital

₹4, 00,000=₹1, 00,000 Creditors + ₹3, 00,000 Capital

c) If total assets are ₹2, 00,000 and outside liabilities are ₹ 50,000 then

Creditors Equity (liabilities)

Creditors Equity (liabilities) = Asset – Capital

₹50,000= ₹2, 00,000 - ₹1,50,000

c)If total assets of the business are ₹5,00,000 & outside liabilities are ₹3,00,000 then owners equity (Capital)

Owners Equity (capital) = Assets – Liabilities

₹2, 00,000 = ₹5, 00,000 – ₹3, 00,000

1.6.5 Contingent Liabilities:

A liability which may arises in future depends on happening or non happening of certain event is called as contingent liabilities.

As it is not confirmed or perfect liability, it does not affect the financial position of the business and therefore, it is not shown on the liability side of the balance sheet. But it is shown by way of foot note to Balance Sheet simply as information.

e.g. A worker makes a claim for compensation of ₹10,000/- against the business and the decision is pending in the court. It may be a future liability for business on happening of an even i.e. “court Order”

1.6.6 Capital and Drawings:

a) Capital:-The total amount invested into the business by the owner is called capital. In accounting sense excess of assets over the liabilities is also called as capital. The equation for this is:-

Capital= Asset-liabilities

Capital is a liability of the business as this amount is payable by the business unit to the owner of the business.

b) Drawings:-If the owner withdraws any money or goods or assets from the business for his personal use, it is called as drawings.

e.g.: A proprietor pays college fees of this son, takes his family foe tour and paid petrol charges from business.

1.6.7 Debtors and Creditors:

Debtors:-A person who has to pay to the business for getting goods and services on credit is known as debtor is a person who owes money to the business.

Creditors:- A person to whom we owe money for the goods or services is known as creditor. In other words a creditor is a person to whom business owes money.

e.g: Mr. 'A' sold goods of ₹5,000/- on credit to Mr. 'B'.In this transaction Mr. 'B' is the debtor of Mr. 'A' and Mr. 'A' is the creditor of Mr. 'B'

1.6.8 Expenditure and Types of Expenditure:

Expenditure:- An amount paid for any consideration received by business is called expenditure.

i) Capital Expenditure: This expenditure is incurred to acquire fixed asset or to increase the value of fixed asset. It gives the benefit for a long period of time and it is non-recurring in nature.

e.g: Purchase of machinery, extension to building, of computer, vehicles, etc.

(ii) Revenue Expenditure

Revenue expenditure is an expenditure from which no future benefit is expected but having immediate or short term benefit may be less than one year. It does not increase profit earning capacity of an organization. These are normal day to day operating expenses of a business organization and appear on the debit side of Trading A/c. or Profit & Loss Ac.

e.g. Rent paid, salary paid, wages paid, etc.

(iii) **Deferred Revenue Expenditure:**

An expenditure which is basically revenue in nature but benefit of which is not exhausted within one year is called as Deferred Revenue Expenditure. Such expenditure is written off over number of years. Such written off amount is shown on debit side of profit and loss a/c and unwritten amount is shown on asset side of the Balance Sheet.

e.g: Heavy expenditure on advertising, heavy legal expenses.

1.6.9 Cash Discount and Trade Discount:

1.Cash Discount: It is the amount deducted from the amount due at the time of receipt. It is the concession encouraging for prompt payment. It is given either on the spot payment or payment within an specific period. Cash Discount is calculated after deducting trade discount, since it is loss to the seller and gain to the buyer, it is always recorded in the books of accounts.

2. Trade Discount:-It is the amount deducted by the seller from the list price of goods at the time of sale. It help a retailer to sell the goods at printed price and yet make the profit. Therefore, it is not required to be recorded in the books of accounts.

1.6.10 Accounting year:

It is the period of 12 months for which accounts are kept and closed by the proprietor. Earlier the proprietors were allowed to follow any accounting year i.e. Calendar year, or financial year or any other year as per tradition. But now for income tax purpose an accounting year starts on 1st April and ends on 31st March. At the end of accounting year a proprietor has to prepare Trading account, Profit and Loss account and Balance Sheet to find out the financial position of the business.

1.6.11 Goodwill:

Goodwill means a reputation of a business valued in terms of money. It is an intangible asset for the business. It is nothing but the 'name' established in the market by a specific business unit. It is an extra value attached to the business in addition to the value of its tangible assets. Goodwill does not have actual physical existence.

1.7 ACCOUNTING CONCEPTS, CONVENTIONS AND PRINCIPLES:

Book keeping and Accountancy is an art of recording, classifying and summarizing transactions of business concern in a systematic manner. If there is no uniformity in the principles followed by different business organization preparing accounts, nobody will be in a position to interpret the financial statements and draw the conclusions. Auditors will also find it difficult to check the accounts without knowing the principles followed while preparing the same. Therefore accounting principles are those rules which are to be adopted by the accountants.

These generally accepted accounting principles are confirming established practices and procedures in term of recording transactions. These principle are usually developed by professional accounting bodies.

1.7.1 Meaning of Accounting concept:- Accounting is the language of business. In the absence of systematic approach, accountants may use their own language and it may not be understood in the same sense by all concerned parties. With a view to make accounting language a standard language, certain accounting concepts have been developed over a course of period. Accounting concepts are general guidelines for sound accounting practices.

Importance of Accounting concept:-

1. Reliable financial statements

2. Uniformity in presentation

3. Generally acceptable basis of measurement

4. Proper information to all

5. Valid and appropriate assumptions

Some of the important concepts are as follows:

1.7.2 Business Entity

The business unit is separate from its owner is the basic meaning of entity. Under this concept sole trading concern and sole proprietor are rated as two different entities. According to the concept only business transactions are recorded in the business book of accounts.

e.g: Half of the building is used for business office and other half of the building is used for the residence of the proprietor. If the total rent of the building is Rs.40000 then only Rs. 20000 will be deducted as drawings from proprietor's capital.

1.7.3 Money Measurement:

There is a need to express business transactions in common unit of measurement. Every transaction is recorded in terms of money. In Indian currency 'Rupee' because of this concept only monetary items are recorded.

e.g.: A businessman owns following properties

Land 20,000sq.Mtrs. Cost ₹. 5, 00,000/- Building 40 Rooms, Cost ₹. 7, 00,000/-

Raw material 4 Tonnes, Cost ₹4, 00,000/-

Here total assets will be recorded by common unit of money measurement and will be valued at ₹16, 00,000/- in the books of accounts.

1.7.4 Cost concept:

An asset is recorded in the books at the value of its price paid at the time of its purchase cost paid will be the base for all further accounting. The said asset may have different value in future realizable value or replacement value or latest value or present value or recording of fixed asset and current assets at their proper values.

e.g: Building is purchased for ₹ 500000 and same cost has been recorded in the books. In case the market value goes to ₹1,50,000/- or ₹2,00,000/- It will not be considered.

1.7.5 Consistency concept:

Any policy adopted for accounting should be continuous or consistent throughout the business and it need not be changed generally unless and until circumstances demand. However it does not stop any improvement of new techniques. But that should be disclosed with a note.

e.g: A company adopts fixed installment method for charging depreciation on fixed asset from the beginning till the end of estimated life of asset.

1.7.6 Conservatism:

While recording the business transactions we have to anticipate no profit but provide for all possible losses. It encourages the certain secret reserve by making excess provision to prevent losses the income statement may show lower income and the Balance Sheet overstates the liabilities and understates the assets. This policy of recording is asking the accountant 'to play safe' while writing the accounts.

e.g.: The closing stock in the factory is valued at ₹ 25,000/- at cost price and ₹ 35,000/- at its market price. But while recording in the books the valued of ₹ 25,000/- will be considered being the lowest of all.

1.7.7 Going Concern:

It is the basic assumption that business will continue for a quite long time, it will go on and will not be closed down or stopped for a quite long time. Business is not to be closed at its early stage but should give a long life. This principle helps many invest, many suppliers to give credit, many workers or employees to gives services.

e.g: A stall for marketing of any product or introduction of new product of any business has to be closed immediately after the exhibition is over. But once the business is set up, it continues for a long time.

1.7.8 Realization:

Income is recorded only when it is realized i.e. either it is received or earned. Revenues are recorded only when sale are effected during the accounting period irrespective of the fact whether cash is received or not.

E.g. 1) A company gets an order for sale of goods ₹ 1, 00,000 in May 2011 goods of only ₹ 60,000 are sold and delivered in June 2011. Cash is received for ₹ 60,000/- in Sept., 2011.

2) A businessman purchased 2 washing machines from manufacturers for ₹ 15,000/- each. One out of two is sold for ₹ 17,000/- and earned a profit of ₹ 2,000/-. The other one is not sold out but still he can't anticipate and record a profit of ₹ 2,000/- on the second machine unless and until a sale is realized.

1.7.9 Accrual:

Income is recorded when it accrues (earned) and expenses are recorded when they accrue (become payable). All expenses and related to the accounting period are to be considered irrespective of the fact the revenues are received in cash or not or not.

E.g: A company invested ₹ 1, 00,000 with a bank for one year on 1stoct, 2010. Bank has to pay interest at 10% p.a. on its maturity i.e. on 30th Sept. 2011

As per the principle of accrual interest of 6 months is ₹ 5000(100000x10/100x6/12) to be shown as "Interest Accrued" on the credit side of Profit and Loss account during financial year 1st April 2010 to 31st March 2011.

1.7.10 Dual Aspect:

Every business transaction has two effects and involves exchange of benefits. Benefit received and benefit given both the aspects should be recorded in the books. The system which records such dual aspects in the books is known as Double Entry System.

This principle also considered as the concept of debit and credit. The account where the benefit comes in is debited and the ledger will be equal to all the credits.

1.7.11 Disclosure:

The accounts must disclose all material information. The accounting reports should disclose full and fair information to the related parties. The financial position and performance should be disclosed very honestly to all the users. The financial position and performance should disclose full and fair information to the related parties. The financial position and performance should be disclosed very honestly to all the users. The financial position means the Balance Sheet of the business and financial performance mean business results in terms of profits or losses and income expenses in profit and loss account.

All the information disclosed should be relevant, reliable, and comparable and understood by all the concerned authorities.

1.7.12 Materiality:

It will be very much uneconomical to record small details in accounting. As per this principle relatively important and significant monetary matters are to be recorded. This concept essentially relates to the time, efforts and cost of accounting in relation to the utility of date related. Only those items should be recorded and disclosed in financial statements which have value/ weightage on the determination of financial condition. Unimportant items are either left out or merged with other items or shown as footnotes.

1.7.13 Revenue Recognition Principle:

This principle is mainly concerned with the revenue, being recognized in the Income Statement of an organization. Revenue is the gross inflow of cash receivables or other considerations arising in the course of ordinary activities.

e.g. Sale of goods, rendering of services and use of resources by other, yielding interest royalties and dividends. It excludes the amount collected on behalf of third parties such as certain taxes. In an agency relationship the revenue is the amount of commission and not the gross inflow of

cash receivable or other consideration. Revenue is recognized in the period in which it is earned irrespective of the fact whether it is received or not received during that period.

1.7.14 Matching principle:

Expenses incurred in an accounting period should be matched with the revenues recognized in that period. E.g. if revenue is recognized on all goods sold during a period, cost of those goods sold should also be charged to that period.

This concept is considering accrual basis and therefore considers all adjustments of prepaid expenses, outstanding expenses, accrued revenue and unaccrued revenues. Matching does not mean that expenses, must be identifiable with revenues,. Expenses charges of a period may or may not be related to the revenue recognized in that period. The appropriate costs have to be matched against the appropriate revenues for that accounting period.

1.8 SUMMARY

Book keeping is an art of recording in the books of accounts the monetary aspects of commercial or financial transactions.

Every business enterprise has an accounting system. It is a means of collecting, summarizing, analyzing and reporting in monetary terms information about the business transactions.

Cash basis is one of the most popular basis whereby income is recorded when cash is actually received and expenses are recorded when cash is actually paid. Every cash comes in business and every cash goes out from business is recorded.

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Accounting means the numerical qualitative presentation of business transactions of financial nature. While recording accounting information in the books of accounts, we must observe the following qualitative characteristics of accounting: Reliability, Relevance, Understandability and Comparability of the accounting information.

In order to satisfy the needs of different people interested in the accounting information, different branches of accounting have been developed.

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Any dealing of a business that involves buying and selling of goods and services in exchange of value may be called as business transaction. Every transaction should affect the financial position of the business and it should be measured in terms of money.

Exercise

Q1. Answer in one sentence:

1. What is ‘transaction’?

2. What is Capital?

3. What is meant by goods?

Q.2 Give the word term or phase which can substitute each of the following statements:

1. A person to whom amount is payable.

2. Excess of expenses over income.

3. Expenditure on fixed assets which increases the earning capacity of the business.

Answers:- 1.Creditor 2. Loss 3. Capital Expenditure

Q.3 Select the most appropriate alternatives from those given below and rewrite the statements:

1) Amount which is not recoverable from customer is known as_____.

a) Debts b) Debtors c) Bad Debts d) Doubtful debts.

2) Totaling of Journal or ledger is called as _____.

a) Posting b) Folio c) Casting d) Journalising

3) Accounts must be honestly prepared and they must disclose all material information is known as _____.

a) Disclosure Concept b) Entity Concept c) Cost Concept d) Dual Aspect Concept

Answers:- 1) Bad Debts 2) Casting 3) Disclosure Concept

Q.4 State whether the following statements are true or false:-

1] Accounting is useful only to the owner.

2] The double entry system is based on “Dual Aspect” concept.

3] Cash discount is not recorded in the books of accounts.

Answers:- True: 2, 3 False: 1

Q.5 Answers the following questions:

1) What do you mean by accounting Principles?

2) What are the Objectives of Accountancy?

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UNIT 1 - CHAPTER 2

DOUBLE ENTRY SYSTEM OF ACCOUNTING

2.0 Objectives

- The meaning, features and advantages of Double Entry Book-Keeping System.
- Meaning of Conventional Accounting System.

- Comparison of Double Entry Book-Keeping System with Conventional Accounting System.
- Meaning of account and types of account.
- Rules for different types of accounts for passing entries.

2.1 Introduction

The credit of evolving the present Double Entry system goes to a philosopher turned mathematician Italian merchant "**Luca D Bargo Pacili"** in 1494.This system is based on the fact that there are two aspects of every business transactions. Every transaction involved at least two persons or parties or accounts. One is the receiver of the benefit and the other is the giver of the benefit. If something comes in the business it will go out from other business, recording dual aspects of business transactions in the book of accounts in terms of Debit and Credit is known as "**Double Entry system ".**

According to modern approach every business transaction is concerned with assets, liabilities, capital expenses and revenue individually or collectively. Each transaction increases or decreases one of them or increases in assets and expenses are credited.

2.2 METHODS OF RECORDING ACCOUNTING INFORMATION

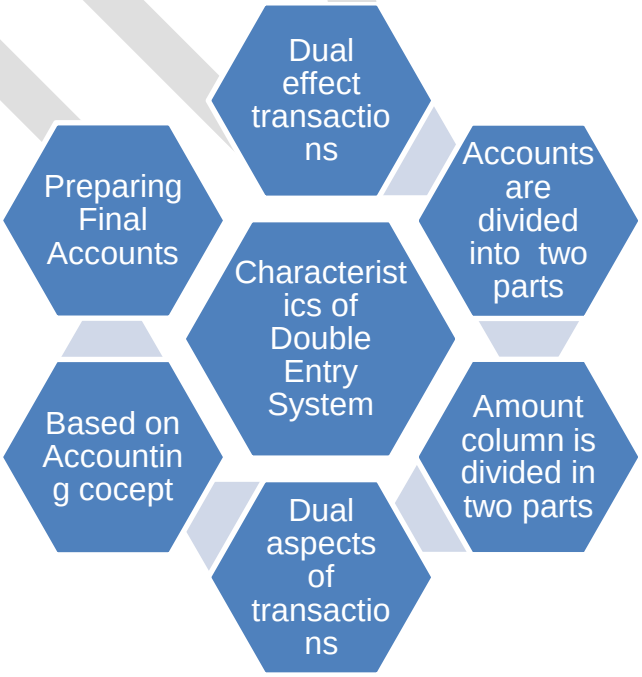

Figure 2.1: Characteristics of Double Entry System of Book -Keeping

There are different methods of recording accounting information. They are as follows.

1) Indian system:

It is most conventional system of accounting. It is also called Mahajani Marwadi\Deshi Nama system. Under this system records are maintained in Indian Language, such as Marathi, Hindi, Mardwadi, Urdu, etc. Transactions are recorded in long books known as kird and Bahi Khata. This system of accounting is not based on Double Entry system. Though this system is not scientific, it is still being used in India in small sized business.

2) English Entry System:

A) Single Entry System-Under this system only Cash Book and Personal Accounts, are maintained. This system is known as incomplete system of recording because it changes with the convenience of businessman for recording transactions. Therefore it is not a scientific and complete method of recording. It cannot provide accurate information about the financial position of business. It is unscientific method having number of defects. It is suitable to small traders.

Due to above limitations now single entry system y system is rarely used is modern business.

B) Double Entry System: Double Entry System of Book-Keeping has emerged in process of evolution of various accounting techniques. It is the most perfect, scientific and complete system of recording business transactions. It assumes that every transaction has two aspects. These two aspects affect two accounts.

2.3 DOUBLE ENTRY SYSTEM

Definition of Double Entry System:

Some of the important definitions of Double Entry System are,

"Every business transaction has a two fold effect and that it affects two accounts in opposite directions and if a complete record is to be made of each such transaction it would been necessary to debit one account and credit another account. It is this recording of two fold effect of every transaction that has given rise to the term Double Entry"-**J.R.Batliboi**

"The Double Entry System seeks to record every transaction in Money or Money's worth in its double aspects- the receipt of a benefit by one account and the surrender of a like benefit by another account, the former entry being to the debit of the

account receiving and the later to the credit of the account surrendering." **William Pickles.**

Principles of Double Entry System:

Following are the main principles of double entry system of book-keeping.

1. In every business transaction there are minimum two aspects.
2. These two aspects involve two accounts.
3. Out of these two accounts one is the receiver of the benefit and other is the giver of benefit.
4. If one account is debited the other account must be credit and with equal amount.

Main Principle: "Every debit has corresponding credit and every credit and every credit has corresponding debit it with equal amount".

2.4 ADVANTAGES OF DOUBLE ENTRY SYSTEM:

1) **Accuracy:** Under this system both the aspects are recorded in the books of accounts. It establishes accuracy in accounting work. Trial balance can be prepared in order to check the arithmetical accuracy of the books of accounts.

2) **Business Result:** This system ensures arithmetical accuracy. Information regarding expenses, losses, income gains assets, liabilities, debtors creditors etc, is readily available. It helps to ascertain profit earned or loss suffered during an accounting period.

3) **Complete Record:** It provides complete record of business transactions Double Entry System being scientific, records both the aspects of each transactions hence it provides complete record.

4) **Comparative Study:** Result of current year can be compared with those of previous years. It facilitates planning for future.

5) **Common Acceptance:** Business records prepared under this system are trusted by financial institutions, Government authorities and others.

The advantages of double entry system can prove that it is systematic and scientific system has been used extensively in all the countries.

2.5 CONVENTIONAL ACCOUNTING SYSTEM:

This system is a traditional method of recording accounting information. Indian system of accounting is the example of conventional accounting system. Under this sytem accounting records are kept in Indian languages, i.e. Marathi, Gujarati, etc. 'Munimji' is a nation wide popular word for an "accountant". Accountant has a full command on the books of accounts. Cash book and journal i.e. Rojmet and Ledger i.e. Khatavani are kept. Left hand side of account is known as credit i.e. Jama. Right hand side is known as debit i.e. Udhar/Nave. As this system does not follow principles of Double Entry System it is known as incomplete system of recording. It is not recognized by law.

2.5.1 Comparison between Conventional Accounting System and Double Entry System of Book-keeping

Point	Conventional Accounting System	Double Entry System
1) Meaning-	This method records incomplete business transactions	This method is scientific and records complete business transactions.
2) Coverage-	It is a method covering less detail of transactions.	This system covers complete details of business transactions
3)Accuracy-	Arithmetical accuracy is not guaranteed.	Arithmetical accuracy is assured.

4)Nature-	It is traditional method of recording business transactions.	It is modern method of recording business transactions.
5)Number of Account Books-	Only two books are prepared. 1) Cash Book 2) Ledger	All subsidiary books/journals and ledger are prepared
6)Recording-	All transactions are basically recorded in only one book i.e. Cash book	All transactions are recorded in different Subsidiary Books/Journal.

2.6 CLASSIFICATION OF ACCOUNTS AND ACCOUNTING EQUATIONS RULES:

2.6.1 Meaning of an Account- An account is summarized record of transactions relating to a particular person, particular asset, and particular liability, particular head of an expense or income or expense recorded at one place. In day-to-day business dealing number of business transactions takes place. It affects the several accounts. At the end of the certain period of time it is necessary for the businessman to balance the accounts to find out the following business information –

1) Total amount of capital in business.
2) Amount spent for the business expenses.
3) Balance of cash in hand and with Banks
4) Fixed Assets and current assets in business.
5) Total Amount of liabilities of business
6) Cash or goods withdrawn by businessman for personal or domestic use.
7) Total amount of income received or receivable by business, etc.

Systematic debit and credit record of above transaction about his business financial position. Its simple form is "T"

2.6.2 Definitions of an Account:

According to J.R. Batliboi: "An account is summarized record of transactions affecting one person, one kind property or one class of gain or losses."

According to Carter: "An account is a ledger record in a summarized form of all the transactions that have taken place with the particular person or thing specified."

Specimen of an Account

Dr.(Left Hand Side) **(Right Hand Side) Cr.**

Date	Particular	J.F	Amount	Date	Particular	J.F	Amount
	Total				**Total**		

An account is divided into two equal parts by drawing a double line in the middle of the account. The left hand side is called debit side (Dr.) and right hand side is called the credit side (Cr.)

2.6.3 Classification of Accounts:

Meaning: Classification of accounts means an act of dividing or grouping or arranging different accounts into certain well defined classes for the purpose of writing entries in the books of accounts. The accounts are classified into personal and impersonal account.

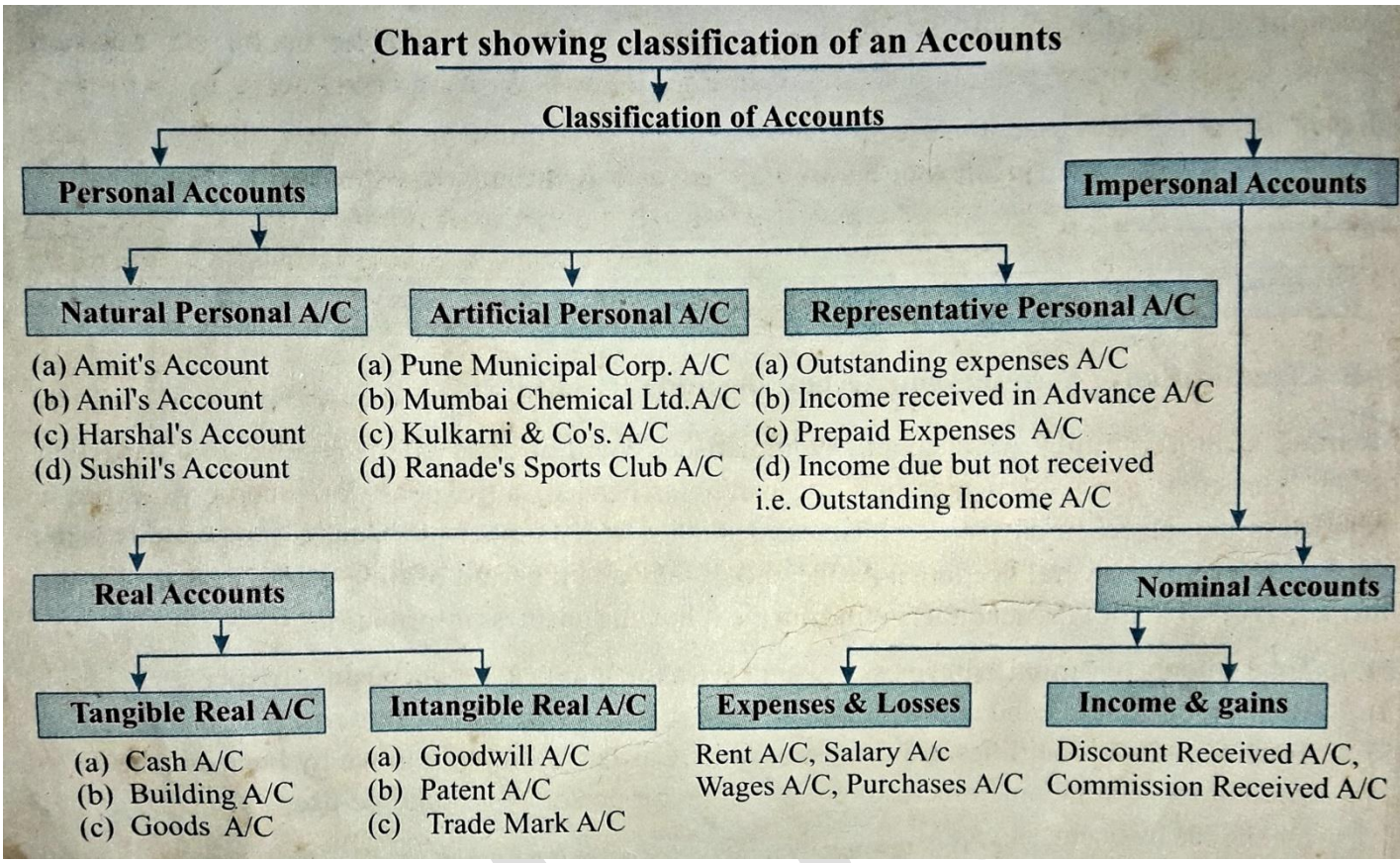

Figure 2.2: Classification of Accounts

Each type of accounts is explained with examples:

1. Personal Accounts: Personal Accounts include the account of person and group of persons with whom the business deals. These accounts can be classified into three categories.

a) Natural Person's Account: The term natural personal account means an account related to individual human-beings. E.g. Ram's Account, Raj's Account, Amit's Account, Sonali's Account etc.

b) Artificial person's Account: These accounts include accounts of organization, associations, institutions which are recognized as an artificial person by law in business dealing. E.g. Sports club account, Insurance Company account, Bank of India Account, Pune Municipal Corp. A/c, Mumbai Chemical A/C, Harsha & Co's. A/C, etc.

c) Representative Personal Accounts: These accounts represent a certain person or group of persons in business dealings. Accounts relating to outstanding and prepaid items are called representative personal accounts.

We have not paid salaries to staff for the last month. Now staff will become creditor of the business because they have provided services. But the return of services is not paid. The salary of these staff will be shown collectively in an account. It will be a personal Account as it represents all the staff e.g. outstanding salary A/c, prepaid insurance A/c, outstanding rent A/c, income received in advance A/c etc.

2. Impersonal Account:

a) Real Accounts: The account which denotes any things, articles or commodities which is visible and tangible is called as real account. This account indicates the value of various assets held by the business e.g. Land and Building, Machinery, Furniture, etc.

This account is subdivided into two parts:

i) Tangible Real Account: Tangible real accounts are those which relate to such things which can be seen touched, felt and measured and have physical existence e.g. cash account, goods account, etc.

ii) Intangible Real Account: This account represents such things which cannot be seen, touched but they can be measured in terms of money. E.g. Goodwill account, patent account, Trademark account, Copyright account, etc.

3. Nominal Accounts: The account of expenses and losses and incomes and gains are called nominal accounts. These accounts exist in name only but they don't represent any tangible thing. E.g. Printing and stationery account, Rates and Taxes account, Salary account, Commission received account, Interest received account, etc.

2.7 MEANING OF DEBIT AND CREDIT

Debit: Debit indicates benefit received by that account and it is recorded to the left-hand side of account which is called as debit side. Recording a transaction on debit side after applying the rules is termed as "debiting an account."

Credit: Credit indicates benefit given by that account and is recorded to the right hand side of an account which is called as credit side. Recording a transaction on the credit side after applying the rules is termed as "crediting account."

2.7.1 Basic Rules of Debit Credit for different accounts

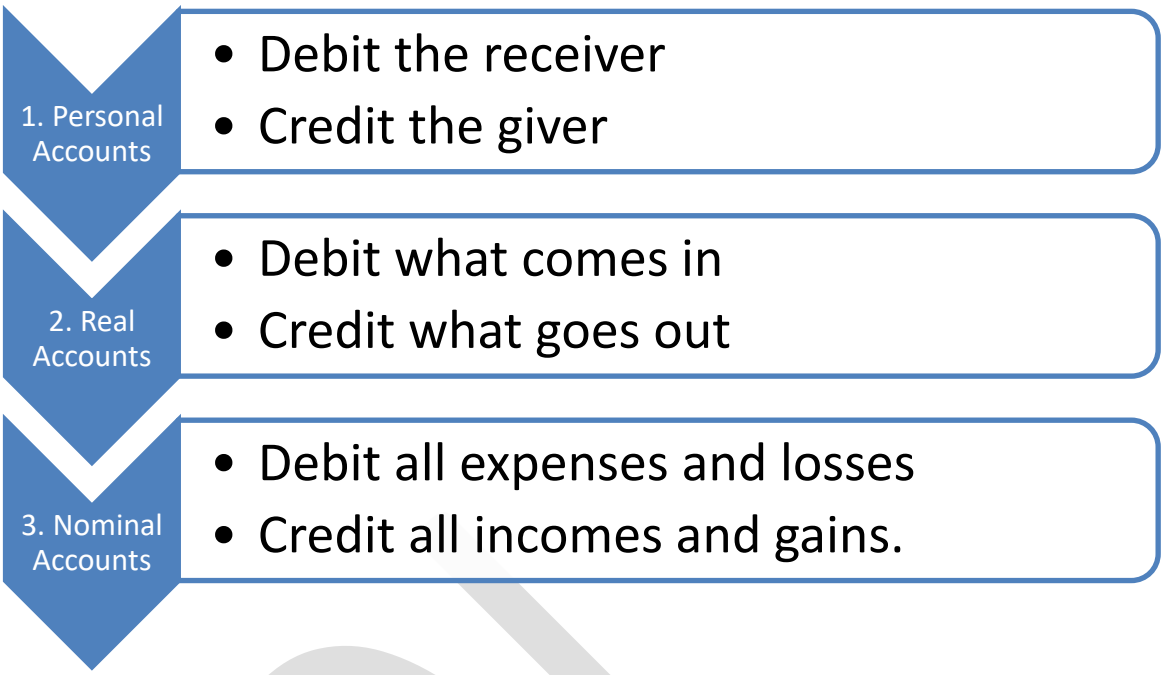

Figure 2.3: Basic Rules of Debit and Credit

Rules of Debit and Credit (Modern Approach)

Assets A/c	**Liabilities A/c**	**Capital A/c**	**Revenues/gain A/c**	**Expenses /Losses A/c**
1.Land	1.Bank Overdraft	1.Ram's capital	1.Dividend received	1. Loss by fire
2.Machinery	2. Creditors	2.Creditors	2.Interest received	2.Audit fees
3.Goodwill	3. Outstanding	3. Outstanding expenses	3. Commission received	3.Printing and Stationary
4.10%Govt.Bonds	4.Bank Loan	4. Bank Loan	4. Profit on sale of asset	4.Wages
Increase (+) debit	Increase (+) debit	Decrease (-) Debit	(-) Debit	Increase (+) Debit
Decrease (-) Credit	Decrease (-) Credit	Increase (+) Credit	Increase (+) Credit	Decrease (-) Credit

In the given chart rules applicable to the different kinds of accounts have been summarized. All accounts are divided into five categories for the purpose of recording the transactions namely (a) Asset (b) Liabilities (c) Capital (d) Expense/losses (e) Revenues/gains.

Two fundamental rules to be followed to record the changes in these accounts.

(1) For recording changes in Assets /Expenses (Losses)

I. Increase in asset is debited and decrease in asset is credited.
II. Increase in expenses/Losses is debited and decrease in expenses/losses is credited

(2) For recording changes in liabilities and capital/ revenues (Gains)

I. Increase in liabilities is credited and decrease in liabilities is debited.
II. Increase in capital is credited and decrease in capital in debited.
III. Increase in revenue/ gain is credited and decrease is revenue/ gain is debited.

Sr. No.	Transaction	Two aspects/ effects	Accounts Involved	Classification of Accounts	Rules Applied	Account to be Debited	Account to be Credited
1.	Started business with cash ₹10,000/-	1)Cash comes in business 2) Proprietor is giver of capital	1) Cash A/c 2) Capital A/c	1)Real A/c 2)Personal A/c	1) Debit what comes in 2)Credit the giver	Cash A/c ------	--------- Capital A/c
2.	Salary paid ₹3,00/- to Amit	1)Salary is an expense 2)Cash goes out	1)Salary A/c 2)Cash A/c	1)Nominal A/c 2)Real A/c	1)Debit the expenses 2) Credit what goes out	Salary A/c ------	------- Cash A/c
3.	Deposited into the Bank ₹ 2,000/-	1)Bank is receiver 2)Cash goes out	1)Bank A/c 2)Cash A/c	1)Personal A/c 2) Real A/c	1) Debit the receiver 2) Credit what goes out	Bank A/c -----	------- Cash A/c
4.	Sold goods for ₹500/-	1)Cash comes in 2)Sales in an income	1) Cash A/c 2)Sales A/c	Real A/c 2)Nominal A/c	1)Debit what comes in 2)Credit the income	Cash A/c --------	------- Sales A/c
5.	Purchased Goods from Amit ₹2,000/-	1)Purchase is an expense 2)Amit is giver	1)Purchase A/c 2) Amit's A/c	1)Nominal A/c 2)Personal A/c	1)Debit the expenses 2) Credit the giver	Purchases A/c -------	-------- Amit's A/c

6.	Received dividend ₹1,200/-	1)Cash comes in 2) Dividend received is income	1)Cash A/c 2)Dividend A/c	1)Real A/c 2)Nominal A/c	1)Debit what comes in 2)Credit the income	Cash A/c -------	-------- Dividend A/c

The following transactions can be explained as follows:

1. Started business with cash ₹ 10,000/- In this transaction cash increases and capital increases by ₹10,000/-

2. Deposited into Bank ₹5,000/- In this transaction Bank balance increases and cash balance decreases by ₹500/-

3. Purchased goods from Sunil on credit ₹1,000/-. In this transaction purchases increases and (Sunil) Liabilities/creditor increases

4. Sold goods to Anil on Credit ₹5,000/- In this transaction (Anil) Debtor increases and sales increases by ₹5000

5. Purchased furniture by cheque by ₹2,000/-. In this transaction (Furniture) Asset increases and (Bank Balance) asset decreases by ₹2,000/-

6. Received cash from Anil ₹2000/-. In this transaction cash increases and (Anil) Debtor/decreases by ₹2000

7. Paid to Sunil ₹2000 by cheque. In this transaction (Sunil) Creditor decreases and Bank Balance decreases by ₹2000

Balance Sheet
As on ----------

Liabilities	**Amount ₹**	**Assets**	**Amount ₹**
Capital	10,000	Cash	7,000
		Bank	1,000
Sundry Creditors	8,000	Stock of goods	5,000
		Sundry debtors	3,000
		Furniture	2,000
		Total	18,000
	18,000		

From the following transactions find out two aspects

(I) 1. Started business with cash ₹ 10,000

2. Purchased goods on credit from Anil ₹ 5,000
3. Sold goods to Sunil for cash ₹ 3,000
4. Paid commission ₹ 5,00
5. Received interest ₹ 2, 00

Sr.No.	**Two Aspects**	
	Aspect I	**Aspects II**
1.	Cash comes in	Proprietor is giver.
2.	Purchases is an expenditure	Anil is giver.
3.	Cash comes in	Sale s is an income.
4.	Commission is an expense	Cash goes out
5.	Cash comes in	Interest received is income

(II) From the above transactions find out two aspects and two accounts.

Sr.no.	**Two aspects**	**Two accounts**	
1.	Cash comes in business Proprietor is giver	Cash A/c	Capital A/c
2.	Purchase (goods)is an expense Anil is giver	Purchase A/c	Anil A/c
3.	Cash comes in Sales is an income	Cash A/c	Sales A/c
4.	Commission is an expense Cash goes out	Commission A/c	Cash A/c
5.	Cash comes in Interest received is an income	Cash A/c	Interest A/c

III) From the above transactions find out two aspects, two accounts, and classify the Accounts.

Sr. No.	Two aspects	Two A/c's	Classification
1.	Cash comes in Proprietor is giver	Cash A/c Capital A/c	Real A/c Personal A/c
2.	Purchase is an expense Anil is giver	Anil's A/c	Nominal A/c Personal A/c
3.	Cash comes in Sales is an income	Cash A/c Sales A/c	Real A/c Nominal A/c
4.	Commission is an expense Cash goes out	Commission A/c Cash A/c	Nominal A/c Real A/c
5.	Cash comes in Interest is an income	Cash A/c Interest A/c	Real A/c Nominal A/c

2.7.2 ILLUSTRATIONS

Illustration-1

State the types of two accounts involved in the following transactions -

1. Started business with cash ₹50,000

Ans-1) Cash Account

2) Capital Account

2. Deposited cash into the Bank ₹ 5,000.

Ans -1) Bank Account

2) Cash Account

3. Purchased goods for cash ₹ 3,000.

Ans-1) Purchases Account

2) Cash Account

4. Paid Rent ₹ 500.

Ans-1) Rent Account

2) Cash Account

5. Cash sales for ₹ 1000

Ans-1) Cash Account

2) Sales Account

Illustration-2

Classify the following Accounts into Personal, Real and Nominal Accounts.

1. Printing and stationary A/c.
2. Bill Payable A/c.
3. Motor Car A/c.
4. Capital Account.
5. Goods destroyed by fire A/c.
6. Life Insurance Corporation A/c.
7. Machinery A/c.
8. Pune Municipal corporation A//c.
9. Good will A/c
10. Repairs and Maintenance A/c
11. Stationery A/c
12. Computer A/c

Personal Account	**Real Account**	**Nominal Account**
2) Bill Payable A/c. 4) Capital A/c 6) Life Insurance Corporation A/c 8)Pune Municipal Corporation A/c	3) Motor Car A/c. 7) Machinery A/c 9) Good will A/c 12) Computer A/c	1) Printing and stationary A/c. 5) Goods destroyed by fire A/c 10) Repairs and Maintenance A//c 11) Stationery A/c

Illustration-3 Classify the following accounts under Personal, Real and Nominal Accounts.

1. Cash Account 2. Unpaid Salary Account 3. Capital Account 4. Fixtures Account 5. Bank Account 6. Octroi Account 7. Prepaid Insurance Account 8. Land and Building Account 9. Loan Account 10. Salary Account 11. Goods stolen by theft Account 12. Copyright Account

Solution-3

Personal Account	Real Account	Nominal Account
2) Unpaid salary A/c 3) Capital A/c 5) Bank A/c 9) Loan A/c	1) Cash A/c 4) Fixtures A/c 8) Land and Building A/c 12) Copyright A/c	6) Octroi A/c 10) Salary A/c 11) Goods Stolen by theft A/c

Illustration- 4 Classify the following accounts in Personal, Real and Nominal Accounts.

1.Prepaid salary Account. 2. Rent Account 3.Unexpired Insurance Account 4. Furniture Account 5. Outstanding Wages Account 6. Bad debts Account 7. Patents Account 8. Drawings Account 9. Amit's Account 10. Leasehold Premises Account 11. Wages Account 12. Insurance Premium Account

Solution -4

Personal Account	Real Account	Nominal Account
1) Prepaid Salary A/c 2) Unexpired insurance A/c 5) Outstanding Wages A/c 8) Drawings A/c 9) Amit's A/c	4) Furniture A/c 7) Patent A/c 10) Leasehold Premises A/c	2) Rent A/c 6)Bad-debts A/c 11) Wages A/c 12) Insurance Premium A/c

2.8 Accounting Equation: Accounting Equation signifies that the assets of a business are always equal to the total of its Liabilities and Capital (owner's equity) the equation is expressed as follow

Assets = Liabilities + Capital or A = L + C

The fundamental equations which gives the foundation to the double entry Book-Keeping

Following are the equations.

Capital = Total Assets - Outsider's Liabilities

Total Assets = Total Liabilities

Assets = Outsider's Liabilities + Capital

Assets = Equities

The properties owned by business are called as assets. The rights to the properties are called Equities. Equities may be sub-divided into two types-

a)The right to the creditors.

b)The right to the owners.

The equity of creditors represent debts of business called as Liabilities. The equity of owner is called capital.

A proprietor is a Debtor for all "Expenses" and Creditor for all "Incomes"

1. Ram Started business with cash ₹60,000

The accounting equation will be

Assets = Capital + Liabilities

Assets = Capital + Liabilities
₹ 60,000 = ₹60,000 + 0

2. Ram purchased Furniture from J.K Co. on credit of ₹ 4000.

The accounting equation will be

Assets = Capital + Liabilities

Cash + Furniture = Capital + Sundry Creditors

₹60,000+ ₹4,000 = ₹60,000 + ₹4,000

₹64,000 = ₹64,000

Here sundry creditor is an outsider's Liability

3.Ram purchased goods for cash ₹10,000

The accounting equation will be

Assets = Capital + Liabilities

Cash + Furniture + Stock = Capital + Sundry Creditors

Old Bal ₹ 60,000+ ₹ 4,000 = ₹ 60,000 + ₹4,000

New Transaction ₹ 50,000+₹ 4,000+₹ 10000 =₹ 60,000 + ₹ 4,000

New Bal ₹ 50,000 + ₹ 4,000 + ₹ 10,000 = ₹ 60,000 + ₹ 4,000

₹ 64,000 = ₹ 64,000

Illustration-1 Give the effects of Assets, Liabilities and Capital with equation.

1. Sushil started business with cash ₹10,000
2. Purchased goods on credit ₹3,000
3. Paid rent ₹500
4. Paid to creditor ₹1,000
5. Additional capital introduced ₹ 5,000
6.

Solution-1

Transaction	**Assets**		**liabilities**	**+**	**capital**
1. Sushil started business with cash ₹ 10,000	10,000	=	0	+	10,000
	10,000	=	0	+	10,000
2. Purchased goods on credit ₹ 3,000	(+)3,000		3,000	+	0
	13,000		3,000	+	10,000

3.Paid rent ₹ 500	(-)500	= =	0	+	(-)500
	12,500		3,000	+	9,500
4.Paid to creditor ₹ 1,000	(-)1000	=	(-)1000	+	0
	11,500	=	2,000	+	9,500
5. Additional capital introduced ₹ 5,000	5,000	= =	0	+	(+)5,000
	16,500	=	2,000	+	14,500

Illustration-2 Show the effects of accounting equation from the following transactions

1. Shri Kamal commenced business with ₹40,000.
2. Paid Rent in advance ₹1,500.
3. Purchased household goods for ₹15,000 giving ₹5,000 in cash and balance through loan.
4. Paid salary ₹500 and Salary outstanding ₹100.
5. Withdrew goods for personal use ₹500.
6. Paid cash ₹500 for loan and ₹300 for interest.

Transaction	**Assets**	**=**	**Liabilities**	**+**	**Capital**
1. Shri Kamal commenced business with ₹40,000.	40,000	=	0	+	40,000
2. Paid Rent in advance ₹1,500.	(-)1,500 (+)1,500	=	0	+	0

	___				
	40,000	=	0	+	40,000
3.Purchased household goods for ₹15,000 giving ₹5,000 in cash and balance through loan.	(-) 5,000	=	10,000	+	(-) 15,000
	_____				
	35,000	=	10,000	+	25,000
4. Paid salary ₹500 and Salary outstanding ₹100.	(-)500	=	(+)100	+	(-) 600
	_____				
	34,500	=	10,100	+	25,000
5. Withdrew goods for personal use ₹500.	(-)500	=	10,100	+	24,400
	_____				
	34,000	=	10,100	+	23,900
6.Paid cash ₹500 for loan and ₹300 for interest.	(-)800	=	(-)500	+	(-)300
	_____ ___				
	33,200	=	9,600	+	23,600

Illustration 3: show the accounting equation on the basis of the following transactions.

1. Anil commented business with ₹20,000.
2. Purchased Furniture for ₹500 in cash.
3. Purchased goods for ₹2,000 in cash.
4. Purchased goods for ₹2,000 on credit.
5. Sold goods costing ₹2,500 on credit for ₹4,000.

6. Paid ₹1,000 for rent and ₹5,000 for Salary.
7. Rakesh withdrew ₹2,000 for personal use.

1. Anil commented business with ₹ 20,000

Assets	**=**	**Liabilities**	**+**	**Capital**
Cash	=	0	+	20,000
20,000	=	0	+	20,000

2. Purchased Furniture for ₹ 500 in cash

Assets	**=**	**Liabilities**	**+**	**Capital**

Cash + Furniture = 0 + 20,000

Old Bal. 20,000 = 0 + 20,000

New Transaction -500+500 = 0 + 0

New Balance 19,500 + 500 = 0 + 20,000

3. Purchased goods for ₹ 2,000 in cash

Assets	**=**	**Liabilities**	**+**	**Capital**

Old Balance Cash + Furniture + Stock = 0 + 20,000

19,500 + 500 + 0 = 0 + 20,000

New Transaction -1,000 + 0 + 1,000 = 0 + 0

New Balance -18,500 + 500 + 1,000 = 0 + 20,000

4. Purchased goods for ₹ 2,000 on credit.

Assets	**=**	**Liabilities**	**+**	**Capital**

Old Balance Cash + Furniture + Stock = 0 + 20,000

18,500 + 500 + 1,000 = 0 + 20,000

New Transaction 0 + 0 + 20,000 = 20,000 + 0

New Balance 18,500 + 500 + 3,000 = 2,000 + 20,000

5. Sold goods costing ₹2,500 on credit for ₹4,000

Assets	=	Liabilities + Capital

Cash + Furniture + Stock + Debtors = Creditor + Capital

Old Bal. 18,500 + 500 + 3,000 + 0 = 2,000 + 20,000

New transaction 0 + 0 -2,500 + 4,000 = 0 + 1,500

New Balance 18,500 + 500+ 500+4,000 = 2,000 + 21,500

6. Paid ₹ 1,000 for rent and ₹ 5,000 for Salary.

Assets	=	Liabilities + Capital

Cash + Furniture + Stock + Debtors = Creditor + Capital +Profit/Presence

Old Bal. 18,500 + 500 + 500 + 4,000 = 2000 + 21,500

New Transaction -6,000 + 0 + 0 + 0 = 0 + (-)6,000

New Bal. 12,500 + 500 + 500 + 4,000 = 2,000 + 15,500

7. Rakesh withdrew ₹ 2,000 for personal use.

Assets	=	Liabilities + Capital

Cash+Furniture+Stock+Debtors =Creditor+Capital +Profit/Presence

Old Bal. 12,500 + 500 + 500 + 4000 = 2,000 + 15,500

New Transaction -2,000 + 0 + 0 + 0 = 0 + (-) 2,000

New Bal. 10,500 + 500 + 4,500 = 2,000 + 13,500

Besides the above explanation for the presentation of financial transaction, explanation is given in International Financial Reporting Standard.

Q 1 Objective type Questions

I) Classify the following accounts under the types of personal, Real and Nominal account.

1) Life Insurance premium A/c
2) Mr. Kulkarni's Capital A/c
3) Goods A/c

4) Loss by fire A/c
5) Export duty A/c
6) Discount A/c
7) Outstanding income A/c
8) Goodwill A/c
9) Deposits with MSEB
10) Loss on sale of machinery A/c
11) Copy right A/c
12) Office Equipment A/c

Answer: 1. Personal Account- 2, 3, 7.

1. Real Account- 8, 9, 11, 12.
2. Nominal Account- 1, 4, 5, 6, 10.

II Give one word, phase or term for the following

1. Business Assets which cannot be seen touched but can be sold for cash.

2. Name the account which is debited when dog is purchased for business security.

3. The amount paid to owner /author of book copyright for the use of book.

4.Name the account which is debited when the proprietor uses business money for domestic use.

Answer:- 1. Intangible Assets 2. Live Stock A/c

3. Royalty 4. Drawing

III State whether the following statement are True or False

1. Loan A/c is Personal account

2. Bank of India is an example of Real account.

3. Commission received is a Nominal account.

4. An order placed for the goods, entry is passed/ recorded in the book of account

Answer: True- 1, 3.

False- 2, 4.

IV Answer in one sentence only

1. What do you mean by debit?

2. State meaning of accounting equation.

3. State whether drawings increases or decreases owner's equity.

4. Give two examples of personal account.

5. What is Nominal account?

Q.2 (1)Show the accounting equation on the basis of the following transactions

1. Mr.Raj commenced business with cash ₹ 50,000

2. Paid Salary ₹ 1,200.

3. Purchased furniture₹5,000

4. Purchased goods from Rakesh for cash ₹ 7,500

5. Sold goods to Suraj Costing ₹ 13,000.

6. Paid Rent ₹ 5,00.

2) Show the accounting equation on the basis of the following transactions

1. Mrs. Pooja Shah started business with cash ₹ 50,000.
2. Purchased goods from Mehak ₹ 30,000.
3. Withdrew goods for personal use ₹ 2,000.
4. Purchased household goods for ₹ 15,000 giving₹5,000 in Cash and balance through loan.
5. Paid Cash ₹ 300 for interest.

3) Prepare chart showing Analysis of the following transactions in a Tabular Form

1. Mr. Nitesh shah started business with cash ₹ 10,000
2. Purchased goods for cash ₹ 1,500.

3. Deposited into Bank of Maharashtra ₹ 1,000.
4. Sold goods to preet ₹5,00.
5. Paid Rent of ₹ 200.
6. Received dividend of ₹ 550.
7. Loan taken from SBI ₹2,000.
8. Withdrew for office use ₹2,000.
9. Paid for repairs ₹150.
10. Paid wages to suraj ₹200.

4) Prepare chart showing Analysis of the following transactions in a Tabular form-

1. Raghav started business with cash ₹ 50,000.
2. Sold goods for ₹ 1,500.
3. Purchased goods for ₹ 1,000 from Amit.
4. Deposited into Bank of India ₹ 5,000.
5. Paid salary of ₹ 1,200.
6. Received commission ₹ 250 from Ram.
7. Purchased goods for cash worth ₹ 750 from Jay.
8. Withdrew ₹500 for personal use.
9. Sold goods to Roshan worth ₹ 1,500.
10. Withdrew money for office use ₹ 1,300.
11. Paid for transportation ₹ 430.
12. Loan taken from Mr.Mehta ₹ 5,000.
13. Paid for advertisement ₹320.
14. Additional capital introduced ₹ 5,000.
15. Received interest on investment ₹ 1,500.

2.9 SUMMARY

Every transaction involved at least two persons or parties or accounts. One is the receiver of the benefit and the other is the giver of the benefit. If something comes in the business it will go out from other business, recording dual aspects of business transactions in the book of accounts in terms of Debit and Credit is known as "Double Entry system **".**

Single Entry System only Cash Book and Personal Accounts, are maintained. This system is known as incomplete system of recording because it changes with the convenience of businessman for recording transactions.

Every debit has corresponding credit and every credit and every credit has corresponding debit it with equal amount.

An account is summarized record of transactions relating to a particular person, particular asset, and particular liability, particular head of an expense or income or expense recorded at one place.

An account is a ledger record in a summarized form of all the transactions that have taken place with the particular person or thing specified.

Personal Accounts include the account of person and group of persons with whom the business deals.

The term natural personal account means an account related to individual human-beings.

These accounts include accounts of organization, associations, institutions which are recognized as an artificial person by law in business dealing.

Accounts relating to outstanding and prepaid items are called representative personal accounts.

The account which denotes any things, articles or commodities which is visible and tangible is called as real account.

The account of expenses and losses and incomes and gains are called nominal accounts.

Debit the receiver, Debit what comes in, Debit all expenses and losses

Credit the giver, Credit what goes out, Credit all incomes and gains

Accounting Equation signifies that the assets of a business are always equal to the total of its Liabilities and Capital (owner's equity) the equation

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UNIT 1 - CHAPTER 3

JOURNAL

3.0 OBJECTIVES

- **Meaning of Journal**
- **Importance of Journal**
- **Utility of Journal**
- **Specimen of Journal**
- **Writing of Journal**

3.1 INTRODUCTION:-

In modern business world a businessman everyday makes several transactions with different parties and completes them in all respects. He keeps different books of accounts for maintaining accounting records. The number of books depends upon the size and nature of business and volume of transactions but important books of accounts which must

be maintained by every businessmen are Journal and Ledger. Journal is one of the books of accounts in which the business transactions are first recorded in a chronological order i.e. date wise in the order in which they take place.

Generally, the following Books of Accounts are maintained by a businessman for recording the business transactions.

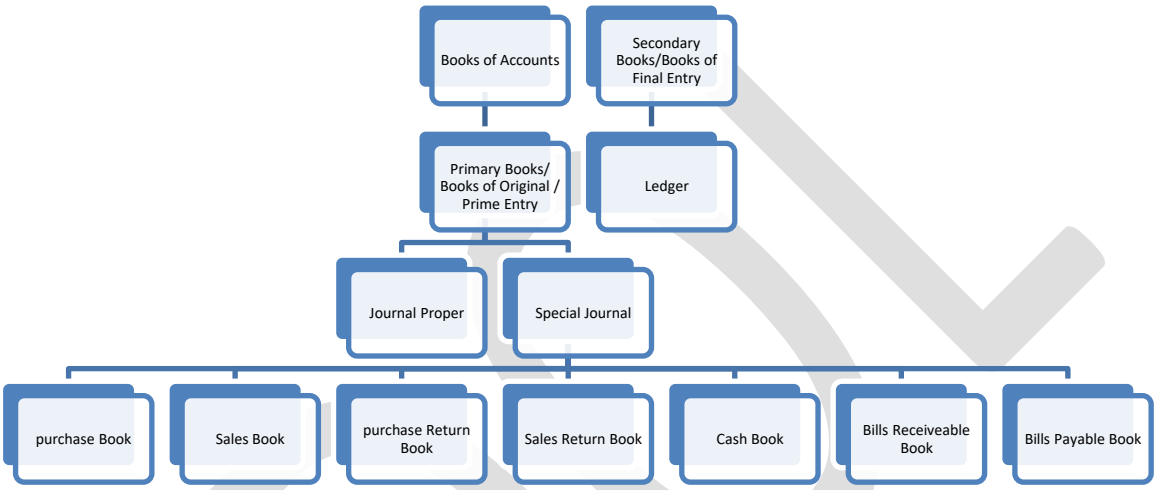

Figure: 3.1 Books of Accounts

A memorandum book is maintained by a businessman but memorandum book is not a part of books of accounts because it does not have a debit or a credit entry. It is used for noting down in brief, the transactions, as and when they take place. Waste book is kept for the sake of memory to make rough notes of the transactions, so that nothing important is omitted.

3.2 MEANING OF JOURNAL:

The word 'Journal' is derived from the French word 'Jour' which means a 'Day'. Therefore journal means a 'daily record'. A journal contains a daily record of business transactions.

Journal is a book of original entry or primary entry because all the business transactions are recorded first in the Journal; in a chronological order i.e. in the order of their occurrence (taking place).

Business transactions are systematically recorded in Journal on the basis of source documents. All the transactions are entered in journal in chronological order as per double entry system.

Definition:

"A journal is a book, employed to classify or sort out transactions in a form convenient for their subsequent entry in the ledger" –**L.C.Cropper.**

A 'journal is a book of "Prime Entry" or Original Entry".

Importance and utility of Journal:

A journal is an important book in Book-Keeping. All the big or small businessmen, keep the journal. The Importance and utility is as follows:-

1. A Complete record of all transactions (i.e. debit and credit aspects of each transaction) is available at one place.
2. When the transactions are recorded date wise, we can take reference quickly and easily of any transaction.
3. Brief explanation of the transaction is called 'Narration to journal entry conveys the details of the entry helps in understanding the transactions which are recorded.
4. Checking of posting of journal entries to ledger is facilitated to ensure the accuracy.
5. As the entries in the journal are made from source documents like receipts, vouchers etc., the court considers the entries in the journal as an evidence in case of any disputes.
6. Arithmetical accuracy of the entries is ensured when the totals of debit and credit amount columns agree.
7. It helps in preparation of final accounts.

3.3 SPECIMEN OF A JOURNAL:

Specimen/Format/Ruling/Performa of journal is given below-

Journal of ----------

Date	Particulars	L.F.	Debit Amount	Credit Amount

Year Month/ Date	Name of the account debited Dr. To Name of account Credited [Being …….]		**xx**	**xx**

Explanation of columns:

1) **Date:** It records year, month and date of every transactions. Then year should be written at the top and below that the month and date should be written.
2) **Particulars:** In particulars column the journal entry is passed in 3 parts i) Debit A/c ii)Credit A/c iii) Narration. It records the name of the account to be debited and the name of the account to be credited. This is decided by applying the rules for Debit and Credit. The account to be debited is always written first. The word "Dr." is written in front of debited account just near L.F. Column. The account to be credited is written on the next line beginning with the word "To" after leaving short space just near date column. Narration is to be written just below the journal entry. "Narration means brief explanation of the Journal Entry". It is always written in the bracket and begins with word, 'Begin'.
3) **Ledger Folio:** Folio means page number and thus leger folio means page number of the ledger. While recording the transaction nothing has to be written in this column. The transactions entered in the journal are posted to the ledger. The page number of the ledgeron which the two accounts appear, are entered in this column, at the time of posting. The Folio number may be written in bold.
4) **Debit Amount:** The amount of debited account should be written in debit amount column against the account debited.
5) **Credit Amount:** The amount of credited account should be written in credit amount column against the account credited.

Casting of Journal: At the end of each page of journal, we take the total of debit amount and credit amount column to check arithmetical accuracy of the transaction. The totals of both the columns must be equal.

After recording journal entries, at the end of each page the total of amount columns is carried forward to the next page by writing the wards Total c/f in particulars column. The next page will

begin with the total brought forward from previous page, by writing the words Total b/f, on the last page of journal 'Grand Total' is cast.

Journalizing:

The process of entering or recording the transactions in a journal is called as journalizing. The record of a business transaction in a journal is called as journal entry. Journalizing records two fold effects of every business transaction in terms of Debit and Credit.

Steps for Journalising :

1. Identification of accounts involved in a aprticular transaction.
2. Deciding the types of accounts involved.
3. Ascertain what rule of debited and credit is applicable for each of the accounts involved.
4. Deciding the account to be debited and the account to be credited.
5. Recording the date of the transaction in the "date column".
6. The name of the account to be debited is to be written in "particulars" column. On first line it is written close to the date column and name of the account to be credited is written on the second line after leaving short space from the date column.
7. The word 'Dr.' is written against the name of the account debited whereas the name of the account to be credited is preceded by the word 'To'.
8. The amount involved in the transaction is written in the 'Dr.'. (i.e. debit) and 'Cr.'. (i.e. credit columns against the name of the debit and accounts respectively.
9. A brief explanation of the entry is given in the bracket just below the entry. It is called "Narration" . it begins with word "Being".
10. A line is drawn below each journal entry in particulars column only to keep the entries of the transactions distinctly separate from each other.
11. L.F. (Ledger Folio) The page on which the particular account is opened in the Ledger is stated under the L.F. column to facilitate easy reference.

Goods Account:

The goods account as such does not appear in the books. It is generally classified as Purchases Ac, Sales A/c, Return outward A/c, Goods distributed as free samples A/c, Goods destroyed by fire A/c, Goods damaged lost in transit A/c, and Goods Pilfered or stolen account.

1) **Purchases:**

Purchases for the business means goods bought for trading/manufacturing activity. There are two types of purchases

i) Cash Purchases

ii) Credit Purchases

i) Cash purchases – When goods are purchased and payment for the same is made to seller immediately, by cash or cheque, it is called cash purchases

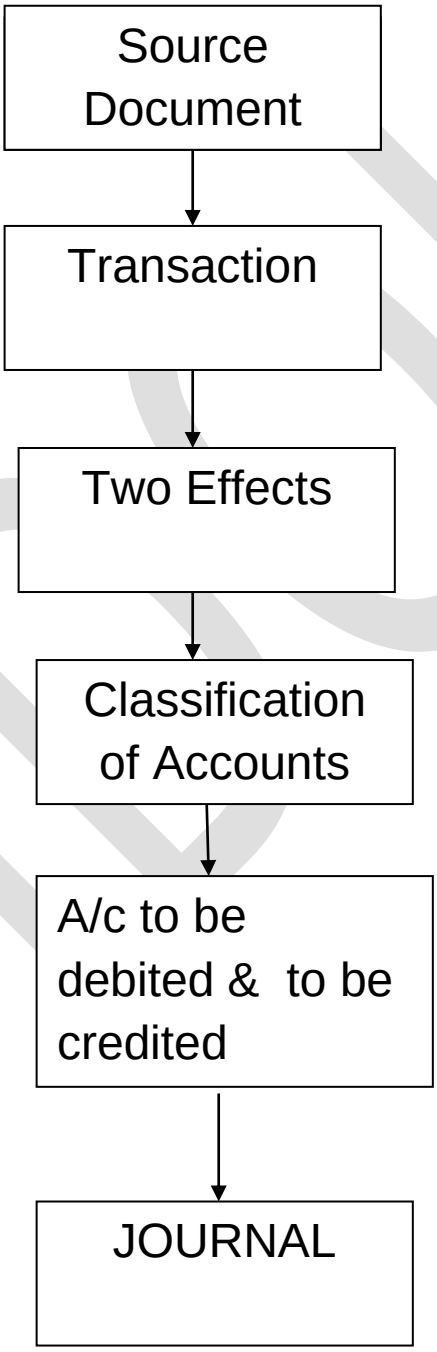

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Figure 3.2: Steps for Journalising

Example 1 : Purchased goods for cash from Arvind worth ₹10000

Journal Entry

Date	Particulars	L.F.	Debit Amount ₹	Credit Amount ₹
Year Month/Date	Purchase A/c Dr. To Cash A/c (Being purchased goods for cash)		10,000	 10,000

ii)Credit Purchases - When goods without making immediate payment to seller i.e. seller allowed a certain period of time to buyer to make the payment in respect of such purchases it is called as credit purchases.

Example 2 : Bought goods from Arvind worth ₹10000 on credit

Journal Entry

Date	Particulars	L.F.	Debit Amount ₹	Credit Amount ₹
Year Month/Date	Purchases A/c Dr. To Arvind 's Ac (being Purchased goods on credit)		10,000	 10,000

Purchase book is maintained mainly tom record the credit purchases of goods only.

2) Return Outward (Purchase Return):

Sometimes goods purchased, are returned to the supplier for various reasons like.

1. Goods are not according to sample.
2. Goods are of inferior quality.
3. Goods are damaged in transit.
4. Goods are defective.
5. Goods are received in excess quantity than ordered.
6. Delay in supply of Goods.

Thus, when gods purchased are returned by purchaser to supplier, it is called as "return outward".

Example 3: Out of the goods purchased in Ex-2goods worth ₹ 4,000 returned to Mr.Arvind

Journal Entry

Date	Particular	L.F.	Debit Amount ₹	Credit Amount ₹
Year Month/ date	Mr. Arvind's A/c Dr. To Return Outward A/c (Begin goods returned)		4,000	 4,000

3) Sales: Sales for the business means goods sold. Sales are classified in the following types-

a) Cash Sales b) Credit Sales.

a) Cash Sales: When goods are sold and money in that respect is received immediately, it is termed as cash sales.

Example 4 : Sold goods worth ₹ 16000 for cash to Mr. Anil.

Entry now as the transaction is on cash basis; Mr. Anil's account will not get affected.

Journal Entry

Date	Particular	L.F.	Debit Amount ₹	Credit Amount ₹
Year Month/ Date	Cash A/c Dr. To Sales A/c (Being sold goods for cash to Mr. Anil)		16,000	 16,000

b) Credit Sales – When goods are sold and money in that respect is to be received after some time i.e. credit period it is called period it is called as credit sales.

Example 5: Sold goods to Anil worth ₹20,000 and he promises that he will make payment after 2 months. Thus 2 months is the credit period allowed to him.

Journal Entry

Date	Particular	L.F.	Debit Amount ₹	Credit Amount ₹

Year Month/ Date	Mr.Anil's A/c Dr. To Sales A/c (Being goods sold on credit)		20,000	 20,000

4) Return Inward (Sales Return) : Sometimes the goods sold to the customer are later returned by that buyer to the Seller. These are called 'Return Inward'.

Example 6: Anil returned goods worth ₹ 6,000 out of goods of ₹ 20,000 purchased by him (Ex.5)

Journal Entry

Date	Particulars	L.F.	Debit Amount ₹	Credit Amount ₹
Year Month/ Date	Return Inward A/c Dr. To Anil's A/c. (Being sold goods returned by Anil)		6,000	 6,000

5) Goods withdrawn by Proprietor

The proprietor may withdraw goods for personal use. In such a case, Drawing Account is debited. The goods withdrawn by Proprietor go out of the business and hence credited.

Journal Entry

Date	Particulars	L.F.	Debit Amount ₹	Credit Amount ₹
Year Month/ Date	Drawings A/c Dr. To Goods withdrawn by Proprietor's Ac or Purchases A/c (Being Goods withdrawn by proprietor)		xxx	 xxx

6) Goods distributed as free sample: It is the value of goods distributed by the firm as free sample for advertising purpose. Advertisement A/c is debited and the goods distributed as sample / purchases A/c is credited as goods goes out of the business.

Journal Entry

Date	Particulars	L.F.	Debit Amount ₹	Credit Amount ₹
Year Month/ Date	Advertisement A/c Dr. To Goods distributed as samples A/c or Purchases A/c (Being Goods distributed as free sample)		xxx	 xxx

7) Goods Destroyed by Fire Accident : If goods are destroyed by fire accident, it is a physical loss of goods for which loss by fire A/c is debited and since goods go out of business, Goods destroyed by fire/purchase A/c is credited.

A) If goods are not insured (Uninsured) :i) When goods destroyed by fire / Accident and insurance company has not accepted the claim

Journal Entry

Date	Particular	L.F.	Debit Amount ₹	Credit Amount ₹
Year Month/Date	Loss by fire A/c Dr. To Goods destroyed by fire A/c (Being Goods destroyed by fire)		XXX	 XXX

B) If goods are insured: i) If full claim is accepted

Journal Entry

Date	Particular	L.F.	Debit Amount ₹	Credit Amount ₹
Year Month/ Date	Insurance Co. A/c (Amt. of claim) Dr. To Loss by fire A/c (Being claim by insurance Co. accepted)		XXX	 XXX

ii)If claim is party accepted

Journal Entry

Date	Particular	L.F.	Debit Amount ₹	Credit Amount ₹

Year Month/ Date	Insurance Co. A/c (Amt. of Claim) Dr. Profit & Loss A/c (Amt. of Loss) Dr. To Goods destroyed by fire Ac (Being Goods Destroyed and Insurance Co. accepted the claim partly)		XXX XXX	XXX

8) Exchange of goods against Asset:

If proprietor purchase any asset and instead of making cash payment to supplier, he offers/gives goods in exchange of the same value to the supplier. It means value of the asset is equal to value goods given.

Example: Purchased Machinery of ₹75,000/- against which goods worth ₹75,000/- were given

Journal Entry

Date	Particular	L.F.	Debit Amount ₹	Credit Amount ₹
Year Month/ Date	Machinery A/c Dr. To Sales A/c (Being machinery purchased in exchange of goods)		XXX	XXX

9) Goods damaged or Lost transit:

While dispatching the goods to the buyer and before it reaches him if there is only damage to the goods in transit due to an accident then it is physical loss of goods.

A) If goods are not insured

Journal Entry

Date	Particular	L.F.	Debit Amount ₹	Credit Amount ₹
Year Month/ Date	Loss in transit Ac Dr. To Goods lost in transit A/c / Purchases A/c (Being goods lost in transit)		XXX	XXX

B)i) If goods in transit are insured & full claim is accepted by insurance co.

Journal Entry

Date	Particulars	L.F.	Debit Amount ₹	Credit Amount ₹
Year Month/ Date	Insurance Co. A/c (Amt. of claim) Dr. To Goods lost transit A/c (Being claim is accepted)		XXX	XXX

ii) If goods in transit are insured and claim is accepted partly by insurance co.

Journal Entry

Date	Particulars	L.F.	Debit Amount ₹	Credit Amount ₹
Year Month/ Date	Insurance Co. A/c (Amt of claim accepted) Dr. Profit & Loss A/c (Claim not accepted) Dr. To Goods lost in transit A/c (Being Goods lost in transit and partly claim is accepted)		XXX XXX	XXX

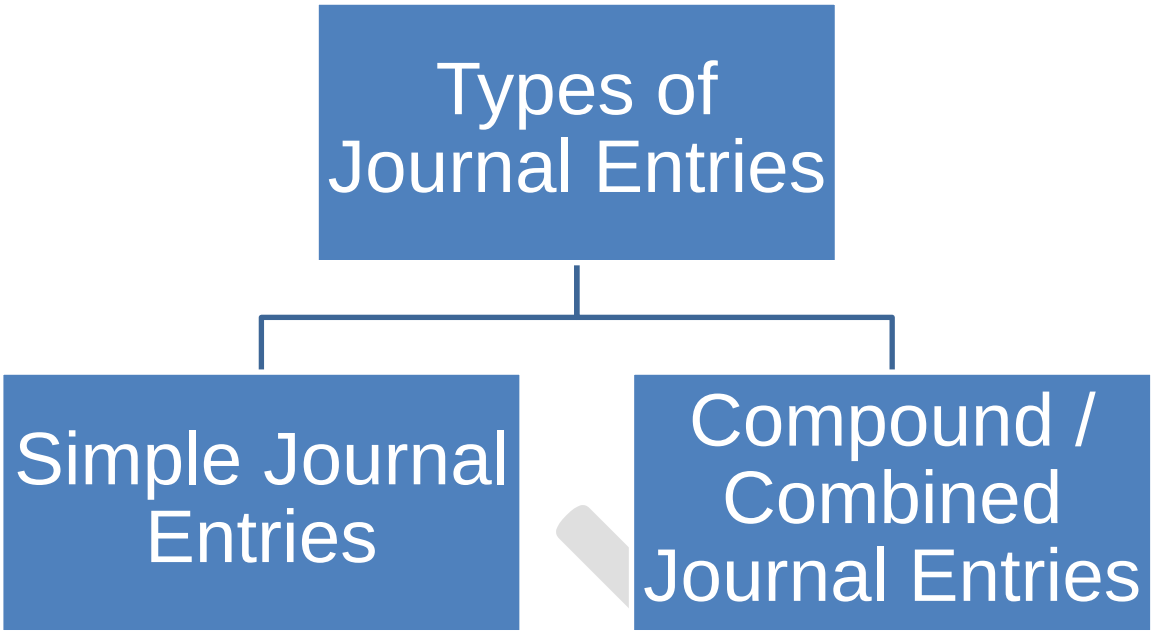
10)Pilfered goods or stolen:

If the goods are pilfered or lost by theft or stolen it becomes physical loss of goods.

Journal Entry

Date	Particulars	L.F.	Debit Amount ₹	Credit Amount ₹
Year Month/ Date	Loss by theft A/c Dr. To Goods lost Ac/ Purchases Ac (Being goods lost by theft)		XXX	XXX

3.4 WRITING OF JOURNAL ENTRIES:



1. **Simple Journal Entry:**

   In a simple journal entry, only two accounts are affected, one account is debited and the other is credited. Few examples of transactions are given below for simple journal entries. The process of journalizing explained above can be practiced with the following illustrations.

Illustration-A

Process of Journalizing:

Transactions	**Two effects**	**Two Accounts**	**Types of Accounts**	**Rules Applicable**	**A/c to be Debited**	**A/c to be Credited**
1. Started business with cash ₹ 200000	Cash Comes in Proprietor is the giver	Cash A/c Capital A/c	Real Personal	Dr. what comes in Cr. The giver	Cash A/c	Capital A/c
2. Purchased Furniture of rs40000 for cash	Furniture comes in Cash goes out	Furniture A/c Cash A/c	Real Real	Dr. what comes in Cr. What goes out	Furniture	Cash A/c
3. Paid for salary rs10000 in cash	Salary is an expense cash goes out	Salaries A/c Cash A/c	Nominal Real	Dr. the expenses/losses Cr. What goes out	Salaries A/c	Cash A/c

Illustration-B

Journal Entries

Date	Particulars	L.F.	Debit Amount ₹	Credit Amount ₹
1.	Cash A/c Dr. To Capital A/c (Being started business with cash)		2,00,000	2,00,000
2.	Furniture A/c Dr. To Cash A/c (Being Purchased furniture for cash)		40,000	40,000
3.	Salaries A/c Dr. To Cash A/c (Being Paid salaries)		10,000	10,000
	Total		2,50,000	2,50,000

Illustration-C

Show the analysis of the following transactions and pass journal entries.

Date Dec, 2011	₹
1 Commenced business with cash	1,10,000
4 Purchased goods for cash	40,000
6 Sold goods for cash	50,000
9 Deposited into Bank of India	60,000
14 Purchased goods from Avinash	10,000
16 Drew cash for personal use	2,000
19 Purchased furniture for cash	21,000
27 Paid salaries	2,000

Solution: C (i)

Chart showing the analysis of transactions

Date	Transaction	Two Accounts Involved	Type of Account	Rules Applicable	Reasons Aspects
2011 Dec.1	Commenced business with cash	Cash A/c Capital A/c	Real personal	Debit what comes in Credit the giver	Cash comes into the business The owner is the giver of cash for his business.
4	Purchased goods for cash	Purchases A/c Cash A/c	Nominal Real	Debit what comes in Credit the giver	Purchases is the expense Cash goes out
6	Sold goods for cash	Cash A/c Sales A/c	Real Nominal	Debit what comes in Credit the income	Cash comes in Sales is income
9	Deposited in to Bank of India	Bank of India A/c Cash A/c	Personal Real	Debit the receiver Credit what goes out	Bank is the receiver of cash Cash goes out
14	Purchased goods from Avinash	Purchases A/c Avinash A/c	Nominal Personal	Debit the expenses Credit the giver	Purchases is an expenses Avinash is the giver of good without receiving amount
16	Drew cash for personal use	Drawing A/c Cash A/c	Personal Real	Debit the receiver Credit what	Owner is the receiver Cash goes out

				goes out	
19	Purchased Furniture for cash	Furniture A/c Cash A/c	Real Real	Debit what comes in Credit what goes out	Asset comes in Cash goes out
27	Paid Salaries	Salaries A/c Cash A/c	Nominal Real	Debit all expenses & losses Credit what goes out	Salary is an expense Cash goes out

Solution: C (ii)

Journal Entries

Date	Particular	L.F.	Debit Amount ₹	Credit Amount ₹
2011 Dec. 1	Cash A/c……Dr. To Capital A/c (Being started business with cash)		1,10,000	1,10,000
4	Purchases A/c……Dr. To Cash A/c (Being goods purchased in cash)		40,000	40,000
6	Cash A/c……Dr. To Sales A/c (Being goods sold in cash)		50,000	50,000
9	Bank of IndiaA/c……Dr. To Cash A/c (Being amount deposited in Bank of India)		60,000	60,000
14	Purchases A/c……..Dr. To Avinash's A/c		10,000	10,000

	(Being goods purchased from Avinash on credit)			
16	Drawing A/c ……Dr. To Cash A/c (Being withdrew cash for personal use)		2,000	2,000
19	Furniture A/c……Dr. To Cash A/c (Being furniture purchased for cash)		21,000	21,000
27	Salaries A/c……Dr. To Cash A/c (Being Salaries paid)		2,000	2,000
	Total		**2,95,000**	**2,95,000**

Illustration-1

Journalise the following transactions in the books of shri.Herambh

2011 April 1 Herambh started business with cash ₹71,000.

2 Purchased goods from Mahesh ₹ 20,000 on credit.

5 Deposited cash into Bank of India ₹ 30,000.

9 Sold goods to Dhanraj ₹ 25,000 on credit.

11 Purchased Furniture of ₹ 10,000 for cash.

14 Paid to Mahesh by cheque of Bank of India ₹ 10,000.

18 Received a Bearer Cheque for ₹ 15,000 from Dhanraj.

30 Paid salary by cheque ₹ 4,000.

Journal of Shri Herambh

Date	Particulars	L.F.	Debit	Credit

			Amount ₹	Amount ₹
2011				
April 1	Cash A/c Dr.		71,000	
	To Capital A/c			71,000
	(Being started business with cash)			
2	Purchases A/c Dr.		20,000	
	To Mahesh's A/c			20,000
	(Being cash deposited in Bank of India)			
	Bank of India A/c		30,000	
5	To Cash A/c			30,000
	(Being cash deposited in Bank of India)			
	Dhanraj's A/c Dr.		25,000	
9	To Sales A/c			25,000
	(Being sold goods to Dhanraj on credit)			
	Furniture A/c Dr.		10,000	
11	To Cash A/c			10,000
	(Being purchased furniture)			
14	Mahesh's A/c Dr.		10,000	
	To Bank of India A/c			10,000
	(Being received a bearer cheque)			
18	Cash A/c Dr.		15000	
	To Dhanraj's A/c			15,000
	(Being received a bearer cheque)			
30	Salary A/c Dr.		4,000	
	To Bank of India A/c			4,000
	(Being Salary paid by cheque)			

	Total		**1,85,000**	**1,85,000**

Explanatory Note:

1.Entry on April 5

As cash is deposited into Bank of India, Bank of India [Personal A/c] is the receiver and cash [Real A/c] is going out. Hence, Bank of India A/c is debited and Cash A/c is credited.

2. Entry on April 14

The amount of cheque ₹ 10,000 will be paid by bank of India to Mahesh who is receiver [personal A/c]. Hence, Mahesh's A/c is debited and Bank of India A/c is giver [Personal A/c] so it is credited.

3. Entry on April 18

A bearer cheque is received from Dhanraj. Bearer cheque received is treated as Cash. As cash is recived [Real A/c] and Dhanraj is giver [Personal A/c], Cash A/c is debited and Dhanraj A/c is credited.

4. Entry on April 30

Since salary is paid by cheque, the Bank of India is giver of cash and salary is the expense of business. Hence, salary A/c is debited [Nominal A/c] and Bank of India A/c is credited. [Personal A/c]

Discount: Discount means an allowance or concession given by the seller of goods to the purchaser. There are two types of discount. i) Trade Discount and ii) Cash Discount.

i)Trade Discount: It is an allowance given on catalogue price of goods. This discount is allowed at the time of purchase/ Sale of goods. The net value of goods purchased/sold is recorded in the books i.e. deducting the amount of trade discount from the catalogue or invoice price. Therefore trade discount is not required to be recorded separately in the books of accounts.

Example-Amit bought goods woth rs10,000from Akshay at 10% trade discount.

Journal Entry in the Books of Amit (Buyer)

Date	Particulars	L.F.	Debit Amount ₹	Credit Amount ₹

	Purchases A/c Dr. To Akshay's A/c (Being bought goods from Akshay at 10% trade discount)		9,000	9,000

Journal Entry in the Books of Akshay (Seller)

Date	Particulars	L.F.	Debit Amount ₹	Credit Amount ₹
	Amit's A/c Dr. To Sales A/c (Being sold good to Amit at 10% trade discount)		9,000	9,000

ii)Cash discount: In any business purchases and sales of goods are made on cash as well as on credit basis. Sometimes goods are purchased and sold on credit basis for a stipulated period. To recover the amount from customer (Debtor) rather earlier or in stipulated time cash discount is given as an incentive. Thus cash discount is an allowance given on sales price to encourage prompt payment of cash. Since this discount is allowed at the time of payment of cash and it is allowed only if the cash is paid within the time limit given, it is required to be recorded separately in the books of accounts. It means that cash discount appears in the books of accounts.

Discount is a nominal account. Cash discount is loss to the creditor and a gain to the debtor (Buyer). Therefore, whenever cash discount is allowed, discount account should be debited in the books of the person who pays cash (Debtor). Thus there could be discount allowed A//c or discount received A/c.

Example 1: Received from Amol ₹ 925 and allowed him discount ₹ 25

Journal Entry

Date	Particulars	L.F.	Debit Amount ₹	Credit Amount ₹
	Cash A/c Dr. Discount Allowed A/c Dr. To Amol's A/c (Being Cash received and discount allowed)		925 25	 950
	Total		**950**	**950**

Example 1: Paid Amar ₹ 690 who allowed discount ₹ 10

Journal Entry

Date	Particulars	L.F.	Debit Amount ₹	Credit Amount ₹
	Amar's A/c Dr. To cash A/c To Discount Received A/c (Being Cash paid and discount received)		700	 690 10
	Total		**700**	**700**

2. Combined Journal Entry

In many transactions, more than two accounts are affected. Hence, the journal entry may not be with only one A/c to the debit and one A/c to the credit.

A journal entry which contains more than one debit or more than one credit or both is called a combined/compound journal entry.

Thus, in a combined journal entry.

i. Several accounts are credited.

Ii.One account is debited and several accounts are credited.

iii. More than one accounts are debited and more than one accounts are credited.

Example 1: Simple Entry and combined Entry

Transaction- Started business with cash ₹ 1,05,000, Goods ₹ 21,000 and Furniture ₹ 4,000.

Simple Entry			Combined Entry		
a) Cash A/c Dr. To Capital A/c b)Stock of goods A/c Dr. To Capital A/c c)Furniture A/c Dr. To Capital A/c	1,05,000 21,000 4,000	 1,05,000 21,000 4,000	Cash A/c Dr. Stock of Goods A/c Dr. Furniture A/c Dr. To capital A/c (Being started business with cash, goods and furniture)	1,05,000 21,000 4,000	 1,30,000

In the above three simple entries Capital A/c is commonly credited. Instead of passing three simple entries, a combined entry for the same is passed.

Illustration-2:

Journalise the following transactions in the books of Mr. Bindra:

2018 June 1 Started business with cash ₹2,00,000 goods worth ₹ 10,000 and computer ₹ 20,000.

4 Paid into Dena Bank ₹ 1,00,000.

8 Bought goods on credit from Mona ₹ 8,000 at 6% Trade discount.

12 Sold goods to Nayana of ₹ 8,000 at 5% Trade Discount.

14 Goods worth ₹ 1,050 burnt byfire.

18 Received cash of ₹ 7,500 from Nayana in full settlement of her account.

21 Drawn from bank ₹ 5,000 for his personal purpose.

24 Paid cash of ₹ 7,400 to Mona in full settlement of her account.

26 Paid house rent ₹ 2,000.

29 Sold goods worth ₹ 10,000 to Divakar who paid us ₹ 6,000 on account.

30 Paid for Postage and Telegrams ₹ 5,000.

Solution :2

In the books of Mr.Bindra :

Journal Entries

Date	Particular	L.F.	Debit Amount ₹	Credit Amount ₹
2018	Cash A/c Dr.		2,00,000	
June 1	Stock of goods A/c Dr.		10,000	
	Computer A/c Dr.		20,000	
	To Capital A/c			2,30,000

	(Being started business with cash, goods & computer)			
4	Dena Bank A/c Dr. To Cash A/c (Being amount deposited in Dena Bank)		1,00,000	1,00,000
8	Purchase A/c Dr. To Mona's A/c (Being goods purchased on credit at 6% Trade Discount)		7,520	7,520
12	Nayana's A/c Dr. To Sales A/c (Being goods sold on credit to Nayana at 5% Trade Discount)		7,600	7,600
14	Loss by fire A/c Dr. To Goods destroyed by fire A/c / Purchases A/c (Being goods burn by fire)		1,050	1,050
18	Cash A/c Dr. Discount allowed A/c Dr. To Nayana's A/c (Being cash received & discount allowed)		7,500 100	7,600
21	Drawing A/c Dr. To Dena Bank A/c (Being cash withdrawn for personal use)		5,000	5,000
24	Mona's A/c Dr. To Discount Received A/c To Cash A/c (Being cash paid and discount received)		7,520	120 7,400
	Drawings A/c Dr.		2,000	

26	To Cash A/c (Being amount paid for house rent in cash)			2,000
29	Cash A/c Dr. Divakar's A/c Dr. To Sales (Being goods sold in cash and credit)		6,000 4,000	 10,000
30	Postage and Telegrams A/c Dr. To Cash A/c (Being postage and telegram expenses paid)		5,000	 5,000
	Total		**3,83,290**	**3,83,290**

Explanatory Note:

1. Entry on June 14:

In this transaction Goods burnt by fire i.e. goods lost by fire A/c is debited because it is a loss to the business & Goods goes out hence, Goods destroyed by fire A/c is credited or Purchases A/c may be Credited.

2. Entry on June 18:

Amount to be received from Nayana is ₹ 7,600 but ₹ 7,500 is received from Nayana in full settlement of ₹ 7,600. Hence ₹100 is allowed to her as discount.

3. Entry on June 21,26:

In these transactions Drawings A/c is debited because they are used for personal purpose &bank/cash A/c is credited.

4. Entry on June 24:

Amount payable to Mona is ₹ 7,520 but ₹ 7,400 is Paid to Mona in full settlement of ₹ 7,520. Hence₹120 is discount.

Illustration-3:

Journalise the following transactions:

2018 July 1 Shri Ameya started his business with cash ₹ 81,000 ,Building ₹ 1,00,000 and borrowed from friend Jitendra ₹ 25,000.

4 Paid cash in to Bank of India ₹ 90,000.

5 Purchased furniture from Manik and issued him a cheque ₹ 6,000.

7 Credit purchases from Shinde ₹ 15,000 less 4% trade discount.

8 Returned goods to Shinde ₹ 150.

10 Cash Sales to ₹ 4,500.

11 Credit sales to Ashok rs 3,000 less trade discount 2%.

12 Ashok returned goods of ₹294.

14 Goods taken for personal use ₹ 300.

16 Paid postage R. 100 and electricity bill of ₹600.

19 Sent a Telegram of ₹ 30 to Shinde to supply goods of ₹ 7,500 immediately.

21 Purchased Computer & Printer of ₹ 25,000 from Kewal and in part payment gave him cash of ₹ 15,000.

28 Paid life insurance premium on life of Ameya of ₹ 3,000.

29 Paid Telephone Deposit for new telephone connection by the cheque ₹ 2,000.

31 Paid for Travelling expenses ₹ 3,000.

Solution 3:

Journal of Ameya

Date	**Particulars**	**L.F.**	**Debit Amount ₹**	**Credit Amount ₹**
2018 July 1	Cash A/c Dr. Building A/c Dr. To Capital A/c To Jitendra's loan A/c (Being Started business with cash, building & Friend's loan)		1,06,000 1,00,000	 1,81,000 25,000
4	Bank of India A/c Dr. To Cash A/c (Being amount deposited in Bank of India)		90,000	 90,000
5	Furniture A/c Dr. To Bank of India A/c (Being Furniture purchased and amount paid by cheque)		6,000	 6,000

7	Purchases A/c Dr. To Shinde's A/c (Being goods purchased on credit at 4% Trade discount)		14,400	 14,400
8	Shinde's A/c Dr. To Return outward A/c (Being goods returned)		150	 150
10	Cash A/c Dr. To Sales A/c (Being cash A/c)		4,500	 4,500
11	Ashok's A/c Dr. To Sales A/c (Being sold goods to Ashok on credit)		2,940	 2,940
12	Returns Inward A/c Dr. To Ashok's A/c (Being goods returned by Ashok)		294	 294
14	Drawings A/c Dr. To Goods withdrawn by proprietor's A/c /Purchases A/c (Being Goods taken for personal use)		300	 300
16	Postage A/c Dr. Electricity Bill A/c Dr. To Cash A/c (Being Postage and Electricity bill paid)		100 600	 700
19	Postages & Telegram A/c Dr. To Cash A/c (Being Paid for Telegram)		30	 30
21	Computer and Printer A/c Dr. To Cash A/c To Kewal's A/c (Being computer and printer purchased and payment made by cash & credit)		25,000	 15,000 10,000
28	Drawing A/c Dr. To Cash A/c		3,000	 3,000

	(Being paid for life insurance premium)			
29	Telephone Deposit A/c To Bank of India A/c (Being paid for Telephone Deposit)		2,000	 2,000
31	Travelling Expenses A/c Dr. To Cash A/c (Travelling Expenses paid)		3,000	 3,000
	Total		**3,58,314**	**3,58,314**

Explanatory Notes:

1. Entry on July 14:

Goods taken by Ameya for his personal use, Hence Drawing A/c is debited & Goods withdrawn by proprietor A/c or Purchases A/c is credited.

2. Entry on July 21:

Computer &Printer purchased for ₹ 25,000 ₹15,000 paid in cash remaining on credit hence the accounts involved are Computer & Printer A/c, Cash A/c and Kewal's A/c.

3.Entry on July 28:

Life insurance premium paid, it is a personal expense, hence Drawing A/c is debited and cash A/c is credited.

4. Entry on July 29:

Telephone deposit is an asset hence Telephone Deposit A/c is debited and Cash A/c is credited.

Illustration 4 : Journalise the following transactions in the books of Mr. Tejas

Debit Balance on 1st April 2019

Cash at bank ₹75,000. Sundry Debtors ₹ 11,000 , Stock ₹25,000 , Land & Building ₹ 1,75,000

Credit Balance on 1st April,2019

Sundry Creditors-Malini rs 15,000 Bank Loan ₹ 25,000

Transactions during the month of April, 2019

2019 April 1 Purchased goods worth ₹ 20,000 for cash less 25% trade discount.

4 Sold goods to Mohan ₹ 20,000

6 Purchased goods from Sohan worth ₹ 10,000

9 Goods costing ₹ 1,000 distributed as free samples.

11 Received an amount of ₹ 2,000 from Vijay which was previously written off as bad debts.

15 purchased goods, from Bhavesh ₹ 20,000 at 10% trade discount.

15 Paid to Bhavesh 1/3rd amount in cash and received 5% cash discount.

21 Received cash gift ₹ 11,000 from Mother-in-law with which purchased shares of Tata Co. for the business.

25 Repayment of Bank loan with interest ₹ 5,000 (Interest ₹ 1,000)

29 Sold goods to Ashok ₹ 40,000 at 10% trade discount and received half the amount in cash for which 5% cash discount is given.

30 Paid for printing & stationery ₹ 4,000.

30 Withdrew cash from Bank for personal purpose ₹1,000.

Solution 4:

In the books of Tejas

Journal Entries

Date	Particulars	L.F.	Debit Amount ₹	Credit Amount ₹
2019 April 1	Cash at Bank A/c Dr. Sundry Debtors A/c Dr. Stock A/c Dr. Land and Building A/c Dr. To Sundry Creditors A/c To Bank Loan A/c To Capital A/c (Being balances brought forward from last year)		75,000 11,000 25,000 1,75,000	 15,00 25,000 2,46,000
1	Purchases A/c Dr. To Cash A/c (Being goods purchased at 25% trade discount)		15,000	 15,000
4	Mohan's A/c Dr. To Sales A/c (Being goods sold on credit)		20,000	 20,000
6	Purchase A/c Dr. To Sohan's A/c		10,000	 10,000

	(Being goods purchased on credit)			
9	Advertisement A/c Dr. To Goods distributed as free Sample A/c (Being goods distributed for advertisement purpose)		1,000	 1,000
11	Cash A/c Dr. To Bad debts recovered A/c (Being the amount which was previously written off as bad debts now recovered)		2,000	 2,000
15	Purchases A/c Dr. To Bhavesh's A/c (Being goods purchased from Bhavesh at 10% trade discount)		18,000	 18,000
15	Bhavesh's A/c Dr. To Cash A/c To Discount Received A/c (Being 1/3 amount paid to Bhavesh & 5% cash discount received)		6,000	 5,700 300
21	Investment A/c Dr. To Capital A/c (Being amount invested in shares)		11,000	 11,000
25	Bank loan A/c Dr. Interest A/c Dr. To Cash A/c (Being repayment of bank loan with interest)		4,000 1,000	 5,000
29	Cash A/c Dr. Discount Allowed A/c Dr. Ashok's A/c Dr. To Sales A/c (Being goods sold at 10% trade discount and 5% cash discount and half the amount received in cash)		17,100 900 18,000	 36,000
30	Printing and Stationary A/c Dr. To Cash A/c (Being amount paid for printing and stationery)		4,000	 4,000
30	Drawings A/c Dr.		1,000	

	To Bank A/c (Being withdrawn from bank for personal purpose)			1,000
	Total		**4,15,000**	**4,15,000**

Explanatory Notes:-

1. **Entry on April 15:**

Value of goods purchased	20,000	
Less: 10% trade discount	2,000	
Net Value of goods purchased	18,000	
1/3 of ₹18,000 amount received		6,000
Less: 5% cash discount		300
Net cash paid		5,700

For both transactions dated April, 15 combined entry can also be passed as under-

Purchases A/c	Dr. ₹18,000	
To Cash A/c		5,700
To Discount A/c		300
To Bhavesh's A/c		12,000

2. **Entry on April 21:**

   Personal amount invested in shares for the business hence Investment A/c is debited and Capital A/c credited.

3. **Entry on April 29:**

Value of Goods sold	₹ 40,000
Less: 10% trade discount	₹ 4,000
Net Value	₹ 36,000

Half of ₹ 36,000 amount received	₹18,000
Less:5% cash discount	₹ 900
Net cash received	₹17,100

Illustration 5:

Journalise the following transactions in the books of Kapadia & company for the month of April,2019.

Balance as on April 1,2019.

Cash at Bank (Bank of Maharashtra) ₹1,00,000, Land & Building ₹ 1,80,000. Laptop and Printer ₹ 60,000; Debtor:Zinit ₹ 5,000, Yamini ₹ 4,000;Stock ₹ 40,000; Bank Loan ₹ 28,000; Creditors: Mohini ₹ 6,000 ; Nitin ₹ 9,000.

Transaction during the month of April, 2019 were as follows:

2019 April 2 purchased goods of the list price ₹ 20,000 at 10% trade discount on credit from Mr. Ojas

4 Received ₹ 3,700 cash from Yamini in full in full and final settlement of her account.

6 Goods costing ₹ 900 destoryed by fire.

9 Sold goods to Mr. Waman on credoit ₹ 10,000.

11 Cash withdrawn by proprietor for personal use ₹4,000.

14 Mr.Waman Paid ₹ 9,000 after getting 10% cash discount for prompt payment.

19 Interest on Bank Loan ₹ 800 debited to the current account.

21 Paid ₹ 8,900 to Nitin in full and final settlement of his account.

30 Cash sales at list price ₹8,000 trade discount allowed ₹400.

Date	Particulars	L.F.	Debit Amount ₹	Credit Amount ₹
2019 April.1	Cash at Bank A/c Dr. Land and Building A/c Dr.		1,00,000 1,80,000	

	Laptop and Printer A/c Dr. Debtors A/c Dr. Stock A/c Dr. To Sundry Creditors A/c To Bank Loan A/c To Capital A/c (Balancing Figure) (Being brought forward opening balances of assets and liabilities)		60,000 9,000 40,000	 15,000 28,000 3,46,000
2	Purchases A/c Dr. To Ojas A/c (Being goods purchased less 10% trade discount)		18,000	 18,000
4	Cash A/c Dr. Discount A/c Dr. To Yamini's A/c (Being cash received and discount allowed)		3,700 300	 4,000
6	Loss by Fire A/c Dr. To Goods destroyed by fire A/c (Being goods destroyed by fire)		900	 900
9	Waman's A/c Dr. To Sales A/c (Being goods sold on credit)		10,000	 10,000
11	Drawing A/c Dr. To Cash A/c (Being withdrawn for pe rsonal use)		4,000	 4,000
14	Cash A/c Dr. Discount Allowed A/c Dr. To Waman's A/c (Being cash received and discount allowed)		9,000 1,000	 10,000
19	Interest on loan A/c Dr. To Bank of Maharashtra A/c (Being interest charged by bank on Bank Loan amount)		800	 800
21	Mr. Nitin's A/c Dr. To Cash A/c		9,000	 9,000

	To Discount received A/c (Being paid to Nitin in full settlement of his account)			
30	Cash A/c Dr. To Sales A/c (Being cash sales made)		7,600	7,600
	Total		**4,53,300**	**4,53,300**

Explanatory Note:

1.List price means printed price of goods.

2. Entry on April 19

Interest on Bank loan directly charged (debited) by bank hence, Bank of Maharashtra A/c is credited.

Illustration-6

Journalise the following transactions in the books of Samant Brothers for the month of April, 2019.

Balances on April 1,2019.

Cash at bank ₹ 1,80,000 (Bank of India), Cash in Hand ₹ 2,000; Land & Building ₹ 2,00,000; Computer and Printer ₹ 60,000; Sundry Debtors ₹ 10,000; Bill Receivable ₹ 5,000; Sundry Creditors ₹ 32,000; Bills Payable ₹ 10,000.

Transactions during the month of April 2019 were follows:

2019 April 2 Purchased goods from Mohan worth ₹ 20,000 at 10% trade discount and 5% cash discount, paid ¼ amount in cash and ¼ amount by cheque.

4 Purchased shares of HDFC Ltd. ₹10,000 and ₹100 paid as brokerage.

6 Sold goods to Sunita worth ₹ 30,000 at 10% trade discount and 5% cash discount, Received 1/3 amount in cash and 1/3 amount by cheque,5% cash discount is allowed.

11 Paid house rent ₹ 1,000 and telephone bill of proprietor's house ₹ 500

22 Goods worth ₹4,000 were destroyed by fire and Insurance company admitted a claim to the extent of ₹3,000 only

24 Paid Personal Income tax ₹5,000.

27 Purchased office furniture ₹ 20,000 and Paid carriage

₹ 200 office furniture.

29 Transferred ₹15,000 from private bank of proprietor to business Bank of India account.

30 Salaries paid ₹ 4,000 in cash and ₹ 6,000 by cheque.

Solution 6:

Journal of Samant and Brothers

Date	**Particulars**	**L.F.**	**Debit Amount ₹**	**Credit Amount ₹**
2019 April 1	Cash at Bank A/c Dr.		1,80,000	
	Cash in hand A/c Dr.		2,000	
	Land and Building A/c Dr.		2,00,000	
	Computer and Printer A/c Dr.		60,000	
	Sundry Debtors A/c Dr.		10,000	
	Bills Receivables A/c Dr.		5,000	
	To Sundry Creditors A/c			32,000
	To Bill Payable A/c			10,000
	To Capital A/c (Balancing figure)			4,15,000
	(Being transfer of opening balances of assets and liabilities and excess of assets over liabilities taken as capital)			
2	Purchases A/c Dr.		18,000	
	To Cash A/c			4,275
	To Bank of India A/c			4,275
	To Discount Received A/c			450
	To Mohan's A/c			9,000
	(Being purchase goods from Mohan at 10% Trade Discount 5% Cash discount)			
4	Investment A/c Dr.		10,100	
	To Cash A/c			10,100
	(Being sold goods to Sunita at 10% Trade discount and 5% cash discount)			
6	Cash A/c Dr.		8,550	

	Bank of India A/c Dr. Discount Allowed A/c Dr. Sunita's A/c Dr. To Sales A/c (Being sold goods to Sunita 10% Trade discount and 5% cash discount)		8,550 900 9,000	 27,000
11	Drawings A/c Dr. To Cash A/c (Being house rent & Proprietors's telephone bill paid)		1,500	 1,500
22	Loss by fire A/c Dr. Insurance Claim A/c Dr. To Goods destroyed by fire A/c (Being goods destroyed and 75% of claim accepted by insurance company)		1,000 3,000	 4,000
24	Drawings A/c Dr. To Cash A/c (Being income tax paid)		5,000	 5,000
27	Office Furniture A/c Dr. To Cash A/c (Being furniture purchased)		20,200	 20,200
29	Bank of India A/c Dr. To Capital A/c (Being personal cash deposited to business bank A/c)		15,000	 15,000
30	Salaries A/c Dr. To Cash A/c To Bank of India A/c (Being salaries paid in cash as well as by cheque)		10,000	 4,000 6,000
	Total		**5,67,800**	**5,67,800**

Explanatory Notes:

1. Entry on April 4:

The brokerage paid on investment must be added to the cost of investment.

2. Entry on April 11 and 24:

House Rent, Telephone Bill and Income Tax all are personal expenses, hence Drawings A/c is debited and Cash Ac is credited.

3. Entry on April 27:

Expenses incurred on the purchase of an assets increases the cost of the assets, hence particular assets A/c is debited.

4. Entry on April 29:

Whenever personal cash is invested in the business, it is treated as capital, hence capital A/c is credited.

Illustration 7:

Journalise the following transactions in the books of Mr. Gajanan

Balances on 1st April,2019

Cash at bank ₹ 2,10,000; Machinery ₹ 2,00,000; Furniture ₹ 50,000; computer and Printers ₹ 1,00,000; Sundry Debtors ₹ 50,000; Sundry Creditors ₹ 40,000.

Transactions during the month of April,2019:

2019 April 1 Cheque received from Mahesh ₹10,000 and the same is immediately deposited in Bank Maharashtra.

4 Cheque received from sujeet ₹ 20,000.

6 The cheque received on 4th April deposited into Bank of Maharashtra.

9 The cheque deposited on 6th April dishonoured.

14 Cheque received from Monali ₹ 11,000 and the same is endorsed to Anita.

19 The received on 14th April dishonoured.

21 Bank charges charged by bank ₹ 250.

24 Telephone bill paid by cheque ₹ 1,000.

28 Salary outstanding ₹10,000.

Solution:

In the books of Mr. Gajanan

Journal Entries

Date	**Particulars**		**L.F.**	**Debit Amount ₹**	**Credit Amount ₹**
2019 April 1	Cash at Bank A/c	Dr.		2,10,000	
	Machinery A/c	Dr.		2,00,000	
	Furniture A/c	Dr.		50,000	

	Computer and Printer A/c Dr. Sundry Debtors A/c Dr. To sundry Creditors A/c To Capital A/c (balancing figure) (being transfer of balance)		1,00,000 50,000	 40,000 5,70,000
2	Bank of Maharashtra A/c Dr. To Mahesh's A/c (Being cheque received and deposited)		10,000	 10,000
4	Cash A/c Dr. To Sujeet's A/c (Being cheque received)		20,000	 20,000
6	Bank of Maharashtra A/c Dr. To Cash A/c (Being cheque received previously deposited)		20,000	 20,000
9	Sujeet's A/c Dr. To Bank of Maharashtra A/c (Being deposited cheque dishonored)		20,000	 20,000
14	Anita's A/c Dr. To Monali's A/c (Being cheque received and endorsed)		11,000	 11,000
19	Monali's A/c Dr. To Anita's A/c (Being endorsed cheque dishonoured)		11,000	 11,000
21	Bank Charges A/c Dr. To Bank of Maharashtra A/c (Being bank charges charged by bank)		250	 250
24	Telephone Exp.A/c Dr. To Bank of Maharashtra A/c (Being Telephone bill paid by cheque)		1,000	 1,000
28	Salaries A/c Dr. To Outstanding salary A/c (Being Salary outstanding)		10,000	 10,000
	Total		**7,13,250**	**7,13,250**

Note: April 28- Salary is due, it is not paid (Outstanding Salary) is Representative Personal A/c.

3.5 Summary:

Journal is the book of prime or original entry. All the transactions are recorded in the journal on the basis of source documents in order in which they occur. It gives complete information about business transactions in chronological order. The location of an entry is easy by recording transactions chronologically in terms of time.

Double entry system used for recording is clearly visible in journal as both debit and credit aspects are recorded at one place. It also makes posting into ledger accounts easier. A journal does not replaced but precedes the ledger.

The process of recording transactions in a journal, is termed as " Journalsing".

Objectives Type Questions:

(A) Answer in one sentence only.

(1) What is Journal?

(2)State the meaning of Simple Entry.

(3)Which account is credited, when salary is paid by cheque?

(B) Give one word /term or phrase for each of the following statements.

1) The process of recording transactions in the journal.
2) Entry in which more than one account are to be debited or credited.
3) The column in journal, which is not filled at the time of Journalising.

Answers: 1) Journalising 2) Combined Entry 3) Ledger Folio

(C) Select the most appropriate alternative from the alternatives given below and rewrite the statement.

i) Wages paid for installation of machinery should be debited to _____.

a) Wages A/c b) Machinery A/c c) Cash A/c d) Installation A/c

ii) Cash purchases of goods should be credited to _____.

a) Purchases A/c b) Sales A/c c) Cash A/c d) Goods A/c

iii) A purchase of horse in cash should be debited to _____.

a)Goods A/c b) Cash A/c c) Livestock A/c d) Capital A/c

Answers: i) Machinery A/c ii) Cash A/c iii) Livestock A/c

(D)State whether the following statements are true or false:

1. Goods withdrawn by the proprietor from business is debited to the Drawing A/c.
2. Narration is not necessary for each and every journal entry.
3. Premium paid on the life policy of the proprietor should be debited to insurance premium account.
4. If rent is paid to landlord, landlord's a/c should be debited.

Answer: True:- 1 . False:- 2,3,4.

PRACTICAL PROBLEMS

1. Journalise the following transaction in books of Mr. Akshay

2020 January 1 Mr. Akshay started business with Cash ₹ 80,000.

4 Purchased goods from Mona ₹28,000.

7 Deposited cash into Dena Bank ₹ 39,000.

10 Sold goods to Dinesh ₹41,000.

13 Purchased Laptop of ₹ 30,000 in cash.

17 Paid Mona by cheque ₹ 30,000.

20 Paid wages ₹500.

2. Journalise the following transactions.

2020 march 1 Mr.Prem started his business with cash ₹90,000; Building ₹1,50,000 borrowed from friend Jayesh ₹40,000.

3 Paid cash into Bank Maharashtra ₹ 80,000.

6 Purchased furniture from Iyush and issued him a cheque ₹10,000.

9 Credit purchases from Sohan ₹ 20,000 less 5% Trade Discount.

10 Returned goods to Sohan ₹200.

13 Credit Sales to Amit ₹6,000 less 2% Trade Discount.

15 Amit returned goods of ₹ 588.

17 Goods taken by Prem for his personal use ₹500.

18 Paid postage ₹ 200 and Electricity bill ₹900.

20 Sent a Telegram of ₹ 30 to Sohan to supply the goods of ₹ 9,000 immediately.

21 Purchased Laptop & Printer of ₹41,000 from Keshav & Co. and paid him cash ₹21,000.

27 Paid insurance premium on life of Prem of ₹4,000.

29 Paid Telephone Deposit for new telephone connection by cheque ₹4,000.

31 Audit fees paid by cheque ₹4,500.

3. Journalise the following transactions in the books of Mr.Sumeet

Debit Balances on 1st April 2019:-

Cash in hand ₹ 5,000; Cash at Bank ₹95,000; Land &Building ₹ 2,10,000; Furniture ₹ 15,000; Debtors ₹10,000.

Credit Balances on April 1, 2019:-

Creditors ₹ 10,000; Bank Loan ₹ 28,000.

Transactions during the month of April 2019:-

2019 April 1 Purchased goods worth ₹ 30,000 for cash less Trade Discount

3 Sold goods to Meena ₹ 25,000.

7 Purchased goods from Seema worth ₹12,000.

9 Goods costing ₹ 1,100 distributed as free samples.

12 Received an amount of ₹ 1,500 from Vikram which was previously written off as bad.

14 Purchased goods from Bhavesh ₹30,000 at 10% Trade Discount and paid him 1/3rd amount in cash after getting 5% cash discount.

20 Received cash gift ₹ 10,000 from Father-in-law with which purchased shares of Infosis Co.

24 Payment of Bank loan with interest ₹ 6,000 [Interest amount ₹1,500]

28 Sold goods to Anil ₹ 50,000 at 10% trade discount and received half the amount in cash, 5% cash discount allowed.

29 Paid for Advertisement ₹5,000.

30 Withdraw cash from Bank for personal purpose ₹2,000.

4. Record following transactions in the books Siya & Company for the month January, 2020.

Balance on 1st January,2020.

Cash in hand ₹ 21,000; Cash at Bank ₹ 3,00,000. Furniture ₹ 1,00,000; Laptop & Printer ₹ 90,000; Debtors Chetan ₹ 7,000; Dilip- ₹ 9,000; Stock ₹ 25,000; Creditors Gauri- ₹6,000; Hema-₹ 8,000; Bank Loan ₹ 30,000.

Transactions during the month of April were as follows:-

2020 January 1 Purchased goods of the list price ₹ 30,000 at 10% Trade Discount on credit from Mr.Kapil.

3 Received ₹ 8,800 cash from Dilip in full & Final Settlement of his account.

5 Rent paid to landlord ₹ 5,000.

7 Sold goods to Mr. Eknath on credit ₹15,000.

9 Goods costing ₹ 250 distributed as free samples.

12 cash withdrawn by proprietor for private purpose rs5,000.

15 Mr. Eknath pays ₹ 14,250 after getting 5% discount for prompt payment.

20 Interest on Bank loan ₹ 1,000 debited to the current account of the proprietor.

23 Paid ₹7,900 to Mrs.Hema in full & final settlement of her account.

25 Cash purchases at list price ₹10,000 Trade Discount allowed ₹500.

28 Purchased Maruti Van for Business ₹ 1,75,000 amount paid by cheque.

30 Commission paid by cheque ₹7,000.

5. Journalise the following transaction in the books of Sethi and Brothers for the month of June,2019.

Balance on 1st June 2019

Cash at bank ₹ 2,00,000; cash in hand ₹ 2,500; Computer & Printer ₹ 90,000; Land & Building ₹ 1,80,000; Sundry Debtors ₹ 15,000; Bills Receivable ₹10,000; Sundry Creditors ₹14,000; Bills payable ₹ 5,000.

Transactions during the month of June were as follows:-

2019 June 1 Purchased goods from Meets worth ₹ 40,000 at 10% trade discount paid ¼ amount in cash and ¼ amount by cheque, for which 5% cash discount is allowed.

4 Purchased shares of Reliance company ₹ 12,000 and ₹ 200 paid as brokerage.

7 Sold goods to Sunil worth ₹ 60,000 at 10% Trade Discount and 5% Cash Discount received 1/3 amount in cash amount by cheque and 5% cash discount is allowed.

11 Paid Telephone Bill of Proprietor's house ₹ 700.

14 Paid House Rent ₹1,500.

20 Received goods as free samples ₹ 2,000.

23 Purchased Furniture ₹ 30,000.

23 Paid carriage ₹300 on the above furniture.

25 Goods worth ₹6,000 were destroyed by fire and Insurance company admitted a claim to the extent of ₹4,000.

27 Paid income tax ₹6,000.

28 Paid for printing and stationery ₹2,000.

29 Transferred ₹20,000 from private bank of proprietor to business Bank of Maharashtra A/c.

30 Salaries paid ₹5,000 in cash and ₹10,000 by cheque.

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UNIT 1- CHAPTER – 4

VOUCHER AND ACCOUNTING STANDARDS

4.0 OBJECTIVES

- **Meaning of source documents**
- **Contents of source documents**
- **Important of source documents**
- **Specimen of source documents**
- **Different accounting standards**

4.1 INTRODUCTION

All financial transactions are recorded in the book of accounts.

The documents required for recording of transactions in the books of accounts are called source documents which indicate nature of transactions and other details regarding the entry. This document is a legal proof of transaction which is recorded in the books of accounts. It is useful for authenticity of the transaction.

If the telephone bill is paid ₹ 2,000 , we will get the receipt for the payment made, here receipt is source document.

4.2 VOUCHER

Voucher: Voucher is documentary evidence in support of a business transaction. Vouchers are prepared first from the transactions. The Voucher may be of different types for different transaction like cash expenses, purchases or sales etc. e.g. cash vouchers, petty cash vouchers, bank vouchers purchase vouchers, sales vouchers etc.

4.2.1 Internal Voucher:

a) When the business is very big and spread over a number of branches voucher is prepared for the transferred of cash or goods from one branch to another branch or head office branch or vice-versa it is called internal voucher.

b) In another situation when things are purchased from hawkers, grocers or while travelling by an auto or taxi, we cannot get a receipt as proof for such transactions, it is necessary to create a documentary record by preparing a voucher in the organization, is also known as internal voucher. In short a voucher which is created by the business itself and signed by the payee is called as an internal voucher.

4.2.2 External Voucher:

An external voucher is a document received from an outside agency regarding the business transaction. E.g. Cash memo received from the seller for the purchase of stationery or goods, Receipt of electricity bill paid etc.

4.2.3 Importance of Voucher:

1) A voucher is a documentary evidence of the transaction.

2) It is used as a support for ascertainment of profit in taxation matters like income tax, sales tax, excise etc.
3) The vouchers help the auditor to perform his duties efficiently and independently
4) A voucher confirms the date of the transactions, the amount and the concerned person /party
5) A voucher describes the nature of a transaction.

4.2.4 Journal Voucher:

Journal voucher is basic /original voucher. On the basis of this transactions should be journalise in journal book.

Specimen of Journal Voucher:

Journal Voucher

Name of the Firm

Voucher No.

Transaction No.

Date: ₹ ₹

Name of Debit Account : xxx

Name of Credit Account : xxx

Particulars	**Amount ₹**
Amt. In words ₹ Total	

Prepared by: Check by: Authorized Signature

4.2.5 Cash Vouchers:

Meaning:

For the amount spent in cash, one should prepare a cash voucher. If any document from the payee is obtained then that itself can be treated as a voucher, otherwise the internal voucher may be prepared for the payment in the Cash Book.

Contents of a Cash Voucher are as follows:

1)Name and address of the business organization, 2) Voucher Number, 3) Date, 4) Name of the payee, 5) Details of Payment (i.e. payment on what account), 6) Account head. This indicates the grouping of expenditure for e.g. purchase of link bottle, pens, pencils, notebooks under the account head ‘ stationery’ may be grouped under the account head ‘Expenditure’ , 7) Amount in figures and words, 8) Signature of the person preparing the voucher, 9) Signature of the payee, 10) Signature of the person preparing authorizing the payment.

Generally, these vouchers are printed. The date of payment is mentioned on the top. The serial number of the voucher is entered. Normally a cashier is supposed to prepare a voucher. The accountant or the head of the department is the sanctioning authority If the amount of the voucher is ₹5000 or more, a revenue stamp of ₹1 is required to be affixed before getting the signature of the payee. If any external document is obtained for the payment made, it should be attached to the internal voucher prepared.

Specimen:

CASH VOUCHER

GANESH TRADERS, Voucher No. _____ 10 .M.G. Road, Jalgaon

Date

Pay to _____

On account of _____

Debit Account _____

Total ₹._____ only

Amount ₹

Prepared by _____ Passed by_____ Receiver’s Sign:

4.2.6 Petty Cash Voucher:

Meaning:

In business the expenses in cash may be numerous. The frequency and amount of such expenses may differ. Some expenses are very small in amount but are incurred very frequently i.e. even few times in a day. Of course "small" amount of expenditure depends upon the volume of a business. E.g. a trader having a monthly turnover of ₹10,000 may find an expenditure of ₹1,000 as a big amount, where as a company with a turnover in crores may find ₹10,000 as a small amount. Therefore it is upto the business to decide what to categorize the "small amount" of expenditure. Similarly such expenses are incurred frequently. E.g. local conveyance, tea expenses, transport charges, coolie charges etc. such small and frequent spending are called as petty cash expenses. A Petty Cashier is appointed to pay such amounts so that the burden on the main cashier is reduced.

A petty cashier before paying the amount must get a documentary proof in support of the expenditure. This documentary proof is called as a "Petty Cash Voucher." Basically it is as good as a cash voucher because other than the amount and frequency of transaction the expenditure is similar to that of the cash transaction. However, as a separate petty cash book is maintained these vouchers are specifically marked 'petty cash vouchers'.

Contents:

1) Name and address of the business organization, 2) Voucher Number, 3) Date, 4) Name of the payee, 5) Details of the Payment (i.e. payment on what account), 6) Account head. This indicates the grouping of expenditure e.g. petrol repairs, servicing, spare parts, etc. may be grouped under the account head-" vehicle maintenance", 7) Amount in figures and words, 8) Signature of the person preparing the voucher, 9) Signature of the payee, 10) Signature of the person authorizing the payment.

   Generally, for petty expenses the petty cashier himself is authorized to sanction the payment and there is no need of any other sanctioning authority

   These vouchers are generally in printed form. They are serially numbered and filed in a separate file called, as a "petty.cash voucher file."

Specimen:

PETTY CASH VOUCHER
VIJAY TRADERS 10 M.G. Road, Jagaon Date:_____ Voucher No.____

Pay to _____

On account of _____

Debit Account _____

Total ₹. _____ only

Amount ₹

Petty Cashier_____ Receiver's Sign

The petty cahier should attach the external document received for the payment made like cash memo, receipt etc. to this voucher.

4.3 ACCOUNTING STANDARDS:

In the words of Kohler," Accounting standards are codes of conduct in imposed by customs, law or professional bodies for the benefit of public accountants and accountants generally."

i) Concepts: Standards of Accounting is recommended by the Institute of Chartered Accountants of India (I.C.A.I) and prescribed by the Central Government in consultation with the (National Advisory Committee of Accounting Standards (N.A.C.A.S.).

Accounting standards are written policy documents issued by the expert accounting body or by Government or other regulatory body covering following various aspects.

1)Recognition 2)Measurement 3) Treatment 4) Presentation

ii)Objectives: The objectives of the Accounting standards may be summarized as follows.

To standardize the diverse accounting policies and practices with a view to eliminate the non - comparability of financial statements and add the reliability to the financial statements.

iii) Some Accounting Standards (AS): The Council of the Institute of Chartered Accountants of India has so for issued thirty-one accounting stands. Some of these accounting standards are explained below-

4.4 AS-1 DISCLOSURE OF ACCOUNTING POLICIES

According to this standard the accounting policies followed in the preparation and presentation of financial statements should form a part of the financial statements and normally be disclosed in one place.

4.4.1Introduction

The information presented in the financial statements of an organization is of its financial position. The profit or loss can be affected to a large degree by the accounting policies followed. The accounting policies followed vary from organization to organization. It is important to disclose significant accounting policies followed to make the financial statements understandable. The disclosure is required by law in certain cases. In recent years, organizations in India have adopted the practice of including a separate statement of accounting policies followed in their annual reports to shareholders. Many organizations list the accounting policies followed by them in the notes to their financial statements, but there is no consistency in the disclosures among organizations. In other words, the disclosure forms part of accounts in some cases, while in others it is given as supplementary information. The purpose of this standard is to promote better understanding of financial statements by establishing the practice of disclosure of significant accounting policies followed and the manner in which they are disclosed in the financial statements. Such disclosure would also facilitate a more meaningful comparison between financial statements of different organizations.

4.4.2 Fundamental Accounting Assumptions

Certain assumptions are used in the preparation of financial statements. They are usually not specifically stated because they are assumed to be followed. Disclosure is necessary only if they are not followed. The following have been generally accepted as fundamental accounting assumptions: **Going Concern** The organization is normally viewed as a going concern, that is to say, it will be in continuing operations for the foreseeable future. It is assumed that the organization has neither the intention, nor the necessity of shutting down or reducing the scale of

operations. **Consistency** It is assumed that accounting policies are consistently followed from one period to another. No frequent changes are expected. **Accrual** Revenues and costs are recorded when they are earned or incurred (and not as money is received or paid) in the periods to which they relate.

4.4.3 Nature of Accounting Policies

Accounting policies refer to accounting principles and the methods of applying these principles adopted by the organization in the preparation of their financial statements. There is no single list of accounting policies which are applicable in all circumstances. The different circumstances in which organizations operate make alternative accounting principles acceptable. The choice of the appropriate accounting principles calls for a large degree of judgments by the management of the organization. The various standards of the Institute of Chartered Accountants of India combined with the efforts of the Government and other regulatory agencies have reduced the number of acceptable alternatives in recent years, particularly in case of corporates. While continuing efforts in this regard in the future are likely to reduce the number still further, the availability of alternative accounting principles is not likely to be eliminated altogether keeping in mind the different circumstances faced by the organizations.

4.4.4 Areas in which differing Accounting Policies are possible

The following are examples of areas in which different accounting policies may be adopted by organizations.

1. Methods of depreciation, depletion and amortization
2. Treatment of expenditure during construction
3. Conversion or translation of foreign currency items
4. Valuation of inventories
5. Treatment of goodwill
6. Valuation of investments
7. Treatment of retirement benefits
8. Recognition of profit on long-term contracts
9. Valuation of fixed assets
10. Treatment of contingent liabilities

The above list of examples is not exhaustive.

4.4.5 Considerations in the Selection of Accounting Policies

The primary consideration in the selection of accounting policies by an organization is that the financial statements should represent a true and fair picture of the financial position for the period. For this purpose, the major considerations governing the selection and application of accounting policies are: **Prudence** In view of the uncertainty of future events, profits are not anticipated but recognised only when earned, though not necessarily in cash. However, provision is made for all known liabilities and losses even though the amount cannot be determined with certainty and represents only an estimate. **Substance over Form** The accounting treatment and presentation of transactions and events in financial statements should be governed by their substance and not merely by the legal form. **Materiality** Financial statements should disclose all "material" items, i.e. items, the knowledge of which might influence the decisions of the user of the financial statements.

4.4.6 Disclosure of Accounting Policies

To ensure proper understanding of financial statements, it is necessary that all significant accounting policies adopted in the preparation and presentation of financial statements must be disclosed. Such disclosure should form part of the financial statements. It would be helpful to the reader of financial statements if they are all disclosed in one place instead of being scattered over several statements, schedules and notes. Any change in an accounting policy which has a significant effect should be disclosed. The amount by which any item in the financial statements is affected by such change should also be disclosed to the extent it can be calculated. Where such amount is not ascertainable, wholly or in part, the fact should be disclosed. If a change is made in the accounting policies which has no material effect on the financial statements for the current period but is expected to have a material effect in later periods, the fact of such change should be appropriately disclosed in the period in which the change is adopted. Disclosure of accounting policies or of the changes is not a remedy for any wrong or inappropriate treatment of items in the accounts.

Points to remember

- All significant accounting policies used in the preparation and presentation of financial statements should be disclosed.
- The disclosure should form part of the financial statements, normally in one place.
- Any change in the accounting policies which has a material effect in the current period or is expected to have a material effect in later periods should be disclosed. In case of a change in accounting policies which has a material effect in the current period, the

amount by which any item in the financial statements is affected should also be disclosed to the extent it can be calculated. Where such amount is not ascertainable, wholly or in part, the fact should be indicated.

- If the fundamental accounting assumptions of Going Concern, Consistency and Accrual are followed in financial statements, specific disclosure is not required. If a fundamental accounting assumption is not followed, the fact should be disclosed.

4.5 AS-2 VALUATIONS OF INVENTORIES

According to this standard inventories in general should be valued at lower of historical cost and net realizable cost.

This accounting standard is applicable to all companies irrespective of their level (Level I, II and III). This standard prescribes the accounting treatment for inventories and sets the guidelines to determine the value at which the inventories are carried in the financial statements. It explains the different methods of accounting the inventory or closing stock which has a huge impact on the business revenue and the assets. Topics discussed in this article: In this article, we cover the following topics:

4.5.1 Valuation of Inventories

This Standard should be applied in accounting for all inventories except the following:

(a) work in progress in the construction business, including directly related service contracts

(b) work in progress of service business (consulting, banking etc)

(c) shares, debentures and other financial instruments held as stock in trade (d) Inventories like livestock, agricultural and forest products, mineral oils etc These inventories are valued at net realizable value.

Definition

I. Definition of the Inventory includes the following:

A. Held for sale in the normal course of business i.e. finished goods

B. Goods which are in the production process i.e. work in progress

C. Raw materials which are consumed during production process or rendering of services (including consumable stores item)

II. Net Realizable Value (NRV):

"Net realizable value is the estimated selling price in the ordinary course of business less the estimated costs of completion and the estimated costs necessary to make the sale"

Valuation of Inventories

Inventories should be valued at lower of cost and net realizable value. Following are the steps for valuation of inventories:

A. Determine the cost of inventories

B. Determine the net realizable value of inventories

C. On Comparison between the cost and net realizable value, the lower of the two is considered as the value of inventory.

A comparison can be made the item by item or by the group of items. **(Refer Case studies given at the end of the article).**

Let's discuss the important items of Inventory valuation in detail:

A. Cost of Inventories The cost of inventories includes the following

i) Purchase cost

ii) Conversion cost

iii) Other costs which are incurred in bringing the inventories to their present location and condition.

B. Cost of Purchase While determining the purchase cost, the following should be considered:

i) Purchase cost of the inventory includes duties and taxes (except those which are subsequently recoverable from the taxing authorities)

ii) Freight inwards

iii) Other expenditure which is directly attributable to the purchase

iv) Trade discounts, rebates, duty drawbacks and other similar items are deducted in determining the costs of purchase

C. Cost of Conversion

Cost of conversion includes all cost incurred during the production process to complete the raw materials into finished goods. Cost of conversion also includes a systematic allocation of fixed and variable overheads incurred by the enterprise during the production process. Following are the categories of conversion cost:

I. Direct Cost

All the cost directly related to the unit of production such as direct labor

II. Fixed Overhead Cost

Fixed overheads are those indirect costs which are incurred by the enterprise irrespective of production volume. These are the cost that remains relatively constant regardless of the volume of production, such as depreciation, building maintenance cost, administration cost etc.

The allocation of fixed production overheads is based on the normal capacity of the production facilities. In case of low production or idle plant allocation of these fixed overheads are not increased consequently.

III. Variable Overhead Cost

Variable overheads are those indirect costs of production that vary directly with the volume of production. These are the cost that will be incurred based on the actual production volume such as packing materials and indirect labor.

D. Other Cost All the other cost which are incurred in bringing the inventories to the current location and condition. For (eg) design cost which is incurred for the specific customer order. If there are by-products during the production of main products, their cost has to be separately identified. If they are not separately identifiable, then allocation can be made on the relative sale value of the main product and the by-product. Some of the cost which should not be included are:

a. Cost of any abnormal waste materials cost

b. Selling and distribution cost unless those costs are necessary for the production process

c. A normal loss which occurs during the production process is apportioned over the remaining no of units and abnormal loss is treated as an expense

(Refer Case studies given at the end of the article)

4.5.2 Methods of Inventory Valuation

The cost of inventories of items which *can be segregated for specific projects* should be assigned by specific identification of their individual costs (Specific identification method). All other items cost should be assigned by using the first-in, first-out (FIFO), or weighted average cost (WAC) formula. The formula used should reflect the fairest possible approximation to the cost incurred in bringing the items of inventory to their present location and condition. However, when it is difficult to calculate the cost using above methods, Standard cost and Retail cost can be used if the results approximate the actual cost.

4.5.3 Accounting Disclosure

The following should be disclosed in the financial statements:

1. Accounting policy adopted in inventory measurement
2. Cost formula used
3. Classification of the of inventory such as finished goods, raw material & WIP and stores and spares etc
4. Carrying amount of inventories carried at fair value less sale cost
5. Amount of inventories recognized as expense during the period
6. Amount of any write-down of inventories recognized as an expense and its subsequent reversal if any.

4.5.4 CASE STUDIES AND EXAMPLES

EXAMPLES*:*

1. NRV: Cost is 500 and NRV is 300 then Inventory value as per AS-2 is 300 Cost is 500 and NRV is 600 then Inventory value as per AS-2 is 600 Cost is 500, Sale Price is 700 and 30% commission, NRV is 490 (700-30%*700) then, Inventory value as per AS-2 is 490 2. Treatment of Normal loss and abnormal loss: Company A purchased 100 items at the cost of ₹.10 each. Of which 10% is normal loss in general, there were no sales in that period and closing stock was 80. Calculate the Inventory value: Normal Loss = 100*10% = 10 Cost per item considering normal loss = 100*10/ 90 = ₹ 11.11 Abnormal Loss is 90-80 (Normal – closing stock) = 10 Cost of abnormal loss = ₹ 111.11 Closing stock Value = ₹ 888.89 3. Case Law Quick References Some of the popular case laws and its important decision for references: ChainrupSamapatram vs. C.I.T. (24 I.T.R. 481, 485); C.I.T. vs. Chari & Ram (17 I.T.R. 1, 7); Utting & Co. Ltd vs. Hughes (8 I.T.R. Supp. 57, 60) The assessed can get an allowance in respect of future unrealised

loss, the Department is not entitled, by putting on the stock the market value where it exceeds cost, to bring in and charge the unrealized notional profit , unless the assessor's regular basis of valuation is the market rate right from the inception of his business. To the same effect is the judgment in the case of C.I.T. vs. British Paints India Ltd (188 I.T.R. 44) it was held that it is a well-recognized principle of commercial accounting to enter in the profit and loss account the value of the stock-in-trade at the beginning and at the end of the accounting year at cost or market price, whichever is the lower.

4.6 AS-3 CASH FLOW STATEMENTS

According to this standard a cash flow statement is prepared and presented for the period for which the profit and loss account is prepared.

Let's understand in detail about AS 3 Cash Flow Statements:

4.6.1 Applicability of AS 3 Cash Flow Statements

The applicability of Cash flow statement has been defined under the Companies Act, 2013. As per the definition in the act, a financial statement includes the following:

i. Balance sheet

ii. Profit and loss account / Income and expenditure account

iii. Cash flow statement

iv. Statement of changes in equity

v. Explanatory notes

Thus, cash flow statements are to be prepared by all companies but the act also specifies a certain category of companies which are *exempted* from preparing the same. Such companies are *One Person Company (*OPC*), Small Company and* Dormant Company.

- **OPC** means a company which has only one single person as its member.
- *A* **Small Company** is a private company with a maximum paid up capital of ₹ 50 lakhs and a maximum turnover of ₹ 2 crores.
- *A* **Dormant Company** is an inactive company which is formed for some future projects or only to hold an asset and has no significant transactions.

4.6.2. Cash and Cash Equivalents

Cash equivalents are held by an enterprise for meeting its short-term cash commitments instead of the purpose of investment or such other purposes. For investments to qualify as cash equivalents:

1. An investment must be easily convertible into cash and

2. Must be subject to a very low level of risk with respect to changes in its value

Hence, an investment would qualify to be a cash equivalent only when such an investment has a short maturity of three months or less from its acquisition date. AS 3 Cash Flow Statements states that cash flows should exclude the movements between items which forms part of cash or cash equivalents as these are part of an enterprise's cash management rather than its operating, financing and investing activities. Cash management consists of the investment of excess cash in the cash equivalents.

4.6.3 Presentation of Cash Flow

A cash flow statement must depict the cash flows within the period classifying them as

A. Operating activities

B. Investing

C. Financing activities

Companies must prepare and present cash flows from operating, financing as well as investing activities in such manner that is apt to their business. Grouping the activities provide information which enables the users in assessing the impact of such activities on the overall financial position of an enterprise and also assess the value of the cash and cash equivalents.

A. Operating Activities

Cash flows from operating activities predominantly result from the main revenue-generating activities of an enterprise. For example:

(i) Cash received from the sale of goods and services

(ii) Cash received in form of fees, royalties, commissions and various other revenue forms

(iii) Cash paid to a supplier of goods and services

B. Investing Activities

Cash flows from investing activities represent outflows are made for resources intended for generating cash flows and future income. For instance:

(i) Cash paid for acquiring fixed assets

(ii) Cash received from disposal of fixed assets (including intangibles)

(iii) Cash paid for acquiring shares, warrants or debt instruments of other companies and interests in JVs

C. Financing Activities

Financing activities are those which brings changes in composition and size of owner's capital and borrowings of an enterprise. For instance:

(i) Cash received from issuing shares or other similar securities

(ii) Cash received from issuing loans, debentures, bonds, notes, and other short-term or long-term borrowings

(iii) Cash repaid on borrowings

4.6.4. Cash flow from operating activities

A company must report its cash flows from operating activities using:

1. Direct method – Where all the major classes of cash receipts and cash payments are presented; or

2. Indirect method – Where the net profit or net loss is adjusted for:

a) Effects of transactions that are non-cash in nature such as depreciation, deferred taxes, provisions, etc.

b) Accruals or deferrals of future or past operating cash proceeds or payments

c) Any expense or income related to financing or investing cash flows

4.6.5. Cash Flow from Investing and Financing Activities

A company must separately record all the major classes of cash receipts and cash payments which arise from financing and investing activities, barring the ones which need to be reported on the net basis.

A. Cash flow on Net Basis

Cash flows which arise from below-mentioned operating, financing or investing activities might be reported on a net basis:

(i) Proceeds and payments in cash on behalf of a client where cash flows reflect the activities of such client rather than that of the company itself

(ii) Proceeds and payments in cash for items where the amounts are huge, turnover is quick, and maturities are short

Cash flows which arise from each of the below-mentioned activities of any financial enterprise might be reported on the net basis:

(i) Proceeds and payments in cash for acceptances and repayments of deposits having fixed maturities

(ii) Placement and withdrawal of deposits from other financial enterprises

(iii) Loans and cash advances are given to clients/customers and repayment of such loans and advances

B. Foreign Currency Cash Flows

Cash flows that arise from the transactions in the foreign currencies must be recorded in the company's reporting currency by using the below method: Foreign currency amount * FX rates between the reporting and foreign currency at the date of cash flow. A rate which approximates actual rate might be used in case the outcome is largely the same as it would have been if the rate at the date of cash flows was used. The impact of changes in the exchange rate on cash and cash equivalents which is held in the foreign currencies must be reported as a distinct and separate part of the reconciliation of changes in the cash and cash equivalent during the relevant period.

4.6.6. Extraordinary Items, Dividends & Interests

The cash flows related to the extraordinary items must be categorized as arising from operating, financing or investing activities as apt and disclosed distinctly. Cash flows from dividends and interest received and paid must be separately disclosed. Cash flows which arise from dividends and interest received and paid in the case of financial enterprises must be categorized as cash flows from operating activities. For other enterprises, cash flows which arise from interest paid must be categorized as cash flows from the financing activities whereas dividends and interest

received must be categorized as cash flows from the investing activities. Any dividends paid must be categorized as cash flows from the financing activities.

4.6.7 Taxes on Income

Cash flows which arise from taxes on income must be disclosed separately and must be reported as cash flows from the operating activities except if they could be explicitly related to investing and financing activities.

4.6.8. Acquisitions and Disposal of Business Units including Subsidiaries

The aggregate cash flows which arise from acquisition and from the disposal of business units including subsidiaries must be shown as investing activities and reported separately. Enterprises must present, in total, with respect to both the acquisitions and disposals of other business units including subsidiaries within the period the followings:

(a) Aggregate purchase or disposal value

(b) The amount of purchase or disposal value which is discharged by way of cash and cash equivalents

4.6.9 Non-Cash Transactions

Financing and investing transactions which don't require cash or cash equivalents mustn't be included in the cash flow statement. Those transactions must be presented elsewhere in financial statements in a way which gives relevant information about such financing and investing activities.

4.6.10 Disclosure

Enterprises must disclose, along with management commentary, the amount of substantial cash and cash equivalents held by an enterprise which isn't available for use. Commitments that may arise from discounted bills of exchange and other similar obligations that are undertaken by an enterprise are typically disclosed in financial statements by means of notes, even in case the probability of loss is remote.

4.7 AS-9 REVENUE RECOGNITION

This standard deals with the basis required for recognition of revenue items in the Profit and Loss Account of an enterprise. It lays down conditions to recognize revenues that arise from the various transactions of an enterprise.

As per the AS 9 Revenue Recognition issued by ICAI "Revenue is the gross inflow of cash, receivables or other consideration arising in the course of the ordinary activities of an enterprise from the sale of goods, rendering of services & from various other sources like interest, royalties & dividends".

4.7.1 Introduction of AS 9 Revenue Recognition

Revenue has to be measured by the amount charged to the clients for the sale of goods and services. However, in the case of the agency relationship, the revenue has to be measured by the amount charged for commission and not on the gross inflow of the cash, receivables or other consideration. There are few exceptions to the above-mentioned statement where the special consideration applies: –

1. Revenue arising from Construction Contracts
2. Revenue arising from hire-purchase, lease agreements
3. Revenue arising from government grants and other similar subsidies
4. Revenue of Insurance companies arising from insurance contracts

4.7.2 Applicability of AS 9 Revenue Recognition

This standard was issued by ICAI in the year 1985 and in the initial years, it was re-commendatory for only Level I enterprises and but was made mandatory for all other enterprises from April 01, 1993. As per ICAI, "Enterprise means a company as defined in section 3 of the Companies Act, 1956". Level I enterprises are those enterprises whose turnover for the immediately preceding accounting year exceeds 50 crores. The turnover here does not include other income and is applicable for holding as well as subsidiary companies.

4.7.3 Explanation

1. Revenue recognition emphasizes on the timing of recognition of revenue in the statement of profit and loss of an enterprise
2. The amount of revenue arising from a transaction is usually determined by an agreement between the parties involved in the transaction

3. When uncertainties arise regarding the determination of the amount or its associated costs, these uncertainties may influence the timing of the revenue

A. Sale of Goods

One key element for determining the recognition of revenue of a transaction involving the sale of goods is that the seller has transferred the property in the goods to the buyer for a consideration. In most cases, the transfer of property in the goods results in the transfer of the significant risks and rewards in ownership of the goods. However, there are situations where the transfer of significant risks doesn't coincide with the transfer of goods to the buyer, in such cases revenue has to be recognized at the time of transfer of significant risks and rewards to the buyer. Example: Goods sent to the consignee on approval basis. There are certain cases in the specific industry where the performance may be substantially complete prior to the execution of the transaction generating revenue. In such cases, when the sale is assured under government guarantee or a forward contract or where the market exists and there is a negligible risk of failure to sell, the goods involved are often valued at the net realizable value (NRV). Such amounts are not defined in the definition of the revenue but are still sometimes recognized in the statement of profit and loss. Example: Harvesting of Agricultural Crops or extraction of mineral ores.

B. Rendering of Services

Revenue recognition of services depends as the service is performed. This is further divided into two ways:

(a) Proportionate Completion Method: This method of accounting recognizes revenue in the statement of profit & loss proportionately with the degree of completion of each service. Here the service completion consists of the execution of more than one act. Revenue is recognized with the completion of each such act.

(b) Completed Service Contract Method: This method of accounting recognizes revenue in the statement of profit & loss only when the rendering of services under a contract is completed or substantially completed.

C. Interest, royalties & dividends

The use by others of such enterprise resources gives rise to:

(i) Interest: Revenue is recognized on the time proportion basis after taking into account the amount outstanding and the rate applicable. For Example: If the interest on FD is due on 30th June and 31st Dec. On 31st March when the books will be closed, though the interest for the period of Jan-March will be received in June, still we have to recognize the revenue in March itself.

(ii) Royalties: Royalty includes the charge for the use of patents, know-how, trademarks, and copyrights. Revenue has to be recognized on the basis of accrual basis and in accordance with the relevant agreement. For Example: If the royalty is payable based on the number of copies of the book, then it has to be recognized on that basis only.

(iii) Dividends: Revenue has to be recognized when the owner's right to receive payment is established. It is only certain when the company declare the dividends on the shares and the directors actually decide to pay the dividends to their shareholders.

4.8 International Financial Reporting Standard (IFRS)

Introduction:

With the globalization of Indian economy it is needed that Indian accounting should be compatible to the international accounting practices. But different Countries adopt different accounting treatments, disclosures and patterns with the respect of the same economic event which may create confusion among the uses while interpreting the financial statements. With this view in mind, most of the countries of the world are coming to a conclusion that they can adopt to International Financial Reporting Standards (IFRS) which would bring uniformity in the accounting Practices followed. Financial statements that are based on a single universally accepted and used practices information in a meaningful and trustworthy manner.

What is International Financial Reporting Standards (IFRS)?

IFRS is a single set of high quality, understandable and enforceable global accounting standards. It is principle based' on set of standards which are drafted in a simple manner and are easy to understand and apply.

IFRS Comprises of

1. International Accounting Standards (IAS) issued before 2001
2. International Financial Reporting Standards (IFRS) issued after 2001.
3. Standing interpretation Committee (SIC) issued before 2001.

In addition to the above there is a “Framework” for the preparation and presentation of financial statement which describes the principles underlying IFRS.

4.9 SUMMARY

Voucher is documentary evidence in support of a business transaction. Vouchers are prepared first from the transactions. The Voucher may be of different types for different transaction like cash expenses, purchases or sales etc.

A voucher which is created by the business itself and signed by the payee is called as an internal voucher.

An external voucher is a document received from an outside agency regarding the business transaction.

Journal voucher is basic /original voucher. On the basis of this transactions should be journalize in journal book.

For the amount spent in cash, one should prepare a cash voucher

A petty cashier before paying the amount must get a documentary proof in support of the expenditure. This documentary proof is called as a “Petty Cash Voucher.”

Accounting standards are codes of conduct in imposed by customs, law or professional bodies for the benefit of public accountants and accountants generally.

AS-1 Disclosure of accounting policies :All significant accounting policies used in the preparation and presentation of financial statements should be disclosed. The disclosure should form part of the financial statements, normally in one place.

AS-2 Valuations of inventories: Inventories should be valued at lower of cost and net realizable value.

AS-3 Cash Flow Statements: According to this standard a cash flow statement is prepared and presented for the period for which the profit and loss account is prepared.

AS-9 Revenue Recognition**:** This standard deals with the basis required for recognition of revenue items in the Profit and Loss Account of an enterprise. It lays down conditions to recognize revenues that arise from the various transactions of an enterprise.

IFRS is a single set of high quality, understandable and enforceable global accounting standards. It is principle based' on set of standards which are drafted in a simple manner and are easy to understand and apply.

A) Answer in one sentence the following questions.

1) State the meaning of a voucher.
2) Why is petty cash voucher prepared?
3) State meaning of IFRS
4) What is International Financial Reporting Standards(IFRS)?
5) What is AS-1?
6) What is AS-3?

B) Write a word /term or phrase which can substitute each of the following.

1) A documentary evidence of the transaction.
2) Voucher prepared for small amount of payment
3) The amount of revenue stamp is required to be affixed when the amount of voucher is ₹5,000 or more.

Answer:

1) Voucher 2) petty Cash Voucher 3) ₹1

C) Write short note on the following.

1) Importance of Voucher
2) Contents of Cash Voucher.
3) Petty Cash Voucher.
4) AS-9

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UNIT 1 - CHAPTER -5

LEDGER & TRIAL BALANCE

5.0 OBJECTIVES

- Understand meaning, need and contents of ledger
- Do posting of entries from journal and subsidiary books of ledger
- Learn balancing and closing of ledger accounts.
- Learn meaning of debit balance, credit balance and nil balance.
- Know the meaning and purpose of Trial Balance
- Know the specimen of Trial Balance
- Know how to prepare a Trial Balance

5.1 INTRODUCTION

Journal is the book of original entry in which all transactions are recorded chronologically. Subsidiary book is the sub division of Journal. All transactions are recorded in the original Books of Accounts. From original books we cannot get the summarized record of one person, one type of Asset or expense or gain etc. e.g. Rent paid is recorded in cash book every month. But from cash book, we cannot answer how much rent is paid during the year. So it is necessary to summarize the transactions at one place relating to one head of an account e.g. Rent A/c. This purpose is served by a book called as 'Ledger'. It will give us summarized record of transactions relating to one particular account.

5.2 MEANING NEED AND CONTENTS OF LEDGER

5.2.1 Meaning

Ledger is a bound book in which all accounts are maintained. It is recorded from journal and subsidiary books only. There is no direct recording in ledger. So ledger is a secondary book of accounts. It provides summarized record of various accounts at one place. An account in a ledger is called as "Ledger Account"

5.2.2 Need

Need of ledger can be explained as follows:

a) Management requires classified information of various accounts such as assets, liabilities capital etc. Ledger provides this information.

b) Decision making in a business is based on information available from ledger.

c) Preparation of Trial Balance, Profit and Loss Account Balance Sheet is based on ledger.

d) It is a main part of books of accounts.

5.2.3 Content of ledger

i) A ledger is maintained in bound book form. ii) It contains many pages. iii)Each page is maintained for one particular head of an account. iv)Each page is called folio. v)All pages are serially numbered. vi)Page number of that account in ledger is called as 'Ledger Folio.'

A list ledger accounts is given on the first page of ledger which is called as an 'Index'. Index is maintained alphabetically. The page number of each account in ledger is written against that account in 'Index'. It helps to find out any account in the ledger.

5.3 SPECIMEN OF LEDGER ACCOUNTS

Ledger accounts can be maintained in two different forms.

1) 'T' form of an account

2)Statement form of an Account

1) 'T' form of an Account: Generally ledger accounts are maintained in this form. specimen of an Account in 'T' form is as under-

In the book of ……

Dr.(Left hand side) Account (Head of an A/c) (Right hand side)Cr.

Date	**Particulars**	**J.F.**	**Amount ₹**	**Date**	**Particulars**	**J.F.**	**Amount ₹**
	To name the a/c which is credited				By Name the a/c Which is debited		
	Total				**Total**		

The details of 'T' form of an account are as follows:

1) Name of the account is written on the top of the account just above 'T'. It is called "Head of an account" e.g. Cash Account.

2) An account is divided into two equal sides i) The Left hand side of an account is called as "Debit side". The word Dr. is written on left hand side corner of an account to indicate debited side.

ii) The Right hand side of an account is called as "Credit Side". The word Cr. is written on right hand side corner of an account to indicate credit side.

3) Date-In this column the date of transaction is recorded as it is in journal.

4) Particulars-In this column the name of the other account which is affected in the entry is written. Narration is not required.

5) Journal Folio-In this column the page number of the journal where transaction is originally recorded is written. This serves as a reference.

6) Amount- The amount of the transaction is recorded in this column.

2) Statement form of An Account: Statement form of an account is commonly used computerized system of accounting and banks.

Specimen of "Statement form of Account"
In the books of _____
Statement of Account for_____

Serial No.	**Date**	**Particulars**	**J.F.**	**Debit ₹**	**Credit ₹**	**Balance ₹**	**Initials**	**Remarks**
1 2	April1 2	By Balance b/d		xxx xxx		xxxcr. xxxcr.		

5.4 POSTING OF ENTRIES FROM SUBSIDIARY BOOKS TO LEDGER

An act of transferring Journal entries from Journal/ Subsidiary book to respective ledger accounts is called ledger posting. Ledger posting is made in serial order of transactions as per the dates.

Procedure of ledger Posting-

Every entry is posted to the ledger. The procedure of ledger posting is as follows:-

1) On debit side start with word 'To' in the Particulars column and write name of account credited in journal entry.

2) On credit side start with the word 'By' in the particulars column and write name of account debited in journal entry.

3) Write account in front of that respective A/c.

4)Narration is not necessary because it is not a original book of Accounts.

Illustration-1

Posting of simple entry

Transaction 15 July 2019 Paid cash to Mr. Ramesh ₹1,000.

Solution-1

In the Books of…..

Journal

Date	**Particulars**	**L.F.**	**Debit Amount ₹**	**Credit Amount ₹**
2019 July 15	Ramesh's A/c Dr. To Cash A/c (Being paid cash to Mr. Ramesh)		1,000	 1,000

Ledger posting of above entry

In the ledger of……

Dr. **Ramesh's A/c** **Cr.**

Date	**Particulars**	**J.F.**	**Amount ₹**	**Date**	**Particulars**	**J.F.**	**Amount ₹**
2019 July 15	To Cash A/c		1,000				

Dr. **Cash Account** **Cr.**

Date	**Particulars**	**J.F.**	**Amount**	**Date**	**particulars**	**J.F.**	**Amount ₹**

			₹				
				2019 July 15	By Ramesh's A/c		1,000

1 (A) To start an account with opening balance:

At the end of the accounting year Real accounts and Personal accounts are balanced. This closing balance is brought forward on the first day of next accounting year. This is called opening balance of that account. it is recorded on the first line on debit or credit side of respective A/c as the case may be.

Illustration-2

On 1st May 2019, Cash A/c shows debit balance of ₹ 4,000 and Mr. X's A/c our creditor shows credit balance of ₹ 6,000.

Show posting of the above information

Solution-2

Dr. Cash A/c Cr.

Date	**Particulars**	**J.F.**	**Amount ₹**	**Date**	**Particulars**	**J.F.**	**Amount ₹**
2019 May 1	To Balance b/d		4,000				

Dr. X's A/c Cr.

Date	**Particulars**	**J.F.**	**Amount ₹**	**Date**	**Particulars**	**J.F.**	**Amount ₹**
				2019 May 1	By Balance b/d		6,000

Posting of entries from subsidiary books

A)Posting from simple cash book

1) Cash book: While posting from cash book 'cash A/c' is not opened in ledger. Cash column in cash book is itself cash A/c also. Cash book is a Journal as well as ledger.

Illustration-3

Dr. Simple Cash Book Cr.

Date	particulars	R. No.	J.F.	Amount ₹	Date	Particulars	V. No.	J. F.	Amount ₹
2018					2018				
May 1	To Capital A/c (Being Capital brought in)			5,000	May 3	By Purchases A/c (Being goods Purchased)			3,000
2	To Sales A/c (Being goods sold)			1,000					

Post these entries from cash book to relevant accounts in ledger.

Solution-3

Posting of transactions is as under

In the books of _____

Dr. Capital A/c Cr.

Date	Particulars	J.F.	Amount ₹	Date	particulars	J.F.	Amount ₹
				2018 May 1	By cash A/c		5,000

Dr. **Purchase A/c** **Cr.**

Date	Particulars	J.F.	Amount ₹	Date	particulars	J.F.	Amount ₹
2018 May 1	To Cash A/c		3,000				

Dr. **Sales A/c** **Cr.**

Date	Particulars	J.F.	Amount ₹	Date	particulars	J.F.	Amount ₹
				2018 May 1	By Cash A/c		1,000

Note: 'Cash A/c is not opened 'Cash book' is itself 'Cash A/c'

1(B) Posting from two columns cash book: While posting from two column cash book, 'Cash A/c' and Bank A/c will not be opened separately. 'Cash' and 'Bank columns work as 'Cash A/c' and 'Bank A/c'.

Illustration-4

Dr. **Cash Book (with Cash and Bank Column)** **Cr.**

Date	particulars	R. No.	L.F.	Amt. Cash ₹	Amt. Bank ₹	Date	Particulars	V.No.	L.F.	Amt. cash ₹	Amt. Bank ₹
2020 Jan.1	To Capital A/c (Being brought Capital in cash) _____				8,000	2020 Jan. 3	By Purchases A/c (Being Purchased goods and paid by				1,000

4	To Rekha's A/c (Being cash received) _____			2,000			cheque) _____				

Solution-4

Dr. **Capital A/c** **Cr.**

Date	Particulars	J.F.	Amount ₹	Date	particulars	J.F.	Amount ₹
				2020 Jan 1	By Bank A/c		8,000

Dr. **Rekha's A/c** **Cr.**

Date	Particulars	J.F.	Amount ₹	Date	particulars	J.F.	Amount ₹
				2020 Jan 1	By Cash A/c		2,000

Dr. **Purchases A/c** **Cr.**

Date	Particulars	J.F.	Amount ₹	Date	particulars	J.F.	Amount ₹
2020 Jan. 3	To Bank A/c		1,000				

Illustration-5

Journalise the following transactions and post them to ledger accounts and balance the same in the books of Mr. Mehta.

2020

December 1 Mr. Mehta started business with cash ₹ 8,000.

2 Cash Sales ₹ 3,000.

3 Goods Purchased for cash ₹ 2,000

4 Paid salaries ₹ 500.

5 Purchased Machinery on Credit from Sanjay Traders ₹17,000.

6 Paid cash to Sanjay Traders ₹5,000.

Solution:5

In the book of Mr. Mehta

Journal

Date	**Particulars**	**L.F.**	**Debit Amount ₹**	**Credit Amount ₹**
2020 December 1	Cash A/c Dr. To Mehta's Capital A/c (Being started business with cash)		8,000	8,000
2	Cash A/c Dr. To Sales A/c (Being sold goods (for cash)		3,000	3,000
3	Purchases A/c Dr. To Cash A/c (Being goods Purchased for cash)		2,000	2,000
4	Salaries A/c Dr. To Cash A/c (Being goods purchased for cash)		500	500
5	Machinery A/c Dr. To Sanjay Traders A/c (Being purchased machinery on credit from Sanjay Traders)		17,000	17,000

6	Sanjay Traders A/c To Cash A/c (Being paid cash to Sanjay Traders)		5,000	 5,000
	Total ₹		**35,500**	**35,500**

Dr. **Cash A/c** **Cr.**

Date	Particulars	J.F.	Amount ₹	Date	Particulars	J.F.	Amount ₹
2020				2020			
Dec. 1	To Mehta's			Dec.3	By Purchases A/c		
	Capital A/c		8,000		By Salaries A/c		2,000
2	To Sales A/c		3,000	4	By Sanjay		500
				6	Traders A/c		5,000
					By Balance c/d		
				31			3,500
			11,000				**11,000**
2021							
Jan. 1	To Balance b/d		3,500				

Dr. **Mehat's Capital A/c** **Cr.**

Date	Particulars	J.F.	Amount ₹	Date	Particulars	J.F.	Amount ₹
2020				2020			
Dec. 31	To Balance c/d		8,000	Dec. 1	By cash A/c		8,000
			8,000				**8,000**
				2021			
				Jan. 1	Balance b/d		
							8,000

Dr. **Sales A/c** **Cr.**

Date	Particulars	J.F.	Amount ₹	Date	Particulars	J.F.	Amount ₹

2020				2020			
Dec.31	To Balance c/d		3,000	Dec.12	By Cash A/c		3,000
			3,000				**3,000**
				2021			
				Jan.1	By Balance b/d		3,000

Dr. **Purchases A/c** **Cr.**

Date	**Particulars**	**J.F.**	**Amount ₹**	**Date**	**Particulars**	**J.F.**	**Amount ₹**
2020				2020	By balance c/d		
Dec. 31	To Cash A/c		2,000	Dec.31			2,000
			2,000				**2,000**
2021							
Jan.1	To Balance b/d		2,000				

Dr. **Salaries A/c** **Cr.**

Date	**particulars**	**J.F.**	**Amount ₹**	**Date**	**particulars**	**J.F.**	**Amount ₹**
2020				2020	By Balance c/d		
Dec. 4	To cash A/c		500	Dec.31			500
			500				**500**
2021							
Jan. 1	To Balance b/d		500				

Dr. **Machinery A/c** **Cr.**

Date	**particulars**	**J.F.**	**Amount**	**Date**	**particulars**	**J.F.**	**Amount ₹**

			₹				
2020 Dec. 5 2021 Jan. 1	To Sanajy- Traders A/c To Balance b/d		17,000 **17,000** 17,000	2020 Dec.31	By balance c/d		17,000 **17,000**

Dr. **Sanjay Traders A/c** **Cr.**

Date	**Particulars**	**J.F.**	**Amount ₹**	**Date**	**Particulars**	**J.F.**	**Amount ₹**
2020 Dec.7 30	To cash A/c To Balance c/d		5,000 12,000 **17,000**	2020 Dec.16 2021 Jan. 1	By machinery A/c By Balance b/d		17,000 **17,000** 12,000

Illustration: 6

From the following transactions prepare Madhav's A/c in the books of Keshav.

2020 November 1 Madhav's A/c shows Dr. balance ₹ 5,000.

2 Sold goods on Credit to Madhav ₹3,000.

3 Madhav paid Cash ₹4,000.

8 Madhav returned goods of ₹3,00.

15 Credit Sales to Madhav ₹ 2,500

25 Received cash from Madhav ₹ 2,600 and discount allowed ₹200.

Soluation:6 **In the books of Mr. Keshav**

Dr. **Sanjay Traders A/c** **Cr.**

Date	particulars	J.F.	Amount ₹	Date	particulars	J.F.	Amount ₹
2020				2020			
Nov. 1	To Balance b/d		5,000	Nov. 3	By Cash A/c		4,000
2	To Sales A/c		3,000	8	By Sales Return		300
15	To Sales A/c		2,500		A/c		
				25	By Cash A/c		2,600
				25	By discount		
					allowed A/c		200
				30	By Balance c/d		3,400
			10,500				**10,500**
Dec. 1	To Balance b/d		3,400				

Illustration : 7

From the following transactions Prepare Sita's A/c in the books of Gita.

2020 January 1 Sita's A/c shows credit balance in the books of Gita.

3 Returned goods to Sita on credit ₹500.

5 Purchased goods on credit from Sita ₹ 3,000.

6 Paid cash to Sita ₹2,000.

10 Received cash Sita ₹2,000.

15 Returned goods to Sita ₹ 700.

30 Paid ₹3,700 in full settlement of her account.

Solution: 7 **In the books of Gita**

Dr. **Sita's A/c** **Cr.**

Date	particulars	J.F.	Amount ₹	Date	particulars	J.F.	Amount ₹
2020				2020			
Jan. 3	To Purchase			Jan.1	By Balance b/d		1,000
	Return A/c		500		By Purchases		
6	To Cash A/c		800	5	A/c		3,000
15	To Purchase				By Cash A/c		2,000
	Return A/c		700				
30	To Cash A/c		3,700	10			
30	To Discount						
	Received A/c		300				
			6,000				**6,000**

Illustration:8

From the following transactions Prepare Ganesh's A/c in the books of Krishna and Krishna's A/c in the books of Ganesh.

2019 June 1 Krishna's A/c shows Debit Balance of ₹ 1,000 in the books of Ganesh.

1 Ganesh sold goods on credit ₹2,000.
3 Krishna paid cash to Ganesh ₹1,500.
8 Krishna returned goods to Ganesh ₹300
10 Ganesh received a cheque from Krishna ₹800 and Discount allowed ₹ 100
15 Krishna paid ₹ 250 in full settlement of his A/c to Ganesh in cash.

Solution :8 **In the books of Krishna**

Dr. **Ganesh's A/c** **Cr.**

Date	Particulars	J.F.	Amount ₹	Date	Particulars	J.F.	Amount ₹
2019				2019			
June 3	To Cash A/c		1,500	June 1	By Balance b/d		1,000

8	To Purchase Return A/c		300	1	By Purchases A/c		2,000
10	To Bank A/c		800				
10	To Discount A/c		100				
15	To Cash A/c		250				
15	To Discount A/c		50				
			3,000				**3,000**

In the books of Ganesh

Dr. **Krishna's A/c** **Cr.**

Date	Particulars	J.F.	Amount ₹	Date	Particulars	J.F.	Amount ₹
2019				2019			
June 1	To Balance b/d		1,000	June 3	By Cash A/c		1,500
1	To Sales A/c		2,000	8	By Sales Return A/c		300
				10	By Bank A/c		800
				10	By Discount A/c		100
				15	By Cash A/c		250
				15	By Discount A/c		50
			3,000				**3,000**

Illustration:9

From the Subsidiary Book of 'Patil Stores' for the month of May 2019. Prepare necessary ledger accounts and balance them.

Purchases Book

Date	Particulars	Inward Invoice No.	L.F.	Amount ₹
2019 May 2				
31	Mohan			2,500
	Sonal			3,000
	Total ₹			**5,500**

Purchases Return Book

Date	Particulars	Inward Invoice No.	L.F.	Amount ₹
2019				
May 15	Mohan			500
	Total ₹			**500**

Sales Book

Date	Particulars	Inward Invoice No.	L.F.	Amount ₹
2019				
May 15	Mangesh			7,200
31	K.Narayan			15,000
	Total ₹			**22,200**

Sales Return Book

Date	Particulars	Inward Invoice No.	L.F.	Amount ₹
2019 May 20	Mangesh			1200
	Total ₹			**1200**

Journal Proper- 10 May, 2019-Furniture Purchased ₹ 6,000 on credit from Rajesh

Solution-9

Dr. **Purchases A/c** **Cr.**

Date	Particulars	J.F.	Amount ₹	Date	Particulars	J.F.	Amount ₹
2019 May 31	To sundries as per Purchase Book		5,500	2019 May 31	By Balance c/d		5,500
			5,500				**5,500**
June 1	To Balance b/d		5,500				

Dr. **Mohan's A/c** **Cr.**

Date	Particulars	J.F.	Amount ₹	Date	Particulars	J.F.	Amount ₹
2019 May 5	To Purchase Return A/c		500	2019 May 2	By Purchases A/c		2,500
31	To Balance c/d		2,000				
			2,500				**2,500**
				June 1	By Balance b/d		2000

Dr. **Sonal's A/c** **Cr.**

Date	Particulars	J.F.	Amount ₹	Date	Particulars	J.F.	Amount ₹
2019 May 31	To Balance c/d		3,000	2019 May 31	By Purchase A/c		3,000
			3,000				**3,000**
				June 1	By Balance b/d		3,000

Dr. **Purchases Return A/c** **Cr.**

Date	Particulars	J.F.	Amount ₹	Date	Particulars	J.F.	Amount ₹
2019 May 31	To Balance c/d		500	2019 May 31	By sundries as Purchase Return Book		500
			500				**500**
				June 1	By Balance b/d		500

Dr. **Sales A/c** **Cr.**

Date	Particulars	J.F.	Amount ₹	Date	Particulars	J.F.	Amount ₹
2019 May 31	To Balance c/d		22,200	2019 May 31	By sundries as per Sales Book		22,200

			22,200	June 1	By Balance b/d		**22,200** 22,200

Dr. **Mangesh's A/c** **Cr.**

Date	Particulars	J.F.	Amount ₹	Date	Particulars	J.F.	Amount ₹
2019 May 15	To sales A/c		7,200	2019 May 20	By Sales Return A/c		1,200
				31	By Balance c/d		6,000
			7,200				**7,200**
June 1	To Balance b/d		6,000				

Dr. **K.Narayan's A/c** **Cr.**

Date	Particulars	J.F.	Amount ₹	Date	Particulars	J.F.	Amount ₹
2019 May 31	To Sales A/c		15,000	2019 May 31	By balance c/d		15,000
			15,000				**15,000**
June 1	To Balance b/d		15,000				

Dr. **Sales A/c** **Cr.**

Date	Particulars	J.F.	Amount ₹	Date	Particulars	J.F.	Amount ₹

2019				2019			
May 31	To sundries as per			May 31	By Balance c/d		1,200
	Sales Return Book		1,200				
			1,200				**1,200**
June 1	To Balance b/d		1,200				

Dr. **Furniture A/c** **Cr.**

Date	Particulars	J.F.	Amount ₹	Date	Particulars	J.F.	Amount ₹
2019				2019			
May 10	To Rajesh's A/c		6,000	May 31	By Balance c/d		6,000
			6,000				**6,000**
June 1	To Balance b/d		6,000				

Dr. **Rajesh's A/c** **Cr.**

Date	Particulars	J.F.	Amount ₹	Date	Particulars	J.F.	Amount ₹
2019				2019			
May 31	To Balance c/d		6,000	May 10	By Furniture A/c		6,000
			6,000				**6,000**
				June 1	By Balance b/d		6,000

Illustration:10

From the following transactions prepare necessary ledger accounts in the books of Mrs. Komal and balance them.

2019 January

1 Started Business with Cash ₹ 10,000 and Machinery ₹20,000.

5 Cash Purchases ₹3,000 at 5% Trade Discount.

8 Cash Sales ₹ 6,000.

12 Paid wages ₹ 700.

15 Purchased goods on credit from Sanjay Traders ₹ 4,000.

25 Paid to Sanjay Traders ₹3,200.

28 withdrew Cash for Personal use ₹1,000.

31 Opened Bank A/c in Bank of Maharashtra by depositing ₹ 7,000.

Solution:10 In the books of Komal

Dr. Cash A/c Cr.

Date	Particulars	J.F.	Amount ₹	Date	Particulars	J.F.	Amount ₹
2019 Jan.				2019			
1	To Komal's Capital A/c		10,000	Jan. 5	By Purchases A/c		2,850
				12	By Wages A/c		700
8	To Sales A/c		6,000	25	By Sanjay Traders A/c		3,200
				28	By Drawings A/c		1,000
				31	By Bank of Maharashtra A/c		7,000
				31	By Balance c/d		1,250
			16,000				**16,000**
Feb.1	To Balance b/d						

			1,250				

Dr. **Komal's Capital A/c** **Cr.**

Date	Particulars	J.F.	Amount ₹	Date	Particulars	J.F.	Amount ₹
2019				2019			
Jan.31	To Balance c/d		30,000	Jan. 1	By Cash A/c		10,000
				1	By Machinery A/c		20,000
			30,000				**30,000**
				Feb1	By Balance b/d		30,000

Dr. **Machinery A/c** **Cr.**

Date	Particulars	J.F.	Amount ₹	Date	Particulars	J.F.	Amount ₹
2019				2019			
Jan.1	To Komal's Capital A/c		20,000	Jan.31	By Balance c/d		20,000
			20,000				**20,000**
Feb.1	To Balance b/d		20,000				

Dr. **Purchases A/c** **Cr.**

Date	Particulars	J.F.	Amount ₹	Date	Particulars	J.F.	Amount ₹
2019				2019			
Jan.5	To Cash A/c		2,850	Jan.31	By Balance c/d		6,850

15	To Sanjay Traders A/c		4,000				
			6,850				**6,850**
Feb. 1	To Balance b/d		6,850				

Dr. **Sales A/c** **Cr.**

Date	Particulars	J.F.	Amount ₹	Date	Particulars	J.F.	Amount ₹
2019 Jan.31	To Balance c/d		6,000	2019 Jan.8	By Cash A/c		6,000
			6,000				**6,000**
				Feb. 1	By Balance b/d		6,000

Dr. **Wages A/c** **Cr.**

Date	Particulars	J.F.	Amount ₹	Date	Particulars	J.F.	Amount ₹
2109 Jan.12	To Cash A/c		700	2019 Jan.31	By Balance c/d		700
			700				**700**
Feb. 1	To Balance b/d		700				

Dr. **Sanjay Trader's A/c** **Cr.**

Date	Particulars	J.F.	Amount ₹	Date	Particulars	J.F.	Amount ₹

2019				2019			
Jan. 25	To Cash A/c		3,200	Jan.15	By Purchases A/c		4,000
31	To Balance c/d		800				
							4,000
			4,000				
				Feb. 1	By Balance b/d		800

Dr. **Drawings A/c** **Cr.**

Date	Particulars	J.F.	Amount ₹	Date	Particulars	J.F.	Amount ₹
2019				2019			
Jan. 28	To Cash A/c		1,000	Jan. 31	By Balance c/d		1,000
			1,000				**1,000**
Feb. 1	To Balance b/d		1,000				

Dr. **Bank of Maharashtra A/c** **Cr.**

Date	Particulars	J.F.	Amount ₹	Date	Particulars	J.F.	Amount ₹
2019				2019			
Jan.31	To Cash A/c		7,000	Jan.31	By Balance c/d		7,000
			7,000				**7,000**
Feb. 1	To Balance b/d		7,000				

To check the accuracy we will prepare Trial Balance

Trial Balance as on 31/01/2019

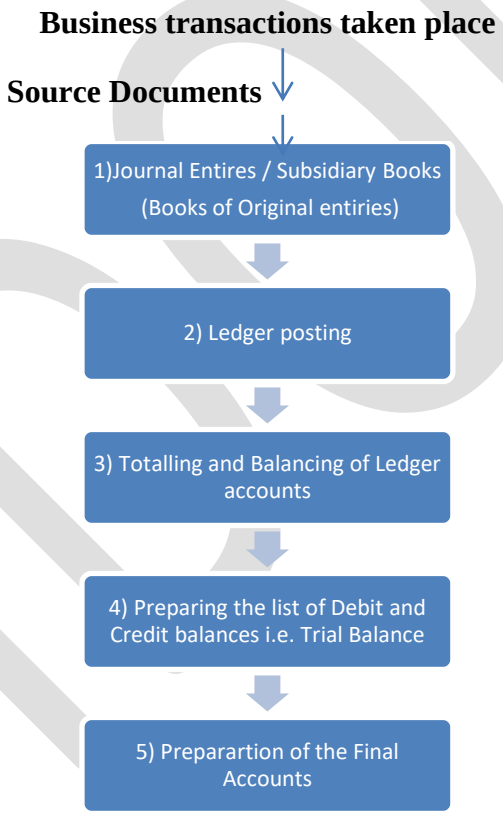
Particulars	L.F.	Debit Balance ₹	Credit Balance ₹
Cash		1,250	
Capital			30,000
Machinery		20,000	
Purchases		6,850	
Sales			6,000
Wages		700	
Sanjay Traders			800
Drawings		1,000	

Bank of Maharashtra		7,000	
Total		**36,800**	**36,800**

5.5 TRIAL BALANCE

As and when any business transaction takes place, it is recorded in original book in a Journal or Subsidiary book. Then these transactions are posted to ledger in respective accounts. At the end of the accounting year accounts are to be closed and balanced. Accounts may show either debit or credit balance. A list is to be prepared of all debit and credit balance which is known as "Trial Balance." Trial balance facilities preparation of final accounts.

Steps in Accounting process are as follows:-



5.6 MEANING AND PURPOSE

Trail Balance is a list of debit and credit balances of all ledger accounts. It is prepared at the end of an accounting year in a statement form. Therefore it is also called as a "Statement of Balance."

Definition:

The concept of trial balance is defined by various Accounting Professionals as below.

1) "It is a list or abstract of the balances or of total debits total credits of accounts in a ledger, with the purpose being to determine the equality of posted debits and credits and to establish a basic summary for final statement"- **By Eric Kohler.**
2) " It is a scheduler or list of list of those debit and credit balances which are extracted from various accounts in the ledger and balances of Cash in hand, Cash at bank as shown by Cash Book are also included in it."**- By Carter R.N.**
3) **"**It is the final list of Balances, totaled and combined."**-By Rolland.**In short Trial Balance is a Statement showing the list of debit and credit balances of all Ledger Accounts of a trader on any particular date. Generally it is prepared at the end of an accounting year. It may be prepared monthly, quarterly or half yearly also. It is a base for the preparation of Final Accounts. As per Income Tax Act, every accounting year closes on 31st March every year.

Purposes of Trial Balance:

Trial Balance is prepared for the following purposes.

1) To know the final balance of any ledger account.
2) To check arithmetical accuracy of each and every account.
3) To assure that all the business transactions are recorded and posted correctly in the books of accounts.
4) To analyze whether the principles of double entry system of book-keeping have been correctly followed, while recording all business transactions.
5) To provide the base for preparation of final accounts.

   It is generally assumed that recording, posting and balancing of all records is correct if the trial balance is tallied. If it does not tally then some errors are there and a trial balance may tally inspite of these errors. Hence though the trial balance is tallied it is not a conclusive proof of the correctness of the books of accounts.

5.7 SPECIMEN OF TRIAL BALANCE:

A trial Balance may be prepared in any one of the following two formats.

1) Journal format
2) T/ Ledger format

1)Journal format:

It has four columns such as Particulars. L.F. Debit balances amount and Credit balances amount as under.

Trial Balance
As on 31st March_____

Particulars	L.F.	Debit Balances Amount ₹	Credit Balance Amount ₹
----------		xxx	
----------		xxx	
----------			xxx
----------			xxx
----------		xxx	
----------		xxx	
----------		xxx	
Total		**xxx**	**xxx**

Explanation of Columns:

1) Particulars Column: In this column the name of account is written.

2) **Ledger Folio(L.F.):** In this column the page no. of the ledger on which the balance appeared is written.

3) **Debit Balances:** In this column the amount of debit balance of respective account is written.

4) **Credit Balances:** In this column the amount of creditor balance of respective account is written.

After writing of all the balances of various ledger accounts, the totals of debit balance column and credit balance column are taken. Both the total must be equal. If both the totals are equal, it is said that the trial balance is tallied.

2) 'T' /Ledger format

In this format trial balance has two sides, left hand sides, left hand side includes debit balances and right hand side includes credit balances. Each side of trial balance has three columns such as Debit balance, L.F. Amount and Credit balance, L.F. Amount as under.

Trail Balance
As on 31st March_____

Debit Balance	L.F.	Amount ₹	Credit Balance	L.F.	Amount ₹
----------		xxx	--------		xxx
----------		xxx	--------		xxx
----------		xxx	----------		xxx

----------		**xxx**	**---------**		**xxx**
Total		**xxx**	**Total**		**xxx**

Explanation of Column:

1) **Debit Balances:** In this column the name of account, which shows debit balance is written.
2) **Credit Balances:** In this column the name of accounts which shows credit balance is written.

5.8 PREPARATION OF TRIAL BALANCE FROM GIVEN BALANCE OF ACCOUNTS:

There are two types of prepare Trial Balance viz.

1) Gross Trial Balance
2) Net Trial Balance.

1)Gross Trial Balance:

While preparing a Trial Balance totals of both sides of an account are entered in proper column of trial balance. Such as debit sides total in debit balance column and credit sides total in credit balance column. This type of trial balance is known as a "Gross Trial Balance." It is called as a Gross Trial Balance as it is prepared without balancing the accounts. This type was used in old age, now it is practically outdated.

2) Net Trial Balance:

A net trial balance is that in which the net balances of each accounts are taken instead of taking the totals of both sides of the accounts. Such as those accounts which show debit balance are entered in debit balance column of the trial balance and those which show credit balance are entered in credit column of the trial balance. This type of trial balance is known as a "Net Trial Balance." Generally trail balance is prepared by this method only.

While preparing a trail balance all the debit and credit balances of ledger account are to be considered.

Meaning of Balances:

1)Personal Accounts:

It may show either debit balance or credit balance. If personal account shows a debit balanceit shows the amount due from person, hence it is a debtorsaccount it appears in debit balance column of trial balance as Sundry Debtors But if personal account shows a credit balance, it shows the amount due to him/her hence it appears in credit balance column of trial balance as Sundry Creditors.

2) Real Accounts:

It always shows debit balance, so it appears in debit balance column of a trial balance.

3) Nominal Accounts:

The accounts of expenses and losses always show debit balance as they appear in debit balance column of trial balance and the accounts of income profit and gains show credit balance, so they appear in credit balance column of trial balance.

Some Important items and their balances are given below.

Items/Accounts	Type of balance	Where to appear in Trial Balance
Capital	Credit	Credit balance column
Drawings	Debit	Debit balance column
Purchases	Debit	Debit balance column
Return Outward/Purchase Return	Credit	Credit balance column
Sales	Credit	Credit balance column
Return Inward/ Sales Return	Debit	Debit balance column

Illustration: 1

From the following information prepare necessary ledger A/c's, balance the accounts and prepare trail balance of Shri Mangaldas:

2020 March	1 Started business with cash	₹ 50,000
	2 Deposited in Bank A/c	₹ 1,000
	5 Purchased Computer	₹ 30,000

6	Purchased goods from Krishna	₹ 5,000
7	Goods sold to Hari	₹ 2,000
10	Furniture Purchased from Ram	₹ 10,000
12	Commission received	₹ 2,000
15	Rent Paid	₹ 500
20	Salary Paid	₹ 500
25	Amount received from Hari	₹ 1,000

Solution: **Ledger Account**

Cash Account

Dr. **Cr.**

Date	Particulars	J.F.	Amount ₹	Date	Particulars	J.F.	Amount ₹
2020				2020			
March				March			
1	To Capital A/c		50,000	2	By Bank A/c		1,000
12	To Commission A/c		2,000	5	By Computer A/c		30,000
	To Hari's A/c				By Rent A/c		
25			1,000	15	By Salary A/c		500
				20	By Balance c/d		500
				31			21,000
	To Balance b/d		**53,000**				**53,000**
Apr.1			21,000				

Dr. **Capital Account** **Cr.**

Date	Particulars	J.F.	Amount ₹	Date	Particulars	J.F.	Amount ₹
2020				2020			
March				March			
31	To balance c/d		50,000	1	By Cash A/c		50,000
			50,000				**50,000**
				Apr. 1	By balance b/d		50,000

Dr. **Bank Account** **Cr.**

Date	Particulars	J.F.	Amount ₹	Date	Particulars	J.F.	Amount ₹

2020 March 2	To Cash A/c		1,000	2020 Mar.31	By Balance c/d		1,000
			1,000				**1,000**
Apr. 1	To Balance b/d		1,000				

Dr. Computer Account Cr.

Date	Particulars	J.F.	Amount ₹	Date	Particulars	J.F.	Amount ₹
2020 March 5	To Cash A/c		30,000	2020 March 31	By Balance c/d		30,000
			30,000				**30,000**
Apr. 1	To Balance b/d		30,000				

Dr. Purchases Account Cr.

Date	Particulars	J.F.	Amount ₹	Date	Particulars	J.F.	Amount ₹
2020 March 6	To Krishna's A/c		5,000	2020 March 31	By Balance c/d		5,000
			5,000				**5,000**
Apr.1	To Balance b/d		5,000				

Dr. Sales Account Cr.

Date	Particulars	J.F.	Amount ₹	Date	Particulars	J.F.	Amount ₹
2020 March 31	To Balance c/d		2,000	2020 March 9	By Hari's A/c		2,000
			2,000				**2,000**
				Apr. 1	By Balance b/d		2,000

Dr. Krishna's Account Cr.

Date	Particulars	J.F.	Amount ₹	Date	Particulars	J.F.	Amount ₹
2020 March 31	To Balance c/d		5,000	2020 Mar.6	By Purchases A/c		5,000
			5,000				**5,000**
				Apr.1	By Balance b/d		5,000

Dr. Hari's Account Cr.

Date	Particulars	J.F.	Amount ₹	Date	Particulars	J.F.	Amount ₹
2020				2020			
March				Mar.25	Cash A/c		1,000
7	To Sales A/c		2,000	Mar.31	By Balance c/d		1,000
			2,000				**2,000**
Apr.1	To Balance b/d		1,000				

Dr. **Ram's Account** **Cr.**

Date	Particulars	J.F.	Amount ₹	Date	Particulars	J.F.	Amount ₹
2020				2020			
March				March			
31	To Balance c/d		10,000	10	By Furniture A/c		10,000
			10,000		By Balance b/d		**10,000**
				Apr. 1			10,000

Dr. **Furniture Account** **Cr.**

Date	Particulars	J.F.	Amount ₹	Date	Particulars	J.F.	Amount ₹
2020				2020			
March				March			
10	To Ram's A/c		10,000	31	By Balance c/d		10,000
			10,000				**10,000**
Apr.1	To Balance b/d		10,000				

Dr. **Rent Account** **Cr.**

Date	Particulars	J.F.	Amount ₹	Date	Particulars	J.F.	Amount ₹
2020				2020			
March				March			
10	To Cash A/c		500	31	By Balance c/d		500
			500				**500**
Apr. 1	To Balance b/d		500				

Dr. **CommissionAccount** **Cr.**

Date	Particulars	J.F.	Amount ₹	Date	Particulars	J.F.	Amount ₹
2020				2020			
March				March			
31	To Balance c/d		2,000	12	By Cash A/c		2,000
			2,000				**2,000**

				Apr. 1	By Balance b/d		2,000

Dr. **Salary Account** **Cr.**

Date	Particulars	J.F.	Amount ₹	Date	Particulars	J.F.	Amount ₹
2020 March 20	To Cash A/c		500	2020 March 31	By Balance c/d		500
			500				**500**
Apr. 1	To Balance b/d		500				

Trial Balance as on 31st March 2020

Particulars	L.F.	Debit balances Amount ₹	Credit balances Amount ₹
Cash		21,000	
Capital			50,000
Bank		1,000	
Computer		30,000	
Purchases		5,000	
Sales			2,000
Krishna			5,000
Hari		1,000	
Ram			10,000
Furniture		10,000	
Rent		500	
Commission			2,000
Salary		500	
Total		**69,000**	**69,000**

Illustration:2

Prepare Trial Balance from the following ledger of Shri.Ganesh as on 31stMarch,2020

Particulars	Amount ₹	Particulars	Amount ₹
Capital	50,000	Carriage	2,500
Debtors	2,500	Purchases	15,000
Wages	3,500	Salary	4,500
Depreciation	1,500	Sales	40,000
Furniture	12,500	Postage	250
Advertisement	2,500	Creditors	4,000
Bad Debts	600	Land & Building	45,000
Bank Loan	2,000	Rent	2,900
Cash in Land	1,250	Drawings	1,500

Solution 2:

Trial Balance as on 31st March 2020

Particulars	L.F.	Debit Balance Amount ₹	Credit Balance Amount ₹
Capital			50,000
Debtors		2,500	
Wages		3,500	
Depreciation		1,500	
Furniture		12,500	
Advertisement		2,500	
Bad Debts		600	
Bank Loan			2,000
Cash in Land		1,250	
Carriage		2,500	
Purchases		15,000	
Salary		4,500	
Sales			40,000
Postage		250	
Creditors			4,000
Land & Building		45,000	
Rent		2,900	
Drawings		1,500	
Total		**96,000**	**96,000**

Illustration No.3

From the following Ledger balances Prepare Trail Balance of Mrs. Shailaja as on 31st March 2019

Particulars	Amount ₹	Particulars	Amount ₹
Capital	50,000	Land & Building	10,500
Plant & Machinery	8,000	Office Expenses	1,700
Insurance	3,600	Carriage Inward	1,400
Drawings	4,000	Rent, Rates & Taxes	2,300
Motor Van	5,400	Reserve for doubtful debts	500
Stock (1-4-18)	14,000	Sales	28,500
Cash at Bank	1,200	Outstanding Expenses	400
Wages	2,800	Salaries	5,000
Debtors	13,000	Bad debts	1,000
Purchases	10,500	Creditors	5,000

Solution:3

Trial Balance as on 31st March 2019

Debit Balances	L.F.	Amount ₹	Credit Balances	L.F.	Amount ₹

Plant & Machinery		8,000	Capital		50,000
Insurance		3,600	Creditors		5,000
Drawings		4,000	Reserve for doubtful		
Motor Van		5,400	debts		500
Stock (1-4-18)		14,000	Sales		28,500
Cash at Bank		1,200	Outstanding Expenses		
Wages		2,800			400
Debtors		13,000			
Purchases		10,500			
Land & Building		10,500			
Office Expenses		1,700			
Carriage Inward		1,400			
Rent, Rates & Taxes					
Salaries		2,300			
Bad debts		5,000			
		1,000			
Total		**84,400**	**Total**		**84,400**

Illustration No.4

From the following ledger Balances Prepare Trail Balance of ShriHari as on 31st March,2020

Particulars	Amount ₹	Particulars	Amount ₹
Stock (1-4-19)	50,000	Sales	2,00,000
Purchases	1,50,000	Carriage outward	1,750
Capital	3,00,000	Bills Payable	35,000
Machinery	1,00,000	Rent	2,500
Sundry Debtors	50,000	Wages	20,000
Building	50,000	Drawings	10,000
Postage & Telegrams	2,500	Bills Receivable	15,000
Cash at Bank	10,550	Bank Loan	1,25,000
Salaries	75,000	Sundry Creditors	75,000
Goodwill	1,80,000	Bad Debts	2,500
Sales Return	20,000	Interest Received	1,800
Purchase Return	7,250	Commission received	2,000
General expenses	1,250	Audit Fees	5,000

Solution: 4

Trail Balance as on 31st March 2020

Debit Balances	L.F.	Amount ₹	Credit Balances	L.F.	Amount ₹
Stock (1-4-19)		50,000	Capital		3,00,000
Purchases		1,50,000	Purchase Return		7250
Machinery		1,00,000	Sales		2,00,000
Sundry Debtors		50,000	Bills Payable		35,000
Building		50,000	Bank Loan		1,25,000
Postage & Telegrams			Sundry Creditors		75,000

Cash at Bank		2,500	Interest Received		1,800
Salaries		10,550	Commission Received		
Goodwill		75,000			2,000
Sales Return		1,80,000			
General expenses		20,000			
Rent		1,250			
Wages		2,500			
Drawings		20,000			
Bills Receivable		10,000			
Bad Debts		15,000			
Audit Fees		2,500			
		5,000			
Total		**7,46,050**	**Total**		**7,46,050**

Illustration No.5

Prepare a Trial Balance of Shri. Krishna from the ledger balances given below as on 31st march,2019.

Particulars	Amount ₹	Particulars	Amount ₹
Capital	5,00,000	Plant & Machinery	3,00,000
Stock(1-4-2018)	1,00,000	Computers	50,000
Royalty	2,000	Wages	25,000
Import duty	3,500	Bank Overdraft	1,00,000
Conveyance	500	Return Inwards	10,000
Leasehold premises	2,00,000	Sales	7,00,000
Salaries	24,000	Debtors	80,000
Cash in hand	18,000	Creditors	50,000
Purchases	5,00,000	Furniture	50,000
Returns Outwards	20,000	Insurance	2,000
Discount allowed	1,000	Printing & Stationery	1,500
Mobile Charges	2,500		

Solution:5

Trial Balance as on 31st March, 2019

Debit Balances	L.F.	Amount ₹	Credit Balances	L.F.	Amount ₹
Stock(1-4-2018)		1,00,000	Capital		5,00,000
Royalty		2,000	Sales		7,00,000
Import duty		3,500	Returns Outwards		20,000
Conveyance		500	Bank Overdraft		1,00,000
Leasehold premises		2,00,000	Creditors		50,000
Salaries		24,000			
Cash in hand		18,000			
Purchases		5,00,000			
Discount allowed		1,000			
Mobile Charges		2,500			

Plant & Machinery		3,00,000			
Computers		50,000			
Wages		25,000			
Return Inwards		10,000			
Debtors		80,000			
Furniture		50,000			
Insurance		2,000			
Printing & Stationery		1,500			
Total		**13,70,000**	**Total**		**13,70,000**

Illustration No.6

Prepare a Trial Balance as on 31st March,2020 from the following balances extracted from ledger of Suraj Patil.

Particulars	Amount ₹	Particulars	Amount ₹
Opening Stock	60,000	Sales	1,30,000
Drawings	2,500	Creditors	16,000
Insurance	600	Travelling expenses	3,000
Salaries & Wages	4,500	Furniture & Fixtures	10,000
Purchases	65,000	Bills Receivable	600
Debtors	18,000	Bills Payable	1,000
10% Investment	12,000	Rent	3,500
Free hold Building	20,000	Unpaid wages	800
Capital	40,000	Return Inward	1,000
General Reserve	21,000	Return outward	500
Interest Received	600	Cash at Bank	4,000
Carriage	2,500	Office expenses	2,700

Solution:6

Trial Balance as on 31st March,2020

Debit Balances	L.F.	Amount ₹	Credit Balances	L.F.	Amount ₹
Opening Stock		60,000	Sales		1,30,000
Drawings		2,500	Creditors		16,000
Insurance		600	Capital		40,000
Salaries & Wages		4,500	General Reserve		21,000
Purchases		65,000	Interest Received		600
Debtors		18,000	Unpaid wages		800
10% Investment		12,000	Return outward		500
Free hold Building		20,000			
Carriage		2,500			
Travelling expenses		3,000			
Furniture & Fixtures		10,000			
Bills Receivable		600			
Bills Payable		1,000			
Rent		3,500			

Return Inward Cash at Bank Office expenses		1,000 4,000 2,700			
Total		**2,09,900**	**Total**		**2,09,900**

5.9 SUMMARY

Ledger is a bound book in which all accounts are maintained. It is recorded from journal and subsidiary books only. There is no direct recording in ledger. So ledger is a secondary book of accounts. It provides summarized record of various accounts at one place. An account in a ledger is called as "Ledger Account"

Decision making in a business is based on information available from ledger.

Preparation of Trial Balance, Profit and Loss Account Balance Sheet is based on ledger.

Ledger accounts can be maintained in two different forms.

1) 'T' form of an account 2)Statement form of an Account

An act of transferring Journal entries from Journal/ Subsidiary book to respective ledger accounts is called ledger posting. Ledger posting is made in serial order of transactions as per the dates.

The closing balance is brought forward on the first day of next accounting year. This is called opening balance of that account.

Cash book is a Journal as well as ledger.

At the end of the accounting year accounts are to be closed and balanced. Accounts may show either debit or credit balance. A list is to be prepared of all debit and credit balance which is known as "Trial Balance." Trial balance facilities preparation of final accounts.

It is generally assumed that recording, posting and balancing of all records is correct if the trial balance is tallied. If it does not tally then some errors are there and a trial balance may tally inspite of these errors.

A trial Balance may be prepared in any one of the following two formats.

3) Journal format 2) T/ Ledger format

There are two types of prepare Trial Balance viz.

3) Gross Trial Balance 2) Net Trial Balance

Q.1. Objectives type questions:

(A) Answer in only one sentence:

1) Why is Trial Balance prepared?

2) What do you mean by Ledger?

3) Which types of the accounts always have debit balance?

4) State the meaning of 'Debit Balance'.

5) What is balance of Cash A/c?

6) On which date is a Trial Balance prepared?

(B) Give one word, term or phrase for the following statement:

1) Mention the side where goodwill A/c is appeared in the Trial Balance.

2) Bound book of accounts.

3) Transfer of a Journal entry from Journal to ledger.

4) A list of both Ledger balances which is prepared after the closing of ledger Accounts.

5) Types of accounts which are not balanced but transferred to Trading A/c or Profit & Loss A/c.

6) Right hand side of an account.

Answer:-1) Debit balance column; 2) Ledger; 3) Posting 4) Net Trail Balance; 5) Nominal Accounts; 6) Credit Side

(C) Fill in the blanks with correct alternative and rewrite the statements:

1) Drawings account appears in _____ column of the trial balance.

a) L.F. b) Debit balance c) Credit balance d) None of these

2) _____accounts usually show a debit balance.

a) Personal b) Real c) Nominal d) Income

3) _____ is prepared from the balances in ledger accounts.

a) List b) Journal c) Book d) Trial balance

4) Carried down (c/d) balance indicates _____ balance.

a) Opening b) real c) Nominal d) Closing

5) A Trail Balance provides the base for preparation of _____.

a) final accounts b) Voucher c) debit note d) Credit note

6) Total of sales book is _____ to sales account.

a) entered b) moved c) posted d) given

Answer:1)Debit balance ; 2) b) Real; 3) d) Trial balance; 4) d) Closing;

5) a) final accounts; 6) c) posted

(D) Statetrue or false:

1) A Trial balance shows only arithmetical accuracy.

2) All transactions are recorded directly in ledger.

3) A Trial balance is an Account.

4) A Trial balance is most important document.

5) Narration is not necessary in ledger.

6) Balance of Personal account is brought down for the next year.

Answers: True: 1; 5;6

False: 2;3; 4;

Practical Problem

1. **From the following transactions in the books of Mr. Kamble. Prepare Mr. Shinde's A/c. Balance the A/c at the end of each month.**

2021 Jan. 1 Mr. Shinde's A/c shows Debit balance of ₹ 600.

1 Sold goods to Mr. Shinde ₹ 500.

5 Received Cash from Mr. Shinde ₹ 2,000.

10 Credit sales to Mr. Shinde ₹ 2,000.

25 Return goods from Mr. Shinde ₹ 250.

31 Received cash from Mr. Shinde ₹ 750.

Feb.1 Received crossed Cheque from Mr. Shinde ₹ 1,100.

15 Credit sales to Mr. Shinde ₹ 400.

28 Mr. Shinde settled his A/c by paying cash. Discount allowed to him ₹ 200.

Ans. Mr. Shinde's A/c shows Debit Balance of ₹ 2,100 on 31/01/2021

On 28/02/2021 Mr. Shinde paid ₹ 1,200 and A/c is settled.

2. **From the following transactions prepare necessary ledger accounts and balance them.**

2020 Jan 1 Sachin started Business with Cash ₹ 10,000 and Machinery ₹15,000

1 Purchased goods for cash ₹ 3,000.

3 Sold goods for cash ₹ 4,000.

5 Purchased furniture on credit from Poona Traders ₹ 7,000.

8 Purchased goods on credit from Mr.Dilip ₹2,000 at 10% T.D.

10 Sold goods on credit toMr. Mahendra ₹ 8,000 at 12.5% T.D.

15 Paid Rent ₹ 600.

18 Withdrew cash for personal use ₹ 1,000.

20 Paid cash to Mr. Dilip ₹ 1,800.

25 Received cash from Mr. Mahendra ₹ 6,800.

31 Paid to Miss Sunita ₹ 400 for salaries

Ans. Debit Balance- Cash A/c ₹ 16,000; Machinery A/c ₹ 15,000; Purchases A/c ₹ 4,800; Furniture A/c ₹ 7,000; Mahendra A/c ₹ 200; Rent A/c ₹ 600; Drawings A/c ₹ 1,000; Salaries A/c ₹ 400.

Credit Balance- Capital A/c ₹ 25,000; Sales A/c ₹11,000;

Poona Traders A/c ₹ 7,000

3. **From the following cash book of Mr. Patel for the month of April 2019, Prepare necessary ledger A/c's and Balance the same.**

Dr. Cash A/c Cr.

Date	Particulars	R.No.	L.F.	Amount ₹	Date	Particulars	V.No.	L.F.	Amount ₹
2019					2019				
April 1	To Balance b/d			5,000	Apr.1	By Purchases A/c			800
	To Rohan's A/c					By Wages A/c			
3	To Sales A/c			1,400	4	By Purchases A/c			500
	To Interest A/c				8	By Rekha's A/c			3,400
6	To Imran's A/c			3,600		By Drawing A/c			
8	To Sales A/c			1,000	10	By Purchases A/c			1,900
	To Rohan's A/c					By Bank A/c			
10	To Capital A/c			2,000	12	By Balanced c/d			1,700
15	To Balance b/d			6,000	22				1,600
20				700					
					30				6,800
30				7,000	30				10,000
				26,700					**26,700**
May 1				10,000					

Ans. Debit Balance- Purchases A/c ₹ 5,800; Wages A/c ₹ 500; Rekha's A/c ₹ 1,900; Drawing A/c ₹ 1,700; Bank A/c ₹ 6,800

Credit Balance-Rohan's A/c ₹ 2,100; Sales A/c ₹ 9,600; Interest A/c ₹ 1,000; Imran's A/c ₹ 2,000; Capital A/c ₹ 7000.

4. **From the following Cash Book (with cash and Bank columns) prepare necessary Ledger Accounts and balance them.**

Dr. Cash Book (with Cash and Bank columns) Cr.

Date	Particulars	L.F.	Cash ₹	Bank ₹	Date	Particulars	L.F.	Cash ₹	Bank ₹
2018					2018				
Apr. 1	To Balance b/d		400	1,000	Apr1	By Purchases A/c		700	
2	To Ram's A/c		980			By Rent A/c			
3	To Sales A/c			4,000		By Sita's A/c			200
7	To Interest A/c		120			By Salaries A/c		300	
10	To Sales A/c		500			By Purchases A/c			450
25	To Bank A/c		2,000			By Cash A/c			
						By Balance c/d			1,350
									2,000
								3,000	1,000
			4,000	**5,000**				**4,000**	**5,000**

			3,000	1,000					

Note: Narration in Cash Book is omitted.
Ans. **: Debit Balance:** Rent A/c ₹ 200; Purchases A/c ₹ 2050; Salaries A/c ₹ 450; Sita's A/c ₹ 300
Credit Balance: Sales A/c ₹ 4,500; Interest A/c ₹120;
Ram's A/c ₹ 980

5. **From the following Subsidiary Books Prepare necessary ledger accounts and balance them.**

Purchase Book

Date	Particulars	Inward Invoice No.	L.F.	Amount ₹
2020 Aug. 2	Laxman			4,250
5	Joseph			1,500
10	Salman			3,000
15	Kamini			2,500
31	Patel			800
	Total			**12,050**

Purchase Return Book

Date	Particulars	Inward Invoice No.	L.F.	Amount ₹
2020 Aug. 7	Laxman			550
18	Kamini			700
31	Patel			100
	Total			**1,350**

Ans. Debit Balance- Purchases A/c ₹ 12,050
Credit Balance- Purchase Return A/c ₹ 1,350; Laxman A/c ₹ 3,700; Mr.Joseph A/c ₹ 1,500; Mr. Salaman A/c ₹ 3,000;
Miss Kamini A/c ₹ 1,800; Mr. Patel A/c ₹ 700.

6. **From following Ledger balances Prepare a Trial Balance as on 31st March,2019 of Mr.ShivSagar**

Particulars	Amount ₹	Particulars	Amount ₹
Goodwill	40,000	Sundry Debtors	31,500
Salary	7,000	Sundry Creditors	66,000
Carriage	5,500	Land & Building	70,000
Advertisement	4,800	Bank overdraft	35,000
Electricity charges	1,650	Patents	20,000
Purchase	78,500	Rent	9,000
Sales	1,52,500	Furniture	20,000
Capital	1,40,000	Printing & stationery	10,200
Plant & Machinery	60,000	Discount (Dr.)	2,300

General expenses	2,200	Discount (Cr.)	3,650
Opening stock	27,000	Cash in hand	4,500
Trade expenses	3,000		

(Answers- **Total of Trial Balance ₹ 3,97,150)**

7. **From the following ledger balances Prepare Trail Balance of Mr. Rama as on 31st March, 2019**

Particulars	Amount ₹	Particulars	Amount ₹
Machinery	1,00,000	Sales return	2,800
Stock (1-4-2018)	20,000	Drawings	12,000
Insurance	5,000	Purchase Returns	4,800
Travelling expenses	3,600	Bills payable	17,300
Purchases	49,300	Capital	1,00,000
Bad Debts	1,200	Furniture	36,000
Sales	77,500	Salary	3,200
Bank Loan	76,000	Printing & stationery	1,400
Bank overdraft	36,000	Office rent	3,000
Sundry Debtors	1,20,800	Discount (Dr.)	1,500
Wages	1,800	Discount (Cr.)	2,000
Factory Rent	4,600	Creditors	52,000
Advertisement	1,000	R.D.D.	1,600

(Answers-Total of Trial Balance ₹ 3,67,200)

8. **Following balances are extracted from the ledger of Shri.RamKrishna as on 31st March,2019. Prepare Trial Balance as on that date.**

Particulars	Amount ₹	Particulars	Amount ₹
Capital	4,50,000	Carriage Inward	5,000
Drawings	25,000	Wages	20,000
Investment	10,000	Plant & Machinery	3,00,000
Building	70,000	Sales Return	7,000
Debtors	20,000	Bank Charges	500
Creditors	25,000	Coal, Gas & water	10,000
Bank loan	15,000	Bills Receivable	20,000
Furniture	60,000	Bills Payable	10,000
General Insurance	2,000	Trade Expenses	500
Sales	3,60,000	Royalty	9,000
Cash in hand	5,000	Purchases	2,35,000
Opening stock	40,000	Salary	20,000
Bad Debts	1,000		

(Answers- Total of Trail Balance ₹ 8,60,000)

9. **Following balances** are extracted from the Ledger of Mr. Vijay as on 31st March, 2020. Prepare Trial Balance as on the date.

Particulars	Amount ₹	Particulars	Amount ₹
Capital	70,000	Bad Debts	1,600
Drawings	17,000	Interest Received	400
Purchases	57,000	R.D.D.	3,000
Carriage	2,000	Wages	14,400
Sales Return	3,000	Furniture	6,000
Sales	1,12,000	Computer	20,000
Discount Received	200	Goodwill	10,000
Creditors	14,400	Cash in Bank	3,000
Salaries	7,000	Cash in hand	400
Rent	2,400	Debtors	42,800
General expenses	400	Bills Receivable	7,000
Rates & Taxes	6,000		

(Answers- Total of Trail Balance ₹ 2,00,000)

Reference Books

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UNIT 1 - CHAPTER -6

FINAL ACCOUNTS

6.0 OBJECTIVES:

Know the meaning, definition and importance of financial statements of a proprietary concern.

Understand the methods of preparing financial statements.

Learn the basic concepts of 'Trading Account', Profit and Loss and Balance sheet

Understand Journal entries required to prepare final accounts.

Understand Journal entries and effects of various adjustments.

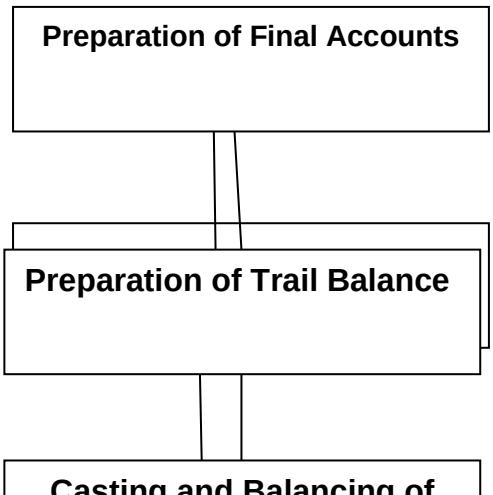
Know the financial position i.e. Assets, Liabilities and Capital (Net worth) as on a particular day/ date.

6.1 INTRODUCTION:

Accounting is system and scientific process of maintaining records of business transactions. A businessman records all the business transactions in journal or Sub-journals (Subsidiary books). The journalized entries are posted to the respective ledger accounts in the ledger. At the end of a particular accounting period these ledger accounts are balanced and a Trial Balance is prepared to check the arithmetical accuracy of the books of accounts On the basis of Trial Balance the Final Accounts are prepared.

Steps in Accounting process:

Meaning: Journalising, posting, casting balancing and preparation of Trial Balance is not a final stage of accounting.



Every businessman is interested to know whether he has earned a Profit or suffered a loss during the accounting year. The Profit or Loss should be determined by preparing a Trading and Profit and loss Account. While financial position is judged by preparing a Trading and Profit and Loss Account. While financial position is judged by preparing Balance Sheet of a business.

Final accounts are the accounts which are prepared at the end of an accounting year. It is a group of two accounts i.e. Trading Account and Profit and Loss Account and one statement i.e. Balance Sheet. Trading and Profit and Loss account is prepared to find out whether Profit is earned or Loss is suffered. And Balance sheet is prepared to know the financial position of the business on a particular date.

Definition:-The concept of Final Accounts is defined as "Final Accounts are the financial statements prepared at the end of an accounting year to disclose the financial position and performance of a business concern". It includes

1) Trading Account

2) Profit and Loss Account

3) Balance Sheet.

Objectives and importance of Final Accounts:-The primary objective of final account is to enable a trader to know the following information

1) The amount of Profit earned or loss suffered during the accounting period.

2) The amount of assets and liabilities in the business on a particular date.

3) The amount of his capital in the business (equity).

Apart from the above main objectives the following are also the objectives of final accounts

a) To know the amount due to creditors and amount due from debtors.

b) To know the Trading Profit, Operating Profit and abnormal gains and losses.

c) To compare his business with that of other similar concerns.

d) To ascertain the amount of Tax liability payable to Government e.g. Income tax, Sales tax, Wealth tax, etc.

e) To calculate various ratios for the purpose of financial analysis.

f) To take necessary policy decision regarding future business activities.

Importance:-Final accounts are prepared for the following purposes.

1. Ascertainment of gross profit or gross loss.
2. Calculation of cost of goods sold.
3. Comparisons of stock with the previous years stock.
4. Ascertainment of net profit or net loss.
5. Ascertainment of ratio of net profit with sales.
6. Ascertainment of expenses ratio to net sales.
7. Comparison of actual performance with desired performance.
8. Knowledge of financial position.
9. Ascertainment of current assets and current liabilities.
10. Ascertainment of Proprietor's equity.
11. To check arithmetical accuracy of accounting records.

6.2 PREPARATION OF TRADING ACCOUNT

Trading Account is a part and Loss Account. It is prepared to find out the result of trading activities done during the accounting period by a trader. Trading activities means buying and selling of goods and services. Trading Account is a nominal account. It is prepared on the basis of direct expenses and direct income.

The main objective of preparation of Trading Account is to find out Gross Profit or Gross Loss i.e. trading result. Trading Account is prepared by passing the closing entries of nominal

accounts (direct incomes and direct expenses only). Gross Profit or Gross Loss is the difference between net sales and cost of goods sold.

Equation of Gross Profit/ Gross Loss

Gross Profit= Net Sales – Cost of goods sold

If amount of net sales is less than cost of goods sold the result is Gross Loss. The equations for these are as follows.

Gross Loss= Cost of goods sold- Net sales

- **Net sales=** Total Sales- Sales return (Return Inward)

Total sales includes Cash sales includes Cash sales and credit sales during the year.

- **Cost of Goods Sold =** Opening stock + Net purchases + Direct expenses- Unsold goods.
- **Net purchases=** Total purchases (cash and credit)- purchase return (return outward)
- Unsold Goods refers to the closing stock of goods at the end of the year, goods distributed as free sample, goods taken over by owner for personal use and goods destroyed by fire or in accident or stolen.

Illustration 1:

Find out Gross Profit/Loss from the following information of Mr.Omkar for the year ended 31st March 2020.

	₹		₹
Opening Stock	15,000	Sales Return	1,400
Closing Stock	10,000	Purchase Return	1,200
Wages	4,500	Purchases	48,200
Octroi duty	500	Sales	95,400
Royalty	1,500	Carriage Inward	1,000

Solution 1: **In the Books of Mr. Omkar**

Statement of Gross Profit / Loss

For the year ended 31st March 2020

Particulars		**Amount ₹**	**Amount ₹**
Total Sales		95,400	
Less: Sales Return		1,400	
Net Sales			94,000
Less: Opening Stock		15,000	
Less: Purchases (Total Purchases)	48,200		
Less Purchase Return	1,200	47,000	
Less: Direct expenses : Wages	4,500		
Carriage	1,000		
Octroi duty	500		
Royalty	1,500	7,500	
Cost of Purchase		69,500	
		10,000	59,500
Less: Closing Stock			
Cost of goods sold			34,500
Gross Profit			
If cost of goods sold is more than net sales it is Gross Loss			

Specimen of Trading Account

In the Books of M/s-----

Trading Account

For the year ended 31st March----

Dr. **Cr.**

Particulars	**Amount ₹**	**Amount ₹**	**Particulars**	**Amount ₹**	**Amount ₹**
To Opening Stock		xx	By Sales	xx	
To Purchases	xx		Less: Return	xx	xx
					xx

Less: Purchase Return	xx		By goods distributed as		
To Carriage/Freight		xx	free sample		xx
To Cartage		xx	By goods withdrawn by		
To Octroi/Custom duty		xx	Proprietor for personal		
To Wages		xx	use		
To Factory rent			By goods destroyed by		xx
To Factory expenses		xx	fire/loss by theft		
To Motive power fuel		xx	By closing Stock		xx
gas, coal		xx	By Gross Loss c/d		xx
To Factory lighting and			(transferred to Profit &		
heating		xx	Loss A/c)		
To Royalties					
To Gross Profit c/d		xx			
(transferred to p& L A/c)					
		xx			
		xx			
		xx			**xx**

The balancing figure of Trading Account may show either Gross Profit or Gross Loss. Credit balance of trading a/c indicates Gross Profit. It is transferred to the credit side of profit and loss account. Debit balance of Trading account indicates Gross Loss it is transferred on debit side of profit and Loss account.

Explanation of items of Trading Account

On debit side of Trading Account

1) Opening Stock:- Opening stock refers to the stock of goods in hand at the beginning of the year. The amount of opening stock appears in Trial Balance. It is debited to Trading Account. In case of newly started business there will be no opening stock of goods. In case of manufacturing concern opening stock will be in three form Viz a) Stock of raw material b) Stock of work in process c) Stock of finished goods.

2) Purchases: The term purchases means goods purchased during the year for sale. It includes both cash purchases and credit purchases. Total amount of purchases of goods is debited to Trading Account.

If there is a balance of purchases return i.e. return outward on credit column of Trial Balance it should be deducted from purchases in Trading Account.

Purchases of capital assets or stationery, spare parts should not be added with the purchases.

3)Direct Expenses: The expenses which are incurred for purchasing or manufacturing of the goods and also the Expenses incurred on goods to bring them in the safest condition are called Direct Expenses. In other words expenses which are directly related to purchases or production of goods are directly related to purchases or production of goods increases the cost of purchase. These are as follows.

a) **Productive wages/ wages:** Wages refer to the remuneration paid to labourers who are engaged in manufacturing of goods in a factory. Hence it is treated as direct expenses and debited to Trading Account.
b) **Carriage Inward/ Freight / Cartage/ Demurrage:** These expenses are incurred for bringing the goods or raw material purchased from the place of purchase to our factory shop or godown. It is debited to Trading Account. Demurrage is a penalty given to Railway authority.
c) **Octroi duty/ Custom duty:** When goods are brought within municipal area the octroi duty is to be paid on it. In case of goods are imported from other countries import duty, customs duty, dock charges have to be paid. Hence these expenses are related to purchases of goods and treated as direct expenses and debited to Trading Account.
d) **Factory Rent, Rates and Factory Expenses:** These expenses are related to manufacturing of goods, which includes factory rent, municipal taxes of factory premises, work expenses, works managers salary etc. it is treated as direct to Trading Account.
e) **Motive power/ fuel/ coal/ gas/ water:** Electricity power or coal gas or fuel utilised for manufacturing of goods are expenses related to manufacturing of goods. Therefore it is treated as direct expenses and debited to Trading Account.
f) **Royalty:** Royalty is the amount paid to the owner for using his rights. E.g. amount paid to the owner of coal-mine for taking out the coal from coal-mine. It is direct expenses and debited to Trading Account.

g) **Trade expenses:** Trade expenses are indirect expenses and debited to Profit and Loss Account. But if Trade expenses appears initial balance along with sundry expenses, general expenses or office expenses, miscellaneous expense then it is treated as direct expenses and debited to Trading Account.

On credit side of Trading Account

1) **Sales:**Net sales of goods is shown in the credit side of Trading Account. When the goods sold are returned, it is called as sales return. It is deducted from total sales to arrive at net sales.
2) **Closing Stock:** Closing Stock of goods means the value of goods which remain unsold at the end of financial year. The amount of closing stock is credited to trading Account. Closing stock is valued on the basis of "Cost Price or Market Price whichever is less" the amount of closing stock is given in the adjustments.

Closing Stock is valued at cost price or Market price whichever is less.

Journal entries for preparing Trading Account:

At the end of accounting year, accounts of direct expenses and direct incomes are closed and the balance of those accounts is transferred to trading account. For this purpose some Journal entries are passed which are known as 'closing entries'.

1) **Transferring of Direct Expenses and Opening Stock**

Trading Account----------Dr.xx

To Opening Stock Account	xx
To Purchases Account	xx
To Sales Return Account	xx
To Direct Expenses Account	xx

(Being Opening Stock, Purchases and Direct expenses transferred to Trading Account)

2) **Transferring of sales and purchase return**

Note: Purchase returns and sales return are transferred to Trading Account by making Journal entries, but while preparing the Trading Account purchase returns are deducted from purchase and sale returns are deducted from sales.

After above stated journal entries the Trading Account is prepared. If the total of credit side of Trading Account is more than the debit side, it represents

Gross Profit and if the debit side total is more than credit side then the difference is called as Gross Loss.

Sales Account----------Dr. xx

Purchase Return Account---------Dr. xx

To Trading Account xx

(Being Sales and purchase return transferred to Trading Account)

3) **Transfer entry of closing stock to Trading Account**

Closing Stock Account----------Dr. xx

To Trading Account xx

(Being closing stock transferred to Trading Account)

4) **For Gross Profit transferred to Profit and Loss Account.**

Trading Account----------Dr. xx

To Profit and Loss Account xx

(Being Gross Profit transferred to P&L Account)

Gross Profit is credited to Profit and Loss account

5) **For Gross Loss transferred to Profit and Loss Account.**

Profit and Loss Account ----------Dr. xx

To Trading Account xx

(Being gross loss transferred to Profit and Loss Account)

Gross Loss is debited to Profit and Loss Account

Give closing entries of purchase return and sales return.

Illustration .2

From the following balances prepare Trading Account of Mr. Kedar for the year ended 31st March 2020.

Particulars	**Amt** ₹	**Particulars**	**Amt** ₹
Opening Stock	55,000	Purchase Return	5,000
Sales	2,88,000	Motive Power	10,000

Wages	30,000	Purchases	1,90,000
Octroi duty	1,000	Sales Return	3,000
Royalty	3,000	carriage	6,000

Stock of goods on 31st March 2020 was valued at Cost price ₹ 40,000 while its market price ₹42,000

Solution 2 In the Books of Mr. Kedar

Trading Account

For the year ended 31st March 2020

Dr. **Cr.**

particulars	**Amount ₹**	**Amount ₹**	**particulars**	**Amount ₹**	**Amount ₹**
To Opening stock		55,000	By Sales	2,88,000	
To Purchases			Less: Sales Return	3,000	2,85,000
Less: Purchase Return	1,90,000				40,000
To Wages	5,000	1,85,000	By Closing Stock		
To Carriage		30,000			
To Octroi duty		6,000			
To Royalty		1,000			
To Motive Power		3,000			
To Gross Profit c/d		10,000			
(transferred to Profit and loss account)		35,000			
Total		**3,25,000**	**Total**		**3,25,000**

Note:

1) For Valuation of closing stock, cost price or market price which ever is less is to be considered. Here cost price rs40,000 is less than market price of rs42,000.
2) Gross profit is transferred to credit side of profit and loss account.

6.3 PROFIT AND LOSS ACCOUNT

After preparing Trading Account, the next step is to prepare Profit and Loss Account. Profit and Loss Account is prepared to ascertain net profit or net loss. It is nominal account and prepared on the basis of indirect expenses and indirect incomes.

Trading Account shows the amount of gross profit or gross loss which is transferred to Profit and Loss Account. Profit and Loss Account is opened with Gross Profit or Gross Loss.

All the indirect expenses are debited and indirect incomes are credited to Profit and Loss Account.

Indirect expenses are the expenses incurred after production of goods. These are related to office and administration expenses, selling and distribution expenses and financial expenses.

Indirect income includes other sources of income and non-trading incomes such as commission received, discount received, rent, interest on investment and deposit received.

Specimen of Profit and Loss Account

In the Books of M/S------

Profit and Loss Account

For the year ended 31st March, 2020

Dr. **Cr.**

Particulars	**Amt. ₹**	**Amt. ₹**	**Particulars**	**Amt. ₹**	**Amt. ₹**
To Gross Loss b/d		xx	By Gross Profit b/d		xx
To Office Salaries		xx	By Interest on Investment		xx
To Office Rent		xx	By Commission received		xx
To Printing and stationery		xx	By Discount received		xx
To Postage, Telephone			By Dividend on Shares		xx
To Audit Fees		xx	By R.D.D. Account		
To Electricity			Old R.D.D.	xx	
To Commission paid		xx	Less: Bad debts (old)	xx	
To Discount allowed		xx	Less: New R.D.D	xx	xx
To carriage outward		xx			xx
To Advertisement		xx	By Net Loss transferred to		
To R.D.D Account		xx	Capital Account		
Add: Bad debts(old)		xx			
Add: New Bad debts					

Add: New R.D.D	xx				
	xx				
Less: Old R.D.D	xx				
To Travelling and conveyance	xx				
To Bank charges and Interest on Bank Loan	xx	xx			
To Depreciation		xx			
To Abnormal losses e.g. Loss by fire, theft		xx			
To Loss on sale of assets					
To Net Profit transferred to Capital Account		xx			
		xx			
		xx			
Total		**xx**	**Total**		**xx**

Explanation of some Important items in profit and Loss Account

1) Office and Administration expenses: These are the expenses which are incurred for maintenance of office, management and administration of the organization. It includes salary to office staff, printing and stationery, postage, telephone, telegram, office rent, insurance, audit fees, office expenses and office electricity charges, etc.

2) Selling and Distribution expenses: These expenses are incurred for promoting sale and distribution of sale of goods. These expenses include advertisement, salesmen commission, discount allowed, carriage outward, cost of after sales services, bad debts, godown rent, delivery van expenses, etc.

3) Financial expenses: These expenses are incurred for raising the funds which is required for running the business. These include interest on loan, interest on capital, bank charges, discount on bills interest on bank overdraft etc.

4) Depreciation and Maintenance charges: Depreciation means gradual and continuous decrease in the value of fixed assets due to its wear and tear. It is to be debited to Profit and Loss Account repair and maintenance expenses of various assets also come under this head.

5)Abnormal losses: Some abnormal losses may occur during the accounting period. For example Loss by fire, Loss by theft, Loss on sale of asset etc. these abnormal losses are debited to Profit and Loss Account.

6) Indirect incomes and gains: All other incomes other than sale of goods and gains are credited to Profit and Loss Account. These incomes and gains included interest on investment and deposits, commission received, discount received, dividend on shares, etc.

Operating Profit:

Operating profit means excess of operating revenue over operating expenses and losses. It is the result of operation and it excludes finance and investment income such as dividend, interest paid and received. Operating profit arises as a result of carrying out operating activities. Operating activities are the principal activities of business and non-operating activities are financial and investing activities. For e.g. buying and selling of furniture are principal activities of furniture dealer but granting a loan or investing excess funds is non operating activities. Thus interest on investments is non operating income, profit or loss on sale of fixed asset, loss by fire these are abnormal losses and gains. Thus

Operating profit = Net Profit + Non Operating Expenses and Losses – Non Operating Gains and Incomes

Closing Entries relating to Profit and Loss Account

1) For transfer of expenses to debit side of Profit and Loss Account

Profit and Loss A/c Dr.
To Salaries A/c
To Advertisement A/c
To Audit fees A/c
To Printing and stationery A/c

To Rent A/c

(Being transfer of various expenses to Profit and Loss account)

2) For transfer of incomes to credit side of Profit and Loss A/c

Dividend A/c Dr.

Discount A/c Dr.

Interest A/c Dr.

To Profit and Loss A/c

(Being transfer of various incomes to Profit and Loss A/c)

Balancing of Profit and Loss Account:

After transferring the indirect expenses and losses and indirect incomes and gains to Profit and Loss Account, it is closed to find out Net Profit or Net Loss of the business. If the total of credit sides of Profit and Loss Account is higher than debit side it shows Net Profit where as if debit side is higher than credit side of Profit and Loss Account it represents Net Loss and is transferred to Capital Account.

Journal entries for transferring Net profit or Net Loss

1)Transferring Net Profit to Capital Account

Profit and Loss Account ---------Dr. xx

To Capital Account xx

(Being Net Profit transferred to Capital Account)

2) Transferring Net Loss Capital Account

Capital Account ----------Dr. xx

To Profit and Loss Account xx

(Being Net Loss transferred to Capital Account)

Net profit is **added** to Capital Account where as Net Loss is **deducted** from Capital Account.

Illustration 3

From the following balances you are required to prepare Trading and Profit and Loss Account of Mr. David for the year ending 31st March 2019.

Particulars	Amount ₹	Particulars	Amount ₹
Opening Stock	42,000	Rent and taxes	4,200
Purchases	1,10,000	Insurance	1,800
Sales return	10,000	Bad debts	300
Wages	8,000	Sales	2,25,000
Carriage inward	2,000	Purchase return	5,000
Octrio duty	500	Commission received	1,500
Advertisement	1,200	Discount received	500
salaries	12,800		

Closing stock was valued at ₹ 9,500.

Solution 3 : **In the Books of Mr. David**

Trading and Profit and Loss Account

For the year ended 31st March, 2019

Dr. **Cr.**

Particulars	**Amount ₹**	**Amount ₹**	**Particulars**	**Amount ₹**	**Amount ₹**
To Opening Stock		42,000	By Sales	2,25,000	
To Purchases	1,10,000		Less Sales return	10,000	2,15,000
Less: Purchase return	5,000	1,05,000			
To Wages			By Closing Stock		9,500
To Carriage inward		8,000			
To Octroi duty		2,000			
To Gross Profit c/d		500			
		67,000			
		2,24,500			**2,24,500**
To Advertisement					
To Salaries		1,200			
To Rent and taxes		12,800			
To Insurance		4,200	By Gross Profit b/d		67,000
		1,800	By Commission Received		1,500
To Bad debts		300	By Discount Received		500
To Net Profit transferred		48,700			

to Capital Account		**69,000**			**69,000**

6.4 PREPARATION OF BALANCE SHEET:

A Balance Sheet is a statement of the financial position of a business on a particular date. It is the mirror of the financial status of business. Balance Sheet is prepared after the preparation of the trading and Profit and Loss Account. It is not an account. The word 'To' and 'By' are not used in the Balance Sheet because it is a Statement and not an account. It is only a statement that shows Assets, Liabilities and Capital of a business. The total value of assets is always equal to the total of Capital and Liabilities. The excess of Assets over Liabilities of the business is known as Capital or Net worth. The following is the equation for returns or owner equity (Capital)

Net Worth – Owner Equity = Capital Owner Equity (Capital) = Total Equity (Assets) – Credit Equity (Liabilities)

Definition:

American Institute of Certified Public Accountant : Defines Balance Sheet as "A list of balances of the assets and liabilities account. This list depicts the position of assets and liabilities of specific business at specific point of time."

According to Palmer: "The balance sheet is a statement at a given date showing on one side the traders property and possession and on the other side his liabilities."

Features:

1) A Balance Sheet is a statement and not an account.
2) It shows financial position of business.
3) It is prepared at a particular date.
4) It is summarized statement of ledger accounts which has not been transferred to Trading and Profit and Loss Account.
5) Balance of Real Account and Personal Account appear in Balance Sheet.

As stated above, Balance Sheet is a statement which is divided in to two sides. The left hand side of the Balance Sheet in known as Liabilities side and right hand side is known

as Assets side. The balance of Real and Personal accounts is carried forward for next accounting year. A Balance Sheet is prepared as follows.

In the books of M/S

Balance Sheet as on 31 March…..

Liabilities	Amt. ₹	Amt. ₹	Assets	Amt. ₹	Amt. ₹
Capital (Opening)	xx		Cash in hand		xx
Add: Net profit	xx		Cash at Bank		xx
Add: Interest on capital	xx		Bills Receivable		xx
	xx		Sundry Debtors		xx
Less: Drawings	xx		Goodwill		xx
Less: Interest on Drawings	xx		Furniture		xx
Less: Net Loss	xx	xx	Plant & Machinery		xx
Bank Loan		xx	Land & Building		xx
Bank Overdraft		xx	Prepaid expenses		xx
Sundry Creditors		xx	Outstanding Incomes		xx
Bills payable		xx	Closing Stock		xx
Outstanding expenses		xx			
Pre received Income		xx			
Total		**xx**	**Total**		**xx**
Contingent Liabilities		xx			

Classification of Assets:

Assets are classified as 1) Fixed Assets 2) Floating /Current Assets 3) Fictitious Assets.

1) **Fixed Assets:** Fixed assets which are acquire for relatively long period. These are permanent in nature. These assets are not meant for resale. They are used in business again & again for earning income. E.g. Plant & Machinery, Land & Building, Furniture etc.
2) **Floating Current Assets:-** Current assets are those assets which are acquired with the intention of converting them in to cash during the Operating year. Current assets are also called circulating assets as their nature goes on changing continuously. The term "Current Assets" includes cash and bank balances, stock of goods, raw material and work in progress, bills receivable, debtors, and short term investments.
3) **Fictitious Assets:-** These assets are not represented by tangible possession of property. They are imaginary assets but do not have exchange value. E.g. Preliminary expenses,

Deferred revenue expenses like advertisement suspense, discount on issue of shares and debentures.

Classification of Liabilities:-

Liabilities are classified 1) Fixed Long term Liabilities 2) Current Liabilities 3) Contingent Liabilities

1) **Fixed Long term Liabilities:-**These are the liabilities which do not become due for payment in one year. In other words these liabilities are to be paid after a long period. E.g. Long term Loan, Debentures, Capital.
2) **Current Liabilities:-**Current Liabilities are to be paid within one year. e.g. Bills payable, Bank overdraft, Creditors, Outstanding expenses, Short term loans etc.
3) **Contingent Liabilities:-** It is not actual liabilities. It may not be actual liability. It may occur after happing of any event e.g. Bill of exchange discounted, Workers Compensation claim in court. It should be Written as a foot note below the Balance Sheet.

Arrangement of assets and liabilities:

The assets and liabilities are arranged in the Balance Sheet in a specific order called as "Marshalling". There are two ways in which assets and liabilities can be arranged in Balance sheet 1) Order of Liquidity and 2) Order of Permanency.

1) Order of Liquidity: In liquidity order the assets which are more readily convertible into cash come first and those which can not be so readily convertible come next and so on. Similarly those liabilities which are payable first come first and those payable later come next and so on. A format of Balance Sheet according to Liquidity order is given below.

In the Books of Mr. Ram

Balance Sheet as on---

Liabilities	Amt. ₹	Amt. ₹	Assets	Amt. ₹	Amt. ₹
Outstanding expenses		xx	Cash in hand		xx
Pre-received Income		xx	Cash at Bank		xx
Bills Payable		xx	Prepaid expenses		xx
Sundry Creditors		xx	Bills Receivable		xx
Bank Overdraft		xx	Sundry Debtors		xx
Bank Loan		xx	Closing Stock		xx

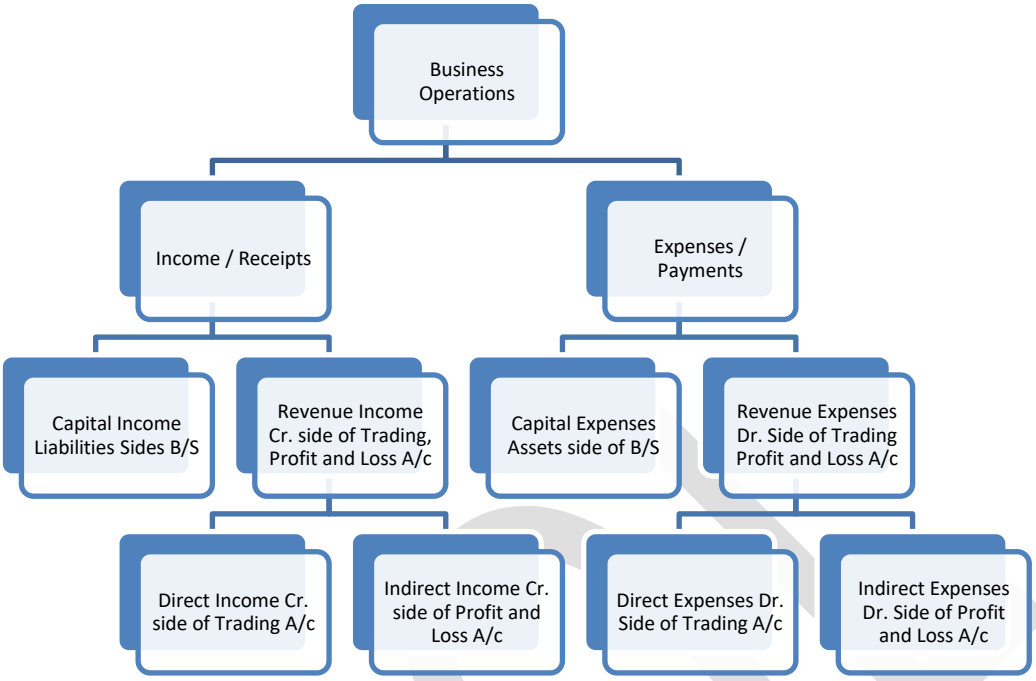
Loan from others		xx	Investment		xx
Capital		xx	Plant and Machinery		xx
			Furniture		xx
			Land and Building		xx
			Goodwill		xx
Total		**xx**	**Total**		**xx**

2) Order of permanency: Under this method assets which are more permanent/fixed come first and less permanent or current assets come next. Similarly liabilities, which are more permanent / long term liabilities, come first and less. Permanent/ current liabilities come next and so on. Format of Balance Sheet as per permanency order is given below.

In the Books of M/S Ram

Balance Sheet as on ……

Particular	**Amt. ₹**	**Amt. ₹**	**Assets**	**Amt. ₹**	**Amt. ₹**
Capital		xx	Goodwill		xx
Loan from others		xx	Land and Building		xx
Bank overdraft		xx	Furniture		xx
Sundry creditors		xx	Plant & Machinery		xx
Bills payable		xx	Prepaid expenses		xx
Outstanding expenses		xx	Closing Stock		xx
Pre received income		xx	Sundry Debtors		xx
			Bills Receivable		xx
			Investment		xx
			Cash at Bank		xx
			Cash in Hand		xx
Total		**xx**	**Total**		**xx**



1) Office Administrative
2) Selling & Distribution
3) Financial Expenses

Key Points:

Trail Balance is a list of closing balances of ledger accounts. It consists of all the balances of Nominal Account, Personal Account and Real Account.

Drawings is personal account of owner. It is deducted from Capital Account.

Need for adjustments:

According to accrual concept of accounting all expenses and losses relating to the current accounting year only whether paid or not paid should be brought into the books of accounts. Similarly all income and gains relating to the current accounting year only whether received or not received should be brought into the books of accounts. Income & Expenses relating to the previous year or next year will have to be deducted from the total amount received during the year. Unless such are adjusted final accounts will not give true and fair result of the business.

6.5 SOME IMPORTANT ADJUSTMENTS AND THEIR EFFECTS:

a) **Closing Stock:** The stock of goods which remains unsold at the end of the year is known as closing stock. The balance of closing stock does not appear in the trail Balance. Valuation of closing stock is at "Cost price or Market price whichever is less". The following adjusting entry is passed in the Journal proper.

Closing Stock A/c----- Dr. xx

To Trading A/c xx

Effect of closing stock

1) Amount of closing stock is credited to Trading Account
2) It is shown on assets side of Balance Sheet as current assets

b) **Depreciation:** Depreciation means gradual and continuous decrease in the value of fixed assets. Depreciation is charged on fixed assets only. Like Building, Plant & Machinery, Furniture & Fixtures, etc. Reduction in value of assets is a loss and this loss is to be debited to Profit and Loss Account.

Journal Entries

1) For charging depreciation on fixed assets.

Depreciation A/c--------- Dr. xx

To Respective Assets Account xx

2) For transferring depreciation to profit & loss account

Profit & Loss A/c-------- Dr. xx

To Depreciation A/c xx

Effects of Depreciation:

1) Amount of depreciation is to be debited to profit & Loss Account

2) Depreciation is to be deducted is to be deducted from Assets on Balance is ₹ 1,00,000 and depreciation is provided at 10% P.a. The two effects of this adjustment are as follows:

Profit and Loss Account for the year ended---

Dr. **Cr.**

Particulars	**Amt. ₹**	**Amt. ₹**	**Particulars**	**Amt. ₹**	**Amt. ₹**
To Depreciation on Plant & Machinery 10%		10,000			

Balance Sheet as on-------

Liabilities	Amt. ₹	Amt. ₹	Assets	Amt. ₹	Amt. ₹
			Plant & Machinery Less Deprecation 10%	1,00,000 -10,000	90,000

C) Bad Debts and Doubtful Debts:

1) Bad debts:-It is a routine practice to sell the goods on credit basis. A person who purchases goods on credit is known as a debtor. Amount due from all such debtors is shown on Assets side of Balance Sheet under heading 'Sundry Debtors'. However some debtors cannot pay their dues to business due to certain reasons. Irrecoverable part of debtors is called as 'Bad debts'. The amount of bad debts is a loss to the business concern. Therefore Bad debts is debited to Profit and Loss Account.

If amount of bad debts appears in Trail Balance it is only recorded on debit side of Profit and Loss Account.

If there is an Adjustment regarding bad debts below the trial balance.

For example- Total debtors in trial balance are ₹10,000 and bad debts ₹1,000 are given. Further bad debts of ₹500 is to be made. The entries will be made as follows:

Bad Debts A/c Dr. 500

To Sundry Debtors Account 500

(Being further bad debts provided for)

Profit and Loss Account Dr. 1,500

To Bad Debts A/c 1,500

(Being Bad debts debited to profit and loss account)

Profit and Loss Account

Dr. **Cr.**

Particulars	Amt. ₹	Particulars	Amt. ₹
To Bad Debts 1,000 Add New Bad Debts 500	1,500		

Balance Sheet

Liabilities	Amt. ₹	Assets	Amt. ₹
		Sundry debtors 10,000 Less: Bad debts - 500	 9,500

Summary Chart of Accounting Treatments in Final Accounts

Name of Adjustment	Journal Entries	Two Effects
a) Closing Stock	Closing Stock A/c Dr. To Trading A/c	1) Credit side of Trading A/c 2) Shown on Assets side of Balance sheet
b) Depreciation	1)Depreciation A/c Dr. To Asset A/c 2) Profit & Loss A/c Dr. To Debtors A/c	1) Debit side of Profit & Loss A/c 2) Deducted from particular Assets on Assets side of Balance Sheet
c) Bad Debts	1) Bad debts A/c Dr. To Debtors A/c 2) Profit & Loss A/c Dr. To Bad Debts A/c	1) Debit side of Profit Loss A/c (New R.D.D + Bad Debts) 2) Deducted from Sundry Debtors on assets side
d) R.D.D.(Reserve for doubtful debts)	Profit & Loss A/c Dr. To R.D.D A/c	1) Debit side of Profit and Loss A/c 2) Deducted from Sundry debtors on Assets side.
e) Outstanding or Unpaid Expenses	Expenses A/c Dr. To outstanding expenses A/c	1) Add to particular expenses on Trading or Profit and Loss A/c 2) Shown on liabilities Side of Balance Sheet

f) Prepaid Expenses	Prepaid Expenses A/c Dr. To Expenses A/c	1) Less from that particular expenses on Trading or Profit and Loss A/c 2) Shown on Assets side of Balance Sheet
g) Accrued Income/Outstanding Income	Accrued Income A/c Dr. To Income A/c	1) Add to particular income on credit side of Profit & Loss A/c 2) Shown on Assets side of Balance Sheet
h) Pre-received Income	Income A/c Dr. To pre-received Income A/c	1) Less from particular income on credit side of Profit & Loss A/c 2) Shown on Liabilities side of Balance Sheet
i) Provision for Discount on Debtors	Profit & Loss A/c Dr. To Provision for discount on debtors A/c	1) Debit side of Profit and Loss A/c 2) Deducted from Sundry debtors on for discount Assets Side
j) Provision for Discount on creditors	Provision for Discount on Creditors A/c Dr. To Profit & Loss A/c	1) Credit side of profit and loss A/c 2) Deducted from Sundry creditors on liabilities side of balance sheet
k) Goods taken for personal use	1) Drawings A/c Dr. To Trading A/c / To Purchase A/c 2) Proprietor's capital A/c Dr. To drawings A/c	1) Credit side of Trading or deduct from purchases A/c 2) Deducted from capital on Liability side
l) Goods distributed as free sample	1) Goods distributed as free sample A/c Dr.	1) Credit side of Trading or deduct from Purchase A/c 2) Debited to Profit & Loss

	To Trading A/c / To Purchase A/c 2) Advertisement A/c Dr. To Goods distributed as free sample/ To Purchase A/c	A/c

Illustration: 4– Following is the Trail Balance of KalpanaTraders as on 31st March 2019. You are required to prepare Trading and Profit and Loss Account for the year ended 31st March 2019 and Balance sheet on that date.

Trial Balance as on 31st March,2019

Particulars	Amount ₹	Particulars	Amount ₹
Stock on 1-4-2018	30,000	Capital	35,500
Purchases	85,000	Discount Received	1,500
Return Inward	2,500	Sales	1,27,500
Wages	5,300	Return outward	1,000
Salaries	6,600	Creditors	15,000
Carriage Inward	1,200	Bills payable	5,000
Carriage Outward	200		
Power & Fuel	700		
Advertisement	1,300		
Office Expenses	400		
Printing and Stationery	800		
Commission	1,000		
Furniture	8,500		
Machinery	30,000		
Cash in hand	1,200		
Drawings	800		
Debtors	7,500		
Bill Receivable	2,500		
	1,85,500		**1,85,500**

Adjustment-1) Closing stock was valued at cost ₹ 32,000

Solution:4 **In the books of Kalpana Traders**

Trading and Profit & Loss Account

For the year ended 31st March, 2019

Particulars	Amt. ₹	Amt. ₹	Particulars	Amt. ₹	Amt. ₹
To opening Stock		30,000	By Sales	1,27,500	
To Purchases	85,000		Less Return Inward	2,500	1,25,000
Less: Return outward	1,000	84,000			
To Wages			By Closing Stock		32,000
To Carriage Inward		5,300			
To Power & Fuel		1,200			
To Gross Profit c/d		700			
		35,800			
		1,57,000			**1,57,000**
To Salaries					
To Carriage Outwards		6,600	By Gross Profit b/d		35,800
To Advertisement		200	By Discount Received		1,500
To Office expenses					
To Printing and		1,300			
Stationery		400			
To Commission		800			
To Net profit transferred					
to Capital A/c		1,000			
		27,000			
		37,300			**37,300**

Balance Sheet as on 31st March, 2019

Liabilities	Amt. ₹	Amt. ₹	Assets	Amt. ₹	Amt. ₹
Capital	35,500		Furniture		8,500
Add: Net Profit	27,000		Machinery		30,000
	62,500				
Less: Drawings	800	61,700	Cash in Hand		1,200
Creditors		15,000	Debtors		7,500
Bills Payable		5,000	Bill Receivable		2,500
			Closing Stock		32,000
		81,700			**81,700**

Illustration: 5

Following is the Trial Balance of Mr.Raghav Sharma as on 31st March, 2020, prepare Trading and Profit & Loss Account for the year ended 31st March, 2020 and Balance Sheet as on the date.

Trial Balance as on 31st March 2020

Particulars	Amount ₹	Particulars	Amount ₹
Opening Stock	15,000	Capital	60,000
Purchases	45,000	Sales	84,800
Wages	10,600	Sundry Creditors	12,000
10% Investment	10,000	Bills Payable	5,000
Salaries	3,500	R.D.D.	1,700
Carriage outward	4,600	Commission	4,000
Printing & Stationery	3,400		
Insurance	750		
Postage & Telegram	700		
Machinery	26,000		
Furniture	7,000		
Sundry Debtors	25,000		
Bills Receivable	4,000		

Cash at Bank	6,200		
Advertisement	1,000		
Bad debts	250		
Carriage Inward	4,500		
	1,67,500		**1,67,500**

Adjustments:

1) Closing stock was valued at ₹ 40,000.
2) Wages included ₹ 4,000 paid for fixation of new Machinery purchased on 1-4-2019.
3) Depreciation Machinery and Furniture by 10% p.a
4) Outstanding Salary ₹1,000.
5) Create Reserve for doubtful debts at 5% on Sundry debtors.

Solution -5 In the Books of Mr. Raghav Sharma

Trading and Profit & Loss Account

For the year ending 31st March 2020

Dr. **Cr.**

Particulars	**Amt. ₹**	**Amt. ₹**	**Particulars**	**Amt. ₹**	**Amt. ₹**
To Opening Stock		15,000	By Sales		84,800
To Purchases		45,000			
To Wages	10,600		By Closing Stock		40,000
Less: Wrongly included wages for fixation of Machinery	4,000	6,600			
To Carriage Inward		4,500			
To Gross Profit c/d		53,700			
		1,24,800			**1,24,800**
To Salaries	3,500		By Gross profit b/d		53,700
Add: Outstanding	1,000	4,500	By Commission		4,000
To Carriage outward		4,600	By Accrued Interest on Investment		1,000
To Printing & Stationery		3,400			

To Insurance			By R.D.D(old Reserved)		
To Postage & Telegram		750	Less: New Reserve		
To Advertisement		700	Less: Bad Debts	1,700	
To Depreciation on				1,250	
Machinery 10%		1,000			
Furniture 10%				250	200
To Net Profit transferred to	3,000				
Capital A/c	700	3,700			
		40,250			
		58,900			**58,900**

Balance sheet as on 31st March,2020

Liabilities	**Amt.** ₹	**Amt.** ₹	**Assets**	**Amt.** ₹	**Amt.** ₹
Capital	60,000		Closing Stock		40,000
Add: Net Profit	40,250	*1,00,250*	Sundry Debtors	25,000	
Sundry Creditors		*12,000*	Less: R.D.D	1,250	23,750
Bills Payable		*5,000*	Machinery	26,000	
Outstanding Salary		*1,000*	Add: Wages for Fixation	4,000	
			Less: Depreciation	30,000	
			Furniture	3,000	27,000
			Less: Depreciation		
			Bills Receivable	7,000	
			Cash	700	6,300
			10% Investment		
			Add: Interest Accrued		4,000
					6,200
				10,000	11,000
				1,000	
		1,18,250			**1,18,250**

Illustration: 6

Given below is the Trail Balance of Miss. DivyaMadanon 31st March,2019. Prepare Trading and Profit & Loss Account for the year ended 31st March,2019 and Balance Sheet as on that date.

Trial Balance as on 31st March,2019

Particulars	Debit Amt. ₹	Credit Amt. ₹
Capital		1,00,000
Stock on 1-4-2018	40,000	
Bills Receivable	5,000	
Cash	1,000	
Machinery	50,000	
Purchase & Sales	80,000	1,18,000
Reserve for doubtful debts		1,000
Furniture	26,000	
Investment	14,000	
Return outward		1,000
Sundry Debtors & Creditors	30,000	55,000
Salaries	8,000	
Wages	8,000	
Insurance	5,000	
General Expenses	3,000	
Advertisement(For 3 Years)	3,000	
Interest		2,000
Trade expenses	2,000	
Prepaid Wages	2,000	
	2,77,000	**2,77,000**

Adjustments:

1) Stock on 31-3-2019 Cost price ₹ 25,000 Market price was ₹ 28,000.
2) Insurance included ₹ 2,000 paid for Life Insurance premium.
3) Interest ₹1,500 due but not received on Investment.
4) Depreciate Machinery by 10% Furniture by 5%.
5) Provide Reserve for doubtful Debts at 5% on debtors and discount on creditors at 2%.

Solution -6 In the Books of Mr. DivyaMadan

Trading and Profit & Loss Account

For the year ending 31st March,2019

Dr. **Cr.**

Particulars	Amt. ₹	Amt. ₹	Particulars	Amt. ₹	Amt. ₹
To Opening Stock		40,000	By Sales		1,18,000
To Purchases	80,000				
Less: Return outward	1,000	79,000	By closing Stock		25,000
To Wages		8,000			
To Trade Expenses		2,000			
To Gross Profit c/d		14,000			
		1,43,000			**1,43,000**
To Salaries		8,000	By Gross profit b/d		14,000
To Insurance	5,000		By Interest	2,000	
Less: Life Insurance	2,000	3,000	Add: Interest Accrued	1,500	3,500
(Drawings)			By Provision for Discount		1,100
To General Expenses		3,000	on Creditors		
To R.D.D.(new)	1,500		By Net Loss transferred to		
Less: Old R.D.D.	1,000	500	Capital A/c		
To Advertisement	3,000				3,200
Less: Prepaid (2 Years)	2,000	1,000			
To Depreciation on					
-Machinery 10%	5,000				
-Furniture 5%	1,300	6,300			
		21,800			**21,800**

Balance Sheet as on 31st March,2019

Liabilities	Amt. ₹	Amt. ₹	Assets	Amt. ₹	Amt. ₹
Capital	1,00,000		Cash		1,000
Less: Net Loss	3,200		Machinery	50,000	
	96,800		Less: Depreciation 10%	5,000	45,000
Less: Drawings	2,000	94,800	Furniture		
Sundry Creditors	55,000		Less: Depreciation 5%	26,000	
Less: Provision for Discount	1,100	53,900	Investment	1,300	24,700
			Add: Interest Accrued		
			Sundry Debtors	14,000	
			Less: R.D.D.	1,500	15,500
			Bills Receivable		
			Closing Stock	30,000	
			Prepaid Wages	1,500	28,500
			Prepaid Advertisement		5,000
					25,000
					2,000
					2,000
		1,48,700			**1,48,700**

Illustration :7

From the following Trail Balance of Mr. Shubham Traders Prepare Traders Trading and Profit & Loss Account for the year ended 31st March,2020 and Balance Sheet as on that date.

Trial Balance as on 31st March,2020

Particulars	Amount ₹	Particulars	Amount ₹
Land & Building	30,000	Sundry Creditors	45,000
Sundry Debtors	45,000	Reserve for doubtful debts	1,000

Machinery	25,000	Unpaid wages	1,000
Purchases	48,000	Sales	1,34,100
Stock on (1-4-2019)	25,000	Discount	2,500
Wages	3,000	Capital	40,000
Factory expenses	28,000	12% Bank Loan (Taken on 1-12-2019)	10,000
Royalties	1,800		
Carriage Inward	1,300		
Carriage Outward	1,700		
Office Expenses	2,500		
Bad Debts	800		
Furniture	3,000		
Drawings	5,000		
Cash in Bank	5,000		
Cash at hand	4,300		
Advertisement	3,000		
Insurance	1,200		
	2,33,600		**2,33,600**

Adjustments:

1) Closing stock at the end of year was ₹ 18,000.
2) Goods worth ₹3,000 taken over by Mr. Shubham for his domestic use.
3) Goods of ₹ 1,500 distributed as free sample.
4) Write off ₹1,000 for bad debts and create bad debts and create bad debts reserve on debtors at 5%.
5) Insurance is paid for the year ended 30th Sep.2020.
6) Provide depreciation at 10% on Furniture and Machinery revalued at ₹ 24,000.

Solution-7

In the Books of M/s Shubham Traders

Trading and Profit & Loss Account

For the year ending 31st March,2020

Dr. **Cr.**

Particulars	Amt. ₹	Amt. ₹	Particulars	Amt. ₹	Amt. ₹
To Opening Stock		25,000	By Sales		1,34,000
To Purchases		48,000	By Drawings (Goods)		3,000
To Wages		3,000	By Goods Distributed as		
To Factory Expenses		28,000	Free Sample		1,500
To Royalties		1,800	By Closing Stock		
To Carriage Inward		1,300			
To Gross Profit c/d		49,500			18,000
		1,56,600			**1,56,600**
			By Gross Profit b/d		49,500
To Carriage outward		1,700	By Discount		2,500
To Office expenses		2,500			
To Advertisement	3,000				
Add-Free Sample	1,500	4,500			
To Insurance	1,200				
Less- prepaid	600	600			
To Interest on Bank Loan		400			
To R.D.D.: New					
Add: Bad debts	2,200				
Add: Further Bad debts	800				
	1,000				
Less: Old R.D.D.	4,000				
To Depreciation on	1,000	3,000			
-Machinery					
-Furniture 10%	1,000				
To Net profit transferred to	300	1,300			
Capital A/c					
		38,000			

		52,000			**52,000**

Balance Sheet as on 31st March,2020

Liabilities	Amt. ₹	Amt. ₹	Assets	Amt. ₹	Amt. ₹
Capital	40,000		Land & Building		30,000
Add: Net Profit	38,000		Sundry Debtors	45,000	
	78,000		Less bad debts	1,000	
Less: Drawings Goods for	5000			44,000	
Domestic use	3,000	70,000	Less: R.D.D	2,200	41,800
Sundry Creditors		45,000			
12% Bank Loan	10,000				
Add: Interest on Bank loan	400	10,400	Machinery	25,0001,000	
Unpaid wages			Less: Depreciation	3,000	24,000
		1,000	Furniture	300	
			Less: Depreciation		2,700
			Cash in Bank		5,000
			Cash in Hand		4,300
			Prepaid Insurance		600
			Closing Stock		18,000
		1,26,400			**1,26,400**

Note:- Adjustment No.2 :1) The first effect of drawing is credited to Trading account or may be deducted from purchases A/c (Dr. side of Trading A/c)

Illustration: 8

From the following Trial Balance of Mr. RohitZende, prepare Trading and Profit & Loss Account for the year ended 31st March,2019 and Balance Sheet as on that date.

Trial Balance as on 31st March,2019

Particulars	Amount ₹	Particulars	Amount ₹
Opening Stock	10,000	Creditors	25,000
Purchases	60,000	Bank Loan	30,000
Wages	7,000	Sales	1,22,000
Carriage	2,500	Reserve for doubtful debts	700
Salaries	4,500	Capital	45,000
Printing & Stationery	3,100	Commission	5,000
Advertisement	1,000	Discount Received	3,000
Bad Debts	2,000		
Discount Allowed	3,400		
Debtors	16,000		
Bills Receivable	12,000		
Buildings	30,000		
Machinery	40,000		
Cash in Hand	8,400		
Leasehold premises	20,000		
Drawings	4,800		
Depreciation on Building	2,000		
Depreciation on Machinery	4,000		
	2,30,700		**2,30,700**

Adjustment:

1) Cost Price of Closing Stock was ₹ 21,000 while its market price was ₹ 24,000
2) Outstanding expenses were Salary ₹ 500 Wages ₹ 600 and Interest on Bank loan ₹ 2,000
3) Reserve for doubtful debts is to be maintained at 5% on debtors
4) Sales included ₹ 2,000 sales of old news paper.
5) Leasehold premises is to be run for 10 years.

Solution: 8 In the Books of Mr. RohitZende

Trading and profit & Loss Account

For the year ending 31st March 2019

Dr. **Cr.**

Particulars	Amt. ₹	Amt. ₹	Particulars	Amt. ₹	Amt. ₹
To Opening Stock		10,000	By Sales	1,22,000	
To Purchase		60,000	Less: Sales of old news papers	2,000	1,20,000
To Wages	7,000				
Add: Outstanding	600	7,600	By Closing Stock		21,000
To Carriage		2,500			
To Gross Profit c/d		60,900			
		1,41,000			**1,41,000**
To Salaries	4,500		By Gross Profit b/d		60,900
Add: Out standing	500	5,000	By Commission		5,000
To Printing & Stationery		3,100	By Discount received		3,000
To Advertisement			By Sale of old news papers		
To Discount Allowed		1,000			2,000
To R.D.D. New reserve		3,400			
Add: Bad debts	800				
Less: Old R.D.D.					
To Interest on Bank Loan	2,000				
To Depreciation	700	2,100			
Building		2,000			
Machinery					
Leasehold premises					
	2,000				
To Net Profit	4,000				
Transferred to Capital A/c	2,000	8,000			
		46,300			

		70,900			**70,900**

Balance Sheet as on 31st March,2019

Liabilities	Amt. ₹	Amt. ₹	Assets	Amt. ₹	Amt. ₹
Capital	45,000		Closing Stock		21,000
Add: Net Profit	46,300		Sundry Debtors	16,000	
	91,300		Less: R.D.D.	800	15,200
Less: Drawings	4,800	86,500	Bills Receivable		12,000
Creditors		25,000	Building		30,000
Bank loan	30,000		Machinery		40,000
Add: Interest Payable	2,000	32,000	Leasehold Premises		
Outstanding Expenses			Less: Depreciation	20,000	
Salary	500		Cash	2,000	18,000
Wages	600	1,100			8,400
		1,44,600			**1,44,600**

Illustration:9

From the following Trial Balance of Mr. Sunny Saraf you are required to prepare Trading and profit & Loss A/c for the year ended 31st March 2020 and Balance Sheet as on that date.

Trial Balance as on 31-3-2020

Particulars	Debit Amt. ₹	Credit Amt. ₹
Capital		3,00,000
Drawings	14,000	
Stock on 1-4-2019	2,20,000	
Purchases and Sales	2,80,000	4,60,000
Bills Receivable & Bills Payable	30,000	40,000

Return	5,000	4,500
Plant & Machinery	1,00,000	
Good will	25,000	
Loose Tools	20,000	
Cash in Hand	3,000	
Cash at Bank	10,000	
Furniture	75,000	
Sundry Debtors and Creditors	1,25,000	1,30,000
Commission		28,000
Salaries	11,000	
Wages	17,000	
Office expenses	3,500	
Insurance	5,000	
Advertisement (for 3 years)	9,000	
General expenses	4,000	
Factory rent	6,000	
	9,62,500	**9,62,500**

Adjustment:

1) Closing Stock was valued at ₹ 1,20,000.
2) Depreciation Plant & Machinery by 5% and Loose Tools by 15% p.a
3) Outstanding Salaries ₹ 1,000 & Office expenses ₹ 500.
4) Insurance ₹1,000 was prepaid.
5) Commission ₹ 3,000 were received in advance.
6) Purchase included of ₹ 5,000 Purchases of Furniture on 31st March,2020.

Solution: 9 **In the Books of Sunny Saraf**

Trading and Profit & Loss Account

For the year ended 31st March,2020

Dr. **Cr.**

Particulars	Amt. ₹	Amt. ₹	Particulars	Amt. ₹	Amt. ₹

To Opening Stock		2,20,000	By Sales	4,60,000	
To Purchases	2,80,000		Less: Sales return	5,000	4,55,000
Less: Return	4,500				
Less: Furniture purchased	5000	2,70,500	By Closing Stock		1,20,000
To Wages					
To Factory Rent		17,000			
To Gross Profit c/d		6,000			
		61,500			
		5,75,000			**5,75,000**
To Salaries					
Add: Outstanding	11,000		To Gross Profit b/d		61,500
	1,000	12,000	By Commission	28,000	
To Office expenses			Less: Received in advance	3,000	25,000
Add: Outstanding	3,500				
To Insurance	500	4,000			
Less: Prepaid	5,000				
To Advertisement	1,000	4,000			
Less: Prepaid	9,000				
To General expenses	6,000	3,000			
To Depreciation on		4,000			
-Plant & Machinery					
- Loose Tools					
To Net Profit transferred to Capital A/c	5,000 3,000	8,000			
		51,500			
		86,500			**86,500**

Balance Sheet as on 31st March,2020

Liabilities	Amt. ₹	Amt. ₹	Assets	Amt. ₹	Amt. ₹
Capital	3,00,000		Closing Stock		1,20,000
Add: Net Profit	51,500		Bills Receivable		30,000
	3,51,500		Plant & Machinery	1,00,000	
Less: Drawings	14,000	3,37,500	Less: Depreciation	5,000	95,000
Creditors		1,30,000	Goodwill		25,000
			Loose tools	20,000	
Bills payable		40,000	Less: Depreciation	3,000	17,000
Outstanding Exp. Salary	1,000		Furniture	75,000	
Office Expenses	500	1,500	Add: new purchased	5,000	80,000
Commission received in		3,000	Debtors		
advance			Cash in Hand		1,25,000
			Cash at Bank		3,000
			Prepaid insurance		10,000
			Prepaid Advertisement		1,000
					6,000
			Total		
Total		**5,12,000**			**5,12,000**

6.6SUMMARY

The journalized entries are posted to the respective ledger accounts in the ledger. At the end of a particular accounting period these ledger accounts are balanced and a Trial Balance is prepared to check the arithmetical accuracy of the books of accounts On the basis of Trial Balance the Final Accounts are prepared.

Final Accounts are the financial statements prepared at the end of an accounting year to disclose the financial position and performance of a business concern". It includes 1) Trading Account 2) Profit and Loss Account 3) Balance Sheet.

The main objective of preparation of Trading Account is to find out Gross Profit or Gross Loss i.e. trading result. Trading Account is prepared by passing the closing entries of nominal accounts (direct incomes and direct expenses only). Gross Profit or Gross Loss is the difference between net sales and cost of goods sold.

Gross Profit= Net Sales – Cost of goods sold

Gross Loss= Cost of goods sold- Net sales

Net sales= Total Sales- Sales return (Return Inward)

Cost of Goods Sold = Opening stock + Net purchases + Direct expenses- Unsold goods

All the indirect expenses are debited and indirect incomes are credited to Profit and Loss Account.

Indirect expenses are the expenses incurred after production of goods. These are related to office and administration expenses, selling and distribution expenses and financial expenses.

Indirect income includes other sources of income and non-trading incomes such as commission received, discount received, rent, interest on investment and deposit received

A Balance Sheet is a statement of the financial position of a business on a particular date.The left hand side of the Balance Sheet in known as Liabilities side and right hand side is known as Assets side

Q.1 Objective type questions:

a) Answer in one sentence.

1) What is meant by Final Accounts?

2) State the meaning of current assets.

3) What do you mean by prepaid expenses?

b) Give one word/term or phrase for each of the following statements.

1) Reduction in the value of fixed assets due to its continuous use.
2) Debit balance of Trading Account.
3) Additional information provided after the completion of trial balance.
4) Expenses paid for unexpected period.
5) Statement showing financial position of business.

   Answers: 1) Depreciation 2) Gross Loss 3) Adjustments 4) Prepaid Expenses 5) Balance Sheet

c) Select the most appropriate alternative from those given below

1) Drawings account is closed by transferring the balance to the_____ account.
   a) Drawings b) Liabilities c) Assets d) Capital

2) A list of balances of all the accounts in ledger is called _____.

   a) Balance Sheet b) Profit & Loss A/c c) Trading A/c d) Trial Balance

3) Depreciation is always charged on _____ Assets.

   a) Current b) Fixed c) Fictitious d) Intangible

4) Royalty on production is a _____ expenses.

   a) Direct b) indirect c) capital d) current

5) All items of income are shown on the credit side of the _____ Account.

   a) Balance Sheet b) Profit & Loss c) Manufacturing d) Capital

   Answers: 1) Capital 2) Trial Balance **3**) Fixed **4)** Direct **5)** b) Profit & Loss

d) State whether the following statement are true or false.

1) Final Accounts are prepared on the basis of trial Balance.
2) All indirect expenses are debited to trading account.
3) Balance Sheet is a statement and not an account.
4) Gross profit or Gross Loss is transferred to Balance Sheet.
5) Capital account is a Personal Account.

   Answers: 1) True 2) False 3) True 4) False 5) True

Problem 1

Following is the Trial Balance of KomalJaggi as on 31st March,2020. Prepare trading and Profit and Loss Account for the year ended 31st March, 2020 and Balance Sheet as on that date.

Trail Balance as on 31st March,2020

Particulars	Amount ₹	Particulars	Amount ₹
Stock on 1-4-2019	50,000	Sales	1,90,000
Purchases	1,19,000	Return outward	1,500
Return inward	3,000	Discount received	2,500
Wages	7,750	Sundry creditors	52,000
Insurance	1,500	Capital	1,00,000
Salaries	9,400	Bank loan	30,000
Rent & taxes	5,000	Bills Payable	5,000
Bad debts	1,000		
Discount allowed	2,000		

Machinery	25,000		
Buildings	55,000		
Sundry debtors	70,000		
Advertisement	10,000		
Carriage inward	2,350		
Cash in hand	6,000		
Cash at Bank	8,000		
Office expenses	2,000		
Drawings	4,000		
Total	**3,81,000**		**3,81,000**

Adjustment:

1) On 31st March 2020 the stock was valued ₹ 30,000
2) Outstanding Wages ₹1,250 and Rent ₹1,000
3) Insurance was paid for the year ending 30th Sep.2020
4) Depreciate Machinery 10% and Buildings by 4% p.a.
5) Provide R.D.D. at 5% on Sundry Debtors.

Ans. G.P. 38,150 N.L. 3,700 B/S Total 1,181,550

Problem 2

Prepare Trading Profit & Loss Account for the year ending 31st March,2020 and Balance Sheet as on that date of M/s Sunil Kulkarni from the following Trial Balance

Trial Balance as on 31st March,2020

Particulars	Debit Amt. ₹	Credit Amt. ₹
Opening Stock	25,000	
Purchases and Sales	1,30,000	1,80,000
Returns	2,000	5,000
Sundry Debtors and Sundry Creditors	20,000	25,000
Wages	4,000	
Furniture	11,000	

Machinery	30,000	
Advertisement	4,000	
Salaries	8,000	
Investment	6,000	
Insurance	500	
Cash in hand	900	
Cash at Bank	8,000	
Postage and telegram	1,000	
Commission		500
Reserve Fund		4,000
Bills Payable		6,000
R.D.D.		500
Capital		31,000
Drawings	1,600	
Total	**2,52,000**	**2,52,000**

Adjustment:

1) Closing stock was valued at ₹ 23,000
2) Depreciation Furniture by 20% Machinery by 10% p.a.
3) Wages ₹ 500 were unpaid and Insurance prepaid ₹ 300
4) Create R.D.D. at 5% on debtors.
5) Goods of ₹ 1,400 taken over by Sunil Kulkarni for his personal use.
6) Commission ₹ 200 due but not received.

Ans. **G.P. 47,900 N.P. 31,700 B/s Total 95,200**

Problem 3

Following is the Trial Balance of Supriya Gandhi as on 31st March 2021, you are required to Prepare Trading and Profit and Loss Account for the year ended on 31st March,2021 and Balance Sheet as on that date.

Trial Balance as on 31st March,2021

Particulars	Amount ₹	Particulars	Amount ₹

Plant and Machinery	80,000	15% Bank Loan	60,000
Loose Tools	10,000	(taken on 1-10-2020)	
Carriage and Freight	8,600	Capital	1,40,000
Postage and Telegram	1,400	Creditors	40,000
Motive Power	6,000	Commission	1,000
Debtors	24,000	Sales	1,50,000
Trade expenses	600	Discount	1,000
Advertisement	3,000		
Furniture	14,000		
Wages	28,000		
Purchases	59,000		
Opening Stock	20,800		
Printing and Stationery	5,200		
Interest on Bank Loan	3,000		
Land and Building	1,00,000		
Goodwill	26,600		
Discount	800		
Cash in hand	1,000		
Total	**3,92,000**	**Total**	**3,92,000**

Adjustment:

1) Closing stock was valued at ₹24,000.
2) Depreciation Plant and Machinery at 10% and Furniture by 5% p.a.
3) Outstanding wages ₹2,000.
4) Goods of ₹1,000 taken over for personal use but not recorded.
5) Provide R.D.D. at 5% on debtors.

Ans. G.P. 50,600, N.P.27,200 B/S Total 2,69,700

Problem 4

The Trial Balance of Miss Sneha Chug was as under prepare Trading and Profit & Loss A/c for the year ended 31st March,2020 and the Balance Sheet as on that date.

Trial Balance as on 31st March,2020

Particulars	Amt. ₹	Particulars	Amt. ₹
Opening Stock	30,000	Capital	93,500
Wages	9,500	Bills payable	7,500
Purchases	52,500	10% Bank Loan	
Investments	10,000	(taken on 1-10-2019)	10,000
Postage	1,500	Bank Overdraft	6,500
Printing and Stationery	2,000	Creditors	25,000
Carriage outward	1,000	Sales	71,000
Insurance	3,500	R.D.D.	3,000
Debtors	35,000		
Furniture	5,500		
Bad debts	1,200		
Carriage inward	1,800		
Cash in hand	5,400		
Machinery (Purchased) On 1-7-2019	32,000		
Salaries(for 10 months)	15,000		
Sundry expenses	2,100		
Bills Receivable	8,500		
Total	**2,16,500**	**Total**	**2,16,500**

Adjustment:

1) Closing stock was valued at ₹61,500.
2) Depreciation Furniture and Machinery at 10% p.a.
3) Debtors of ₹1,000 were bad and provide R.D.D. at 5% on debtors.
4) Wages includes ₹8,000 paid for fixation of Machinery.
5) Stock of stationery of rs 300 remain unused.

Ans. G.P. 46,700 N.P.13,950 B/S Total 1,59,950

Problem 5

From the following Trial Balance of M/S Deven Traders you are require to prepare Trading, Profit and Loss A/c for the year ending 31st March,2021 and Balance Sheet as on that date.

Trial Balance as on 31st March,2021

Particulars	Amt. ₹	Particulars	Amt. ₹
Opening stock	15,000	Capital	60,000
Purchases	45,700	Bills payable	11,000
Wages	9,900	Outstanding Salary	1,700
Investment	3,500	Sales	79,800
Carriage outward	4,600	Creditors	12,000
Printing & Stationery	3,400	Bank overdraft	3,000
Insurance	750		
Salaries	10,000		
Postage and Telegram	700		
machinery	26,800		
Furniture	6,400		
Debtors	25,000		
Bills receivable	4,000		
Cash at Bank	6,000		
Advertisement	1,000		
Bad debts	250		
Carriage Inward	4,500		

Total	**1,67,500**	**Total**	**1,67,500**

Adjustments:

1) Closing stock was valued at 61,500.
2) Unexpired insurance ₹200.
3) Carriage inward included ₹3,200 paid for transport on new machinery purchased on 1-4-2020.
4) Outstanding wages were ₹1,100.
5) Depreciate Machinery by 10% and furniture by ₹400.

   Ans. G.P. 46,800 N.P. 22,900 B/s Total 1,11,700.

Reference Books

1.Dr. Kapil Jain, Prof. Rashmi Somani, "Accounting for Managers", Dreamtech Press, 2015

2. S N Maheshwari, "Accounting for Management", Vikas Publishing, 3rd edition

3. Prasanna Chandra, "Financial Management Theory and Practices", TMH, 9th edition

4. Weygandt, Himmel, Kiesco, "Accounting Principles", 12th Edition,Wiley Publication.

5. Khan & Jain, "Financial Management", Mc Graw Hill

6. Siddiqui S.A. Siddiqui,"Managerial Economics & Financial Analysis", A.S. New Age.

7. V Sharan,"Fundamentals of Financial Management", Pearson Education.

Reference Books

1.Dr. Kapil Jain, Prof. Rashmi Somani, “Accounting for Managers”, Dreamtech Press, 2015

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3. Prasanna Chandra, “Financial Management Theory and Practices”, TMH, 9th edition

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UNIT 2 - Chapter 7

BEA and Budgeting

7.0 OBJECTIVES

- Break-even analysis informs you how various parts of a product must be sold to meet the fixed and variable costs of reproduction.
- The break-even point is admitted as a measure of the margin of security.
- Break-even analysis is applied broadly, from funds and options dealing with corporate budgeting for several projects.

7.1 INTRODUCTION:

Break-even analysis involves measuring and analyzing the margin of safety for an article based on the funds collected and correlated prices. In another word, the analysis explains how many deals it needs to pay for the cost of doing business. Analyzing various cost levels correlating to different levels of demand, the break-even analysis defines what level of sales is important to include the company's total fixed costs. A demand-side analysis would provide a retailer important insight into marketing abilities.

How Break-Even Analysis Works

Break-even analysis helps manage the level of product or a targeted desired sales mix. The study is for a company's management's use only, as the metric and calculations are not practiced by outside companies, such as investors, regulators, or financial companies. This type of analysis includes a consideration of the break-even point (BEP). The break-even point is determined by dividing the total fixed costs of stock by the cost per specific unit less the variable costs of production. Fixed costs are costs that continue the same although of how many units are sold.

Break-even analysis views the level of fixed costs related to the profit gained by each new unit originated and sold. In common, a company with lower fixed costs will have a lower break-even point of sale. For example, a company with $0 of fixed costs will automatically have occurred even upon the sale of the first result regarding variable costs do not better sales revenue.

7.2 AN OVERVIEW:

Special Considerations

Although investors are not especially excited about a specific company's break-even analysis on their product, they may use the computation to decide at what rate they will break even on sales or finance. The consideration is beneficial when trading in or producing a plan to buy choices or fixed-income protection goods.

Contribution Margin

The idea of break-even analysis is involved with the contribution margin of goods. The supplement margin is the balance between the selling price of the product and the total variable costs. For example, if an object sells for $200, the total fixed costs are $50 per unit, and the total variable costs are $120 per unit, the contribution margin of the product is $80 ($200 - $120). This $80 indicates the number of funds raised to cover the remaining fixed costs, which are prohibited when calculating the contribution margin.

Calculations for Break-Even Analysis

The calculation of break-even analysis may utilize two equations. In the first calculation, divide the total fixed costs by the unit contribution margin. In the example above, consider the use of the complete fixed costs is $40,000. With a contribution margin of $80, the break-even point is 1000 units ($40,000 divided by $80). Upon the sale of 1000 units, the payment of all fixed costs is whole, and the company will report a net profit or loss of $0.

Alternatively, the calculation for a break-even point in sales money proceeds by splitting the total fixed costs by the contribution margin ratio. The contribution margin ratio is the contribution margin per unit divided by the sale price.

Returning to the example above, the contribution margin ratio is 40% ($80 contribution margin per item divided by $200 sale price per item). Therefore, the break-even point in sales dollars is $100,000 ($40,000 total fixed costs divided by 40%). Confirm this figured by multiplying the break-even in units (1000) by the sale price ($200), which equals $100, 00

7.2.1 CONCEPT OF BREAK EVEN POINT

7.2.1.1 What is a Break-Even Analysis?

A break-even analysis is a commercial instrument that supports a firm to define the stage at which the company, or a new service or a product, will be profitable. In other words, it is a commercial calculation for defining the number of outcomes or services a company should sell or provide to cover its costs (particularly fixed costs). Break-even is a position where an organization is neither gaining money nor wasting money, but all the costs have been satisfied.

Break-even analysis helps study the relation between variable cost, fixed cost, and revenue. Usually, a company with low fixed costs will have a low break-even point of sale. For example, say Hurry Ltd has fixed costs of Rs. 20,000 vs Slow Ltd has fixed costs of Rs. 2,00,000 selling similar products, Happy Ltd will be able to break even with the sale of lesser products as compared to sad Ltd.

7.2.1.2 Components of Break Even Analysis

Fixed cost

Fixed costs are also called over costs. These over costs occur after the determination to start a financial movement is used and these costs are immediately linked to the level of production, but not the amount of stock. Fixed costs incorporate (but are not limited to) interest, taxes, salaries, rent, depreciation costs, labor costs, energy costs, etc. These costs are fixed irrespective of the production. In case of no production also the costs must be acquired.

Variable cost

Variable costs are costs that will raise or reduce in direct relationship to the production volume. These costs involve the cost of raw material, packaging cost, fuel, and other costs that are directly related to the production.

7.2.1.3 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).

Contribution per Unit

Contribution per unit = Selling price per unit – Variable cost per unit

Break – even Point

$$\text{Break even point in quantity(Bep)} = \frac{FC}{\text{Contribution per unit}} \quad \text{or} \quad \frac{FC}{(P - VC)}$$

For an example:

Variable costs per unit: Rs. 800 Sale price per unit: Rs. 1200 Desired profits: Rs. 8,00,000 Total fixed costs: Rs. 20,00,000 First we need to calculate the break-even point per unit, so we will divide the Rs.20,00,000 of fixed costs by the Rs. 400 which is the contribution per unit (Rs. 1200 – Rs. 400). Break Even Point = Rs. 20,00,000/ Rs. 400 = 5000 units Next, this number of units can be shown in rupees by multiplying the 5,000 units with the selling price of Rs. 1200 per unit. We get Break Even Sales at 5000 units x Rs. 1200 = Rs. 60, 00,000. (Break-even point in rupees)

7.2.1.4 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 example, if the price of a product is Rs.200, total variable costs are Rs. 120 per product and fixed cost are Rs.50 per product, the contribution margin of the product is Rs. 80 (Rs. 200 - Rs. 120). This Rs. 80 represents the revenue collected to cover the fixed costs. In the calculation of the contribution margin, fixed costs are not considered.

7.2.1.5 When is Break-even analysis used?

Starting a new business: To begin a unique business, a break-even analysis is a necessity. Not only it assists in selecting whether the idea of starting a new business is viable, but it will force the startup to be sensible about the costs, as well as provide a basis for the pricing strategy.

Creating a new product: In the case of a current business, the firm should still conduct a break-even analysis before launching a new product—especially if such a product is going to add an important investment.

Changing the business model: If the firm is concerning to improve the business model, like, switching from commercial business to retail business, then a break-even analysis must be implemented. The costs could change considerably and breakeven analysis will help in setting the selling price.

7.2.1.6 Breakeven analysis is useful for the following reasons:

- It helps to define the resting/unused space of the firm once the breakeven arrives. This will assist to determine the highest profit on a special product/service that can be produced.
- It serves to define the influence on earnings on adjusting to industrialization from manual (a fixed cost replaces a variable cost).
- It helps to define the variation in profits if the price of a product is changed.
- It helps to define the number of losses that could be sustained if there is a sales downturn.

Additionally, break-even analysis is very helpful for understanding the overall capability of a business to create a profit. In the case of an organization whose breakeven point is near to the highest sales level, this means that it is nearly impossible for the business to gain a profit even under the best of conditions. Therefore, it's the management's efficiency to control the breakeven point regularly. This monitoring reduces the breakeven point whenever reasonable.

7.2.1.7 Ways to monitor Break even point

- **Pricing analysis:** Minimize or reduce the use of tokens or other price discount offers, since such promotional tactics improve the breakeven point.
- **Technology analysis:** Performing any technology that can enhance the business performance, thus expanding potential with no additional cost.
- **Cost analysis:** Examining all fixed costs regularly to confirm if any can be reduced can help. Also, examine the total variable costs to see if they can be reduced. This analysis will improve the margin and decrease the breakeven point.
- **Margin analysis:** Push sales of the highest-margin (high contribution earning) items and pay close consideration to product margins, thus decreasing the breakeven point.

- **Outsourcing:** If a movement consists of a fixed cost, try to outsource such action (whenever possible), which decreases the breakeven point.

7.2.1.8 Benefits of Break-even analysis

- **Catch missing expenses:** When you're considering a new business, it's very much possible that you may neglect a few charges. Therefore, break-even analysis can assist you to evaluate all commercial responsibilities to figure out your break-even point. This analysis reduces the number of wonders down the road or at least makes a company for them.
- **Set revenue targets:** Once the break-even analysis is completed, you will get to understand how much you require to sell to be effective. This will help you and your sales team to set more accurate sales goals.
- **Make smarter decisions:** Administrators often make determinations about their business based on passion. Emotion is necessary i.e. how you feel, though it's not sufficient. To be a successful businessperson, determinations should be based on evidence.
- **Fund your business:** This analysis is a key component in any business plan. It's generally a requirement if you want strangers to support your business. To fund your business, you have to show that your plan is viable. Furthermore, if the analysis looks good, you will be comfortable enough to take the difficulty of different ways of funding.
- **Better Pricing:** Understanding the break-even point will assist in rating the products better. This tool is extremely used for presenting the best price of a product that can get maximum profit externally rising the actual price.

· **Cover fixed costs:** Doing a break-even analysis assists in covering all fixed costs.

7.3 COSTVOLUME-PROFIT ANALYSIS

Cost-volume-profit (CVP) analysis is used to define how variations in costs and volume influence a company's running assets and net income. In performing this analysis, there are various opinions made, including:

- The sales price per unit is constant.
- Variable costs per unit are constant.
- Total fixed costs are constant.
- Everything produced is sold.
- Costs are only affected because activity changes.
- If a company sells more than one product, they are sold in the same mix.

CVP analysis needs that all the company's costs, including production, selling, and organizational costs, be recognized as variable or fixed.

7.3.1 Contribution margin and contribution margin ratio

Key calculations when using CVP analysis are the **contribution margin** and the **contribution margin ratio**. The contribution margin describes the quantity of income or profits the organization established before decreasing its fixed costs. On another way, it is the number of sales dollars ready to satisfy (or contribute to) fixed costs. When calculated as a ratio, it is the percent of sales dollars available to cover fixed costs. Once fixed costs are covered, the next dollar of sales results in the company having an income.

The contribution margin is sales revenue minus all variable costs. It may be calculated using dollars or on a per-unit basis. If The Three M's, Inc., has sales of $750,000 and total variable costs of $450,000, its offering margin is $300,000. Considering the company sold 250,000 units through the year, the per-unit sales price is $3 and the total variable cost per unit is $1.80. The contribution margin per unit is $1.20. The contribution margin ratio is 40%. It can be calculated utilizing either the contribution margin in dollars or the contribution margin per unit. To calculate the contribution margin ratio, the contribution margin is divided by the sales or revenues amount.

Contribution Margin

	$	Per unit
Sales	$750,000	$3.00
Variable Costs	450,000	1.80
Contribution Margin	300,000	$1.20

Contribution Margin Ratio

$$\frac{\text{Contribution Margin}}{\text{Sales}} = \frac{\$300{,}000}{\$750{,}000} = 40\% \qquad \frac{\$1.20}{\$3.00} = 40\%$$

7.3.2 Break-even point

The break-even point describes the level of sales where net income equals zero. In other words, the point where sales revenue equals total variable costs plus total fixed costs, and contribution margin equals fixed costs. Using the previous information and given that the company has fixed costs of $300,000, the break-even income statement shows zero net income.

The Three M's, Inc. Break-Even Income Statement	
Revenues (250,000 units × $3)	$750,000
Variable Costs (250,000 units × $1.80)	450,000
Contribution Margin	300,000
Fixed Costs	300,000
Net Income	$ 0

This income statement format is known as the **contribution margin income statement** and is used for internal reporting only.

The $1.80 per unit or $450,000 of variable costs represent all variable costs including costs categorized as production costs, selling costs, and executive costs. Similarly, the fixed costs represent total production, selling, and executive fixed costs.

Break-even point in dollars. The break-even point in sales dollars of $750,000 is calculated by dividing total fixed costs of $300,000 by the contribution margin ratio of 40%.

$$\text{Break-Even Sales Dollars} = \frac{\text{Total Fixed Costs}}{\text{Contribution Margin Ratio}} = \frac{\$300{,}000}{40\%} = \$750{,}000$$

Another way to calculate break-even sales dollars is to use the mathematical equation.

$$\text{Break-even Sales Dollars} = \text{Variable Costs} + \text{Fixed Costs}$$

In this equation, the variable costs are confirmed as a percent of sales. If a unit has a $3.00 selling price and variable costs of $1.80, variable costs as a percent of sales is 60% ($1.80 ÷ $3.00). Using fixed costs of $300,000, the break-even equation is shown below.

Break-even Sales Dollars = Variable Costs + Fixed Costs

$$X = 60\%\ X + \$300{,}000$$
$$X = .6X + \$300{,}000$$

OR

$$.4X = \$300{,}000$$
$$X = \frac{\$300{,}000}{.4}$$
$$X = \$750{,}000 \text{ Break-even Sales}$$

The last calculation using the mathematical equation is the same as the break-even sales formula using the fixed costs and the contribution margin ratio

Break-even point in units. The break-even point in units of 250,000 is calculated by dividing fixed costs of $300,000 by contribution margin per unit of $1.20.

$$\text{Break-even Sales Units} = \frac{\text{Total Fixed Costs}}{\text{Contribution Margin Per Unit}} = \frac{\$300{,}000}{\$1.20} = 250{,}000 \text{ units}$$

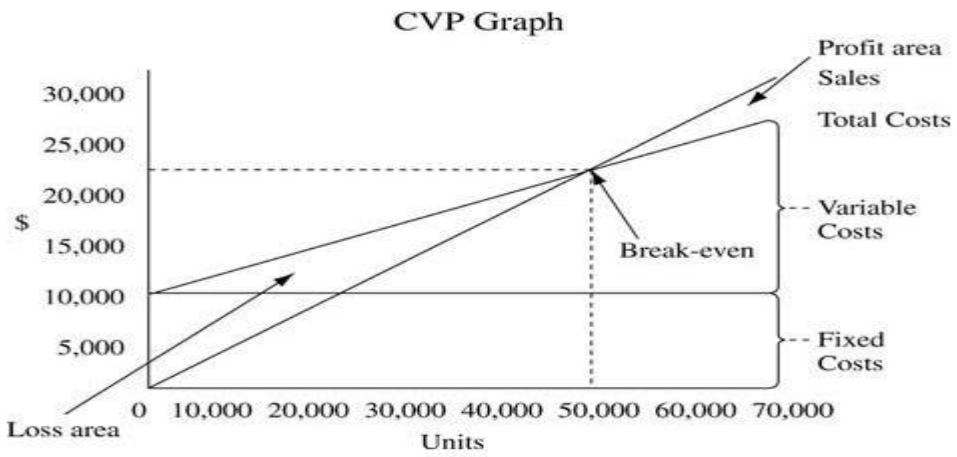
The break-even point in units may also be calculated using the mathematical equation where "X" equals break-even units.

Break-even Sales Units

Sales = Variable Costs + Fixed Costs

$$\$3.00X = \$1.80X + \$300{,}000$$
$$\$1.20X = \$300{,}000$$
$$X = \frac{\$300{,}000}{\$1.20}$$
$$X = 250{,}000 \text{ Break-even Units}$$

Again it should be noted that the last portion of the calculation using the mathematical equation is the same as the first calculation of break-even units that used the contribution margin per unit. Once the break-even point in units has been calculated, the break-even point in sales dollars may be calculated by multiplying the number of break-even units by the selling price per unit. This also works in reverse. If the break-even point in sales dollars is known, it can be divided by the selling price per unit to determine the break-even point in units.



7.3.3 Targeted income

CVP analysis is also used when a firm is trying to define what level of sales is required to attain a special level of income, also called **targeted income**. To calculate the essential sales level, the targeted income is added to fixed costs, and the total is classified by the offering margin ratio to determine essential sales dollars, or the total is divided by contribution margin per unit to define the essential sales level in units.

$$\text{Required Sales in Dollars} = \frac{\text{Fixed Costs + Targeted Income}}{\text{Contribution Margin Ratio}}$$

$$\text{Required Sales in Units} = \frac{\text{Fixed Costs + Targeted Income}}{\text{Contribution Margin Per Unit}}$$

Utilizing the data from the previous example, what level of sales would be needed if the company wanted $60,000 of income? The $60,000 of income needed is called the targeted income. The required sales level is $900,000 and the required number of units is 300,000. Why is the answer $900,000 instead of $810,000 ($750,000 [break-even sales] plus $60,000)? Remember that there are extra variable costs acquired every time an additional unit is sold, and these costs reduce the extra revenues when calculating income.

$$\text{Required Sales in Dollars} = \frac{\$300{,}000 + \$60{,}000}{40\%} = \$900{,}000$$

$$\text{Required Sales in Units} = \frac{\$300{,}000 + \$60{,}000}{\$1.20} = 300{,}000 \text{ units}$$

This calculation of targeted income believes it is being calculated for a division as it ignores income taxes. If a targeted net income (income after taxes) is being calculated, then income taxes would also be added to fixed costs along with targeted net income.

$$\text{Required Sales in Dollars} = \frac{\text{Fixed Costs} + \text{Targeted Income} + \text{Income Taxes}}{\text{Contribution Margin Ratio}}$$

$$\text{Required Sales in Units} = \frac{\text{Fixed Costs} + \text{Targeted Income} + \text{Income Taxes}}{\text{Contribution Margin Per Unit}}$$

Presumptuous the corporation has a 40% income tax rate, its break-even point in sales is $1,000,000 and break-even point in units is 333,333. The amount of income taxes used in the calculation is $40,000 ([$60,000 net income ÷ (1 – .40 tax rate)] – $60,000).

$$\text{Required Sales in Dollars} = \frac{\$300{,}000 + \$60{,}000 + \$40{,}000}{40\%} = \$1{,}000{,}000$$

$$\text{Required Sales in Units} = \frac{\$300{,}000 + \$60{,}000 + \$40{,}000}{\$1.20} = 333{,}333 \text{ units}$$

A summarized contribution margin income statement can be used to prove these calculations.

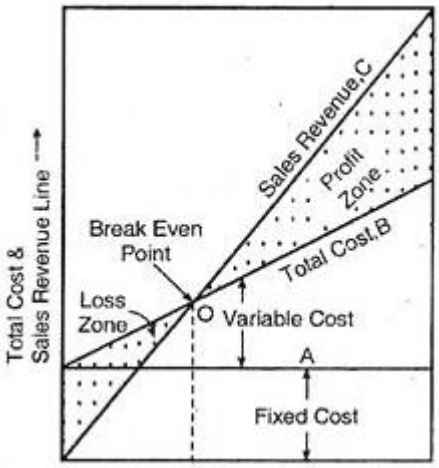
The Three M's, Inc. Income Statement 20X0 Targeted Net Income	
Sales (333,333 * units × $3)	$1,000,000
Variable Costs (333,333 * units × $1.80)	600,000
Contribution Margin	400,000
Fixed Costs	300,000
Income before Taxes	100,000
Income Taxes (40%)	40,000
Net Income	$ 60,000

7.4 DETERMINATION OF BREAK EVEN POINT

The break-even point indicates the level of output or sales at which no profit or loss is achieved. It indicates the posi-tion at which marginal profit or contribution is just sufficient to cover fixed overheads.

In other words, a business is said to break-even when its income equals its expense. When production exceeds the "Break-even point", the busi-ness makes a profit and when it is below the "Break-even point", the business makes a loss.

This is shown in chart



It may be determined in terms of physical units or in money terms i.e., sales value in rupees:

(i) Break-Even-Point in Terms of Physical Units:

Break even volume is the number of units of a product which must be sold to earn enough returns just to cover all expenses. The break-even-point (BEP) is reached when enough number of units of a product has been sold so that the total contribution margin of the units sold is equal to the fixed costs.

B.E.P = Fixed costs/Selling Price – Variable cost per unit

(ii) Break-Even-Point in Terms of Sales Value:

Multi-product firms are not in a situation to estimate the BEP in terms of any standard unit of product. In these firms, it is helpful to define their BEP in terms of total rupee sales. In this case, BEP would be the point where the contribution margin (Sales value-Variable costs) would be equal to fixed costs contribution margin is shown as a ratio to sales.

B.E.P = Fixed costs/Contribution ratio

Where, Contribution ratio = Sales value – Variable costs/Sales value

Margin of Safety:

This is noted on the chart by the distance between B.E.P and the output being produced. It explains that if this distance is short then a small reduction in output or sales will decrease the profit greatly. If the distance is long it means the business could still be making a profit after a great decrease in output.

The angle of Incidence:

By casting the sales line onto a total cost line an angle known as "Angle of Incidence" is formed. The chart shows that if the angle is large it is an implication of large profits and if it is small it shows that profits are being obtained under less beneficial conditions.

Position of Break-Even Point:

If B.E.P. is over to the left of the chart with a large angle of incidence it explains that output can be raised considerably.

If B.E.P. is over to the right of the chart, the margin of safety is low, which means:

(i) The fixed expenses are too high for the number of sales being done, and

(ii) The fixed and variable costs are high while the profit is small.

If the production capacity is below B.E.P., the organization will be running in loss and beyond it, profit can be had.

Break-even-point may be prepared in terms of physical units or money terms.

(i) B.E.P. in Terms of Physical Units:

This is suitable for the single product firm. It represents the number of units of a product which must be sold to earn enough revenue just to cover all charges.

(ii) B.E.P. in Terms of Sales Value:

Multi-product firms are not in a position to estimate the B.E.P. in terms of any common unit of product. In these firms, it is useful to define this B.E.P. in terms of total rupee sales

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7.5 MARGIN OF SAFETY AND PV RATIO

P/V Ratio, Break-Even Point, and Margin of Safety

To understand the impact of specific variations on P/V ratio, breakeven point, and margin of safety, the following data is assumed:

	Original	*After 10% increase*
No. of Units Produced & Sold	8,000	8,800
Unit Selling Price	₹ 20	₹ 22
Unit Variable Cost	₹ 10	₹ 11
Total Fixed Costs	₹ 40,000	₹ 44,000
Contribution	₹ 20 – ₹ 10 = ₹ 10	I ₹ 22 – ₹ 10 = ₹ 12 II ₹ 20 – ₹ 11 = ₹ 9

	Present solution	*Increase in per unit selling price*	*Increase in per unit variable cost*	*Increase in total fixed costs*	*Increase in no. of units sold*
P/V Ratio = Contribution / Sales	₹ 10 / ₹ 20 × 100 = 50%	₹ 12 / 22 × 100 = 54.55%	9/20 × 100 = 45%	No effect	No. effect
Break Even Point = Fixed Costs / P/V Ratio	₹ 40,000 / 50% = ₹ 80,000	₹ 40,000 / 6/11 = ₹ 73,333	₹ 40,000 / 45% = ₹ 88,889	₹ 44,000 / 50% = ₹ 88,000	No effect
Margin of Safety = Total Sales – BEP Sales	₹ 1,60,000 – ₹ 80,000 = ₹ 80,000	₹ 1,76,000 – ₹ 73,333 = ₹ 1,02,667	₹ 1,60,000 – ₹ 88,889 = ₹ 71,111	₹ 1,60,000 – ₹ 88,000 = ₹ 72,000	(8,800 × ₹ 20) – ₹ 80,000 = ₹ 1,76,000 – ₹ 80,000 = ₹ 96,000

From the earlier, it is clear that if:

(i) There is an improvement in selling price per unit it will improve the P/V ratio decreases the breakeven point and improve the margin of safety. If there is a decrease in price per unit, it will reduce the P/V ratio, raise the breakeven point and shorten the margin of safety.

(ii) There is an improvement in variable cost per unit, it will reduce the P/V ratio, improve the breakeven point and reduce the margin of safety.

(iii) There is an improvement in total fixed costs, there wills no impact on the P/V ratio, raise the breakeven point and reduce the margin of safety.

(iv) There is an improvement in no. of units sold, it will have no impact on the P/V ratio and breakeven point but will raise the margin of safety.

Illustration 1:

The company producing a single product sells it at a price of Rs.80 per unit. The variable cost per unit is Rs.48 and the annual fixed cost amounts to Rs.18 lakhs.

Based on these data, you are required to work out the following:

(i) Present P/V ratio and break-even sales.

(ii) Increase in the volume of sales required if the profit is sought to be increased by Rs.3.6 lakhs.

(iii) Percentage increase/decrease in sales volume:

a. To offset an increase of Rs.4 per unit in variable cost; and

b. An increase in selling price by 10% without affecting the quantum of existing profit.

Solution:

(i) $\text{P/V Ratio} = \frac{\text{Contribution per unit}}{\text{Selling Price per unit}} \times 100 = \frac{₹\ 80 - ₹\ 48}{₹\ 80} \times 100 = \mathbf{40\%}$

$\text{Break Even Sales} = \frac{\text{Fixed Cost}}{\text{P/V Ratio}} = \frac{₹\ 18\text{ lakhs}}{40\%} = \mathbf{₹\ 45\ lakhs}$

(ii) $\text{Increase in Volume of Sales required} = \frac{\text{Increase in Contribution}}{40\%} = \frac{₹\ 3.6\text{ lakhs}}{40\%} = \mathbf{₹\ 9\ lakhs}$

(iii) (A) $\text{Percentage Increase in Sales Volume} = \frac{\text{Reduction in Contribution per unit}}{\text{New Contribution per unit}} \times 100$

$= \frac{₹\ 4}{₹\ 32 - ₹\ 4} \times 100 = \mathbf{14.28\%}$

(B) $\text{Percentage Decrease in Sales Volume} = \frac{\text{Increase in Contribution per unit}}{\text{New Contribution per unit}} \times 100$

$= \frac{10\%\text{ of }₹\ 80}{(\text{Rs } 80 + 10\%\text{ of } 80) - ₹\ 48} = \frac{₹\ 8}{₹\ 40} \times 100 = \mathbf{20\%.}$

Illustration 2:

Super Ltd. which produces the element EXCEL has obtained a turnover of Rs.6, 00,000 for the calendar year 2009. The manager of the corporation has notified that the company has acted at a profit ratio of 25% and a margin of safety of 20%.

But he feels due to difficult competition, the selling price is to be decreased to manage the same amount of sales for the year 2010. He does not assume any variation in variable costs. He supposes that due to the cost minimization program, the profit volume ratio and margin of safety will be 20% and 30% respectively and a considerable saving in fixed cost for 2010.

Even if the organization prefers to shut down its operations for 2010, it requires to incur Y minimum fixed cost of Rs.60,000. You are expected to:

(i) Present the comparative statement for the years 2009 and 2010 showing under margin costing.

(ii) What will minimum sales be needed, if it determines to shut down its unit in 2010?

Solution:

Calculation of Variable Costs, Break Even Sales, Profit and Fixed Cost for the Year 2009

Sales for the year 2009	₹ 6,00,000
Profit Volume Ratio	25%
Contribution = Sales × P/V Ratio	₹ 1,50,000
Variable Costs = Sales – Contribution	₹ 4,50,000
Margin of Safety	20%
Margin of Safety = Sales × 20% *i.e.* ₹ 6,00,000 × $\frac{20}{100}$	₹ 1,20,000
Break Even Sales = Sales – Margin of Safety	₹ 4,80,000
	(₹ 6,00,000 – ₹ 1,20,00)

Profit = Margin of Safety × P/V Ratio	₹ 30,000
	(₹ 1,20,000 × 25%)
Fixed Cost = Contribution – Profit	₹ 1,20,000
	(₹ 1,50,000 – ₹ 30,000)

Computation of Sales, Break Even Sales and Fixed Cost for 2010

Let the sales for the year 2010 be x and the variable cost for the year is ₹ 4,50,000, same as in the year 2009

∴ Contribution = x – ₹ 4,50,000

P/V Ratio (Given) = 20%

20% of Sales = x – ₹ 4,50,000

or 20% of x = x – ₹ 4,50,000

or $\frac{20}{100} = \frac{x - ₹\ 4,50,000}{x}$

or $\frac{20}{100} = 1 - \frac{₹\ 4,50,000}{x}$

or $0.80x$ = ₹ 4,50,000

or x = ₹ 4,50,000 × $\frac{100}{80}$ = ₹ 5,62,500

∴ Sales = ₹ 5,62,500

Margin of Safety = 30%

Margin of Safety = ₹ 5,62,500 × $\frac{30}{100}$ = ₹ 1,68,750

Break Even Sales = Sales – Margin of Safety

= ₹ 5,62,500 – ₹ 1,68,750 = ₹ 3,93,750

Break Even Sales = $\frac{\text{Fixed Cost}}{\text{P/V Ratio}}$

or Fixed Cost = P/V Ratio × Break Even Sales

= 20% × ₹ 3,93,750 = ₹ 78,750

(i) **COMPARATIVE STATEMENT OF SALES AND PROFIT UNDER MARGINAL COSTING**
for the years 2009 and 2010

	2009	2010
	₹	₹
Sales	6,00,000	5,62,500
Less : Variable Costs	4,50,000	4,50,000
Contribution	1,50,000	1,12,500
Less : Fixed Cost	1,20,000	78,750
Profit	30,000	33,750

(ii) *Minimum Sales Required* (if the company decides to shut down its unit in 2010)

$$\text{Minimum Sales Required} = \frac{\text{Avoidable Fixed Cost}}{\text{P/V Ratio}}$$

$$= \frac{₹\ 78{,}750 - ₹\ 60{,}000}{20\%} = ₹\ 93{,}750$$

7.6 Impact of changes in Cost or selling price on BEP

Influence of selling price and profit in breakeven, the breakeven calculation needs you to know your fixed and variable costs, the way they react to exchange in quantity, and the link to the change in profit.

Now that you have both your fixed and variable costs per unit, it's time to glance at the connection of the change with your profit; and finally, recognize the number of units you must sell to breakeven.

The first stage of breakeven analysis is to assemble three pieces of data:

- Fixed and variable costs
- Fixed and variable costs per unit
- Selling price per unit

Once you have these three pieces, you are ready to calculate your breakeven.

Calculating the Selling Price

If you are uncertain of your selling price, then you will require calculating this by using the following simple equation.

$$\text{Units} = \frac{\text{Fixed Costs}}{\text{Selling Price} - \text{Variable Cost per unit}}$$

Staying with the earlier example, remember there were the following:

- Fixed costs = $10,000
- Unit = 1,000
- Variable cost per unit = $2

So just input the information to establish the selling price:

$10,000 fixed cost

$$1000 \text{ units} = \frac{\quad}{\text{Selling price - \$2 variable cost per unit}}$$

$$(\text{Selling price - \$2}) \times 1{,}000 = \$\ 10{,}000$$

$$\text{Selling price - \$2} = \frac{\$10{,}000}{1{,}000}$$

Selling price - $2 = $10

Selling price = $10 + $2

Selling price = $12

Based on the consideration, the selling price would be $12.00 per item to approach breakeven.

You can cross-check to make assured the equation is correct by applying a formula that will estimate total sales vs. costs:

Sales = Units × Selling Price

Sales = 1,000 x $12

Sales = $12,000

Sales = Fixed Cost + (Variable cost per unit × units)

Calculating your Profit

Becoming classified as the selling price, you can use the breakeven to define the level of sales needed to obtain the wanted profit.

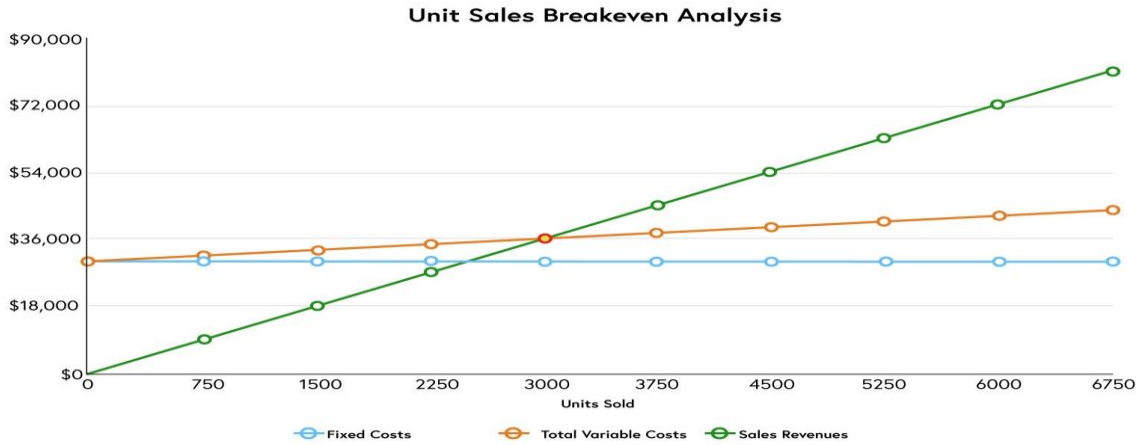
The company proprietor required $20,000 profit from product sales. You can apply the following breakeven formula to define the number of units.

$$\text{Breakeven} = \frac{\text{Fixed costs + desired profit}}{\text{Selling price – variable cost per unit}}$$

$$\text{Breakeven} = \frac{\$10{,}000 + \$\ 20{,}000}{\$12 - \$\ 2}$$

$$\text{Breakeven} = \frac{\$\ 30{,}000}{\$\ 10}$$

Breakeven = 3,000 units to break-even AND achieve a desired profit of $ 20,000



1.7 Practical applications of Break-even Analysis

Application of Break Even Analysis

Break-even analysis not only highlights the fields of financial power and weakness in the firm but also assists in obtaining out the ways which can improve its profitability. With the guidance of this analysis management of the product firm can take decisions correlated to the following:

(i) Safety margin. It determines the degree to which the firm can provide to decline in sales before it starts acquiring losses.

(ii) Volume needed to achieve target profit.

(iii) Price change, and its effect.

(iv)Whether to increase production capability or not.

(v) Whether to add a new product or drop production of any product.

(vi)Whether to make or buy.

(vii) Selection of production machinery to get maximum profit for a special volume of the product out of the available machinery.

(viii) Increasing profit performance by:

a. Increasing the volume of sales, and or

b. Increasing the selling prices, and or

c. Decreasing the variable prices per unit, and or

d. Decreasing the fixed costs.

Limitations of Break Even Analysis

1. Since Break-Even Analysis is based on accounting data, therefore, it can be safe and beneficial only if the firm in question keeps a good accounting system.

2. It is based on the suppositions of given correlations between costs and revenues, on one hand, and input on the other.

3. Cost data of the part-time may not operate well for the current period.

4. Selling costs may change.

5. The cost revenue- Volume relationship is linear. But this is only over narrow ranges of output.

6. Break-even analysis is not an effective tool for long-range use and its use should be limited to the short run only.

7.8 LET US SUM UP

- It does not analyze how demand may be affected at different price levels.
- Break-even analysis is a supply-side analysis; that is it only analyzes the costs of the sales.
- To know how to price your product, you first have to know how to calculate the breakeven point.
- A company should determine its break-even point before selling its products

Hence budgetary authority is an essential medium for any organization to set a budget for future issues. It supports an organization in proper utilization and control of its sources. Budget are estimations and are based on the estimate which is not certain. Therefore the effectiveness of budgetary control depends on the availability and nature of the projection.

7.9 LIST OF REFERENCES

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7.10 UNIT END EXERCISES

Q1**. How Do You Calculate The Break-even Point In Terms Of Sales?**

Q2. What is a Break-Even Analysis?

Q3. What Is The Difference Between Gross Margin And Contribution Margin?

Q4. What Is Contribution Margin?

Q5. Without resorting to computations, calculate the total contribution margin at the break-even point.

Q6. What does a low margin of safety accompanied by low PV ratio indicate?

Q7. How do you calculate margin of safety ratio?

Q8. What will be the impact on BEP if variable cost are reduced?

Q9. How do fixed and variable costs affect break even analysis?

Q10. What are the limitations in using break even analysis?

UNIT 2 - **Chapter 8**

Budgeting

8.0 OBJECTIVES :

- Budgets Constrain Plan
- Budgets Promote Coordination

· Budgets help management to coordinate in the following ways:

1. The presence of a well-laid plan is the major step towards gaining coordination. Executives are required to imagine the connections among unique operations, and the company as a whole.

2. Budgets help to control the empire-building aims of administrators. Budgets increase self-thinking by encouraging to eliminate careless preferences on the part of engineers, sales, and production officers.

3. Budgets help to explore out deficiencies in organizational construction. The formulation and administration of budgets confine difficulties of communication, fixed responsibility, and working relationships.

- Budgets Improve Communication
- Budgets Provide a Basis of Control and Performance Evaluation
- Budgeting enters into control at three points:

(1) When a budget is being formulated, departments scrutinize their plans for the future and submit guesses as per their necessities, justifying each of their demands by showing a demand.

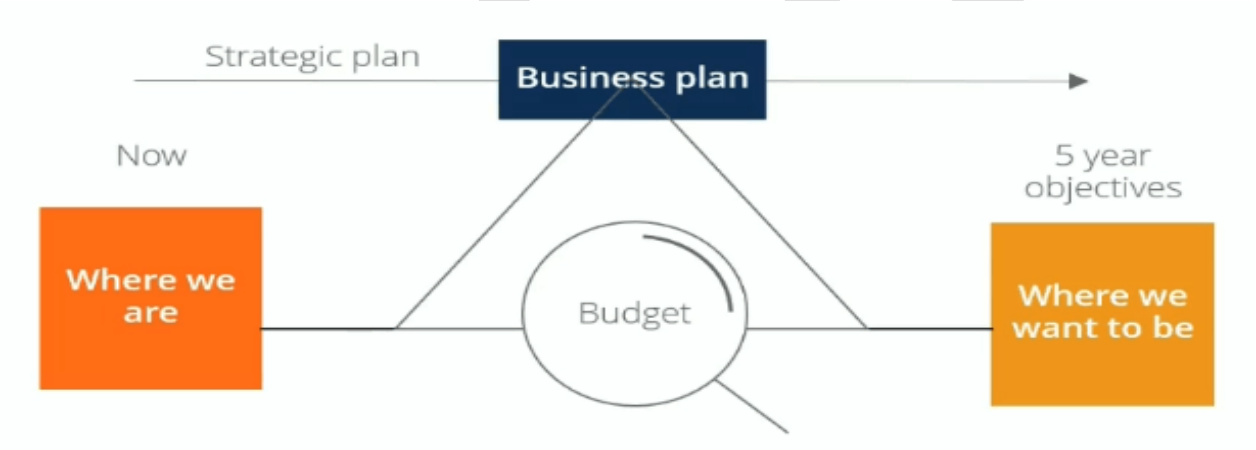
(2) After budgets of different departments have been evaluated and recommended they become objectives that set desirable limits on spending.

(3) At the end of the budget period, a ratio of actual expenditures with budget expenditure is made as a means of assessing performances and fixing responsibility for variations.

8.1 INTRODUCTION

What is Budgeting?

Budgeting is the tactical implementation of a business strategy. To accomplish the goals in a business's strategic plan, we require a complete narrative roadmap of the business idea that sets criteria and pointers of performance. We can then make adjustments along the way to assure that we reach the aspired aims.



Translating Strategy into Targets and Budgets

There are four dimensions to study when altering high-level policy, such as mission, vision, and goals, into budgets.

1. **Objectives** are your goals, e.g., raising the cost each customer pays at your retail store.
2. Then, you develop one or more **strategies** to accomplish your goals. The firm can improve customer spending by extending product offerings, sourcing new suppliers, advertising, etc.

3. You require to follow and judge the effectiveness of the plans, using appropriate **dimensions**. For example, you can estimate the average weekly spending per customer and average price shifts as inputs.
4. Lastly, you should set **aims** that you would want to reach by the end of a certain period. The objectives should be quantifiable and time-based, such as an expansion in the number of deals or a raise in the number of goods sold by a specific time.

Objectives	Strategies	Measures	Targets
What are you trying to achieve?	**How are you going to achieve it?**	**What are the input and output measures?**	**Quantifiable and time-based**
• Increase spend per customer	• Expand product offering • Source new suppliers • Promotion and marketing • Pricing	• Average weekly spend/customer • Spend by product type • Average price changes	• $ increase • Volume increase • % staff trained in new products

Goals of the Budgeting Process

Budgeting is a critical method for any company in various forms.

1. Aids in the planning of actual operations

The method receives directors to examine how circumstances may vary and what actions they require to get, while also providing supervisors to learn how to approach difficulties when they occur.

2. Coordinates the activities of the organization

Budgeting inspires managers to establish relations with the other elements of the process and appreciate how the different areas and companies associate with each other and how they all help the overall business.

3. Communicating plans to various managers

Advertising plans to managers is an essential social feature of the method, which guarantees that everyone receives a bright perception of how they promote the organization. It supports the communication of personal goals, plans, and ambitions, which all roll up collectively to help the

growth of the industry. It also assures relevant people are made responsible for executing the budget.

4. Motivates managers to strive to achieve the budget goals

Budgeting takes managers to concentrate on sharing in the budget process. It gives a challenge or purpose for individuals and managers by connecting their pay and performance related to the budget.

5. Control activities

Managers can match real spending with the budget to manage financial projects.

6. Evaluate the performance of managers

Budgeting gives a means of informing managers of how well they are functioning in reaching goals they have fixed.

Types of Budgets

A robust budget structure is established about a master budget consisting of operating budgets, capital expenditure budgets, and cash budgets. The consolidated budgets create a budgeted earnings statement, balance sheet, and cash flow statement.

1. Operating budget

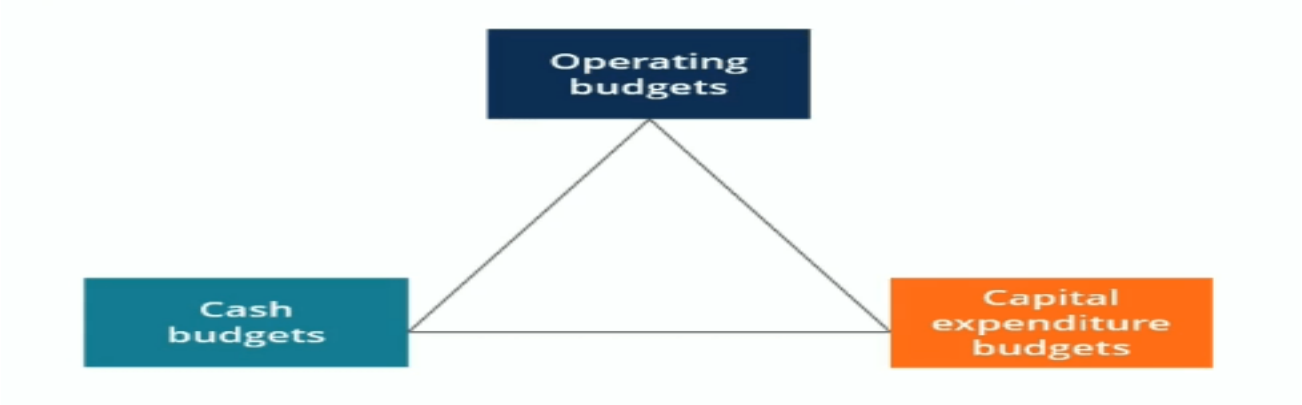
Returns and associated expenses in day-to-day services are budgeted in particular and are classified into main sections such as revenues, salaries, benefits, and non-salary expenses.

2. Capital budget

Capital budgets are typically requests for purchases of large assets such as property, equipment, or IT systems that generate major requirements on an organization's cash flow. The goals of capital funds are to allocate funds, control risks in decision-making, and set preferences.

3. Cash budget

Cash budgets balance the other two budgets collectively and take into record the timing of returns and the timing of receipt of cash from profits. Cash budgets help administrators follow and manage the company's cash flow efficiently by assessing whether additional funds are needed, whether the business requires raising capital, or if there is excess capital.



The Process

The budgeting method for several large corporations regularly starts four to six months before the commencement of the financial year, while some may take a whole financial year to reach. Most companies set budgets and offer a variety of analyses each month. Originating from the initial planning stage, the company goes through a series of steps to finally implement the budget. Common methods cover communication within official management, setting objectives and objectives, developing a detailed budget, compilation and revision of budget model, budget committee review, and approval.

8.2 AN OVERVIEW

8.2.1 CASH BUDGET (THEORY AND NUMERICAL)

What Is a Cash Budget?

A cash budget is a calculation of the cash flows of a business over a special period. This could be for a weekly, monthly, quarterly, or annual budget. This budget is utilized to evaluate whether the object has enough cash to sustain operating over the provided time frame. The cash budget presents a business's penetration into its cash requirements (and any surplus) and supports defining an effective allocation of cash.

How a Cash Budget Works

Companies use sales and production estimates to generate a cash budget, along with opinions about inevitable spending and accounts receivable collections. A cash budget is required to evaluate whether a business will have sufficient cash to maintain services. If a firm does not have sufficient liquidity to function, it must produce more funds by issuing stock or getting on more shares.

A cash roll forward computes the cash inflows and outflows for a month, and it uses the ending scale as the beginning balance for the following month. This process allows the firm to forecast cash needs throughout the year and changes to the roll forward to adjust the cash balances for all future months.

Short-Term Cash Budget vs. Long-Term Cash Budget

Cash budgets are regularly viewed in either the short-term or the long-term. Short-term cash budgets concentrate on the cash necessities required for the next week or months whereas long-term cash budget adjusts on cash requirements for the next year to several years.

Short-term cash budgets will look at items such as utility bills, rent, payroll, payments to suppliers, other operating expenses, and investments. Long-term cash budgets focus on quarterly and annual tax payments, capital expenditure projects, and long-term investments. Long-term cash budgets regularly need more necessary planning and detailed analysis as they expect the cash to be tied up for a longer period.

It's also reasonable to budget cash demands for any difficulties or unforeseen needs for cash that may arise, especially if the business is new and all perspectives of operations are not fully recognized.

Special Considerations

Managing a cash budget also comes down to correctly maintaining the extension of the company. For example, all companies want to sell more and improve, but it is critical to do so in a sustainable way.

For example, a corporation may execute a marketing strategy to expand brand knowledge and sell more products. The ad campaign is successful and order for the product takes off. If the company isn't able to meet this expansion in demand, for example, it may not have sufficient devices to produce more goods, sufficient employees to convoy quality checks, or enough suppliers to order the expected raw materials, then it could have many afflicted customers.

The corporation may require to develop out all these features to meet demand, but if it doesn't have sufficient cash or funding to be able to do so, then it cannot. Therefore, it is necessary to manage sales and prices to reach an optimal level of cash flows.

Example of a Cash Budget

For example, let's assume XYZ Clothing fabricates shoes, and it expects $600,000 in sales for June, July, and August. At a retail price of $120 per pair, the company expects sales of 10,000 pairs of shoes each month. XYZ projects that 80% of the cash from these sales will be received in the month following the sale and the other 20% will be received two months after the sale. The opening cash balance for July is forecast to be $40,000, and the cash budget expects 80% of the June sales will be received in July, which equals $480,000 (80% of $600,000). XYZ also projects $200,000 in cash inflows from sales made beginning in the year.

On the expense side, XYZ must also determine the production costs needed to produce the shoes and meet customer demand. The company requires 2,000 pairs of shoes to be in the beginning inventory, which means a minimum of 8,000 pairs must be delivered in July. If the production cost is $100 per pair, XYZ contributes $400,000 ($100 x 8,000) in July on the cost of goods sold, which is the production cost. The company also demands to pay $120,000 in costs not immediately associated with the production, such as security.

XYZ estimates the cash inflows by combining the receivables received during July to the opening balance, which is $720,000 ($40,000 July beginning balance + $480,000 in June sales collected in July + $200,000 in cash inflows from earlier sales). The company then deducts the cash required to pay for production and other charges. That total is $520,000 ($400,000 in cost of goods sold + $120,000 in other costs). XYZ's July ending cash balance is $200,000, or $720,000 in cash inflows minus $520,000 in cash outflows.

8.3 SALES BUDGET

The sales budget is a commercial plan, which explains how the sources should be allotted to obtain predetermined sales. The main goal of the sales budget is to design for maximum utilization of sources and estimate sales.

The data needed to make a sales budget comes from many origins. One of the best references is the salesperson who sells the goods daily. The company can also gather data from the production department about the date of production or expiry.

It is very necessary to determine actual sales because the budget of other areas is based on the sales budget. For example, the product is produced as per the sales estimate, but if the sales estimate is not perfect, either the product will be less or more than aspired.

The objective of Sales Budgeting

The purpose of sales budgeting is to plan for and control the investment of sources (money, material, facilities, and people) required to gain the wanted sales goal. It aims at leveraging and maximizing profits.

The goal of the sales budget is to obtain the objectives of the sales department. It also functions as a planning tool. It helps a firm to establish standards and attempt to reach them. It is also an apparatus of coordination between different departments in an industry like sales, finance, production, and advertising.

Sales budgeting is also a medium or control, which helps by corresponding with the actual outcomes. If the actual selling is more than that of the budget, we can say it is a favorable condition.

Methods of Sales Budgeting

There are a variety of methods that can be practiced to develop a sales budget.

The following are some of the popular methods to prepare a sales budget −

Affordable Budgeting

This is a method commonly used by companies selling manufactured goods. Also, firms, which do not give importance to budgeting or firms which are having a small size of development, make use of this judgmental method.

Rule of Thumb

Such as a given percentage of sales. Organizations included in the mass sale of assets and businesses controlled by the finance function are the major users of this method.

Competitive Method

A few businesses, the results of which face tough competition and many challenges in selling and which require an efficient marketing policy to keep profits, make use of this method. Using this method requires an understanding of how our rival is operating about stock allocation.

Businesses make use of a combination of the above methods. Depending upon past events, budgeting plans are improved from time to time. The status of the sales & marketing helps the company to figure out the amount of refinement required in decreasing sales budgeting.

Preparation of Sales Budget

Preparation of sales budget is one of the most essential methods of the sales. Usually, businesses make the sales budget based on the principle of a bottom-up plan. The development of a budget for income and sales will depend on the sales organizational structure; each departmental leader is asked to determine their sales capacity and costs for the upcoming season.

For Example, − in a head automobile company, the budget would be able to district wise and all the Budgets from each district would be presented to the Regional office. Clubbing of all the District budgets is done at the Regional or Zonal level or Division wise. A division Budget is made and these Divisional wise budgets would change product-wise or market-wise. So the

Division-wise budgets are ultimately offered to the Manager, Sales as either product-oriented or market group-oriented.

Division-wise budgets overall divisions would be presented to the Central sales department and they would scan and achieve the company's Sales Budget. Now the marketing budget is coupled with the budgets of the sales and marketing staff departments, which will give a fair picture of total sales prices, other marketing-related expenses, and estimated sales funds produced for the business. Some of the standard things in each sales budget involve Employee Salaries, Administrative Expenses, Marketing Expenses, and many more.

Direct selling rates cover boarding and lodging for salesperson, food, and travel, and along with these −

- Commission or incentive-based sales
- Employee benefits like medical insurance, gratuity, and retirement contribution
- Office expenses like internet charges, mailing, telephone, office supplies
- Miscellaneous costs

Advertising and promotional materials like −

- Selling aids
- Contest awards
- Product samples catalogs
- Price lists
- Other miscellaneous materials

Studying past sales budgets helps in better planning of future sales budgets by informing regarding the pros and cons of the past budgets. This points to a better budget for the future and can minimize the variations between the actual and the budget.

Communicating Overall Objectives

The head management wants to perform their purposes and objectives to the marketing department and argue effectively for an equal share of capital. The chief sales executive of the firm should take the information from all supervisors and managers in making the sales budgets and help them to come with various approaches so that after the development of the Budget, they could take charge and show responsibility in reaching the targets and achieving them.

While making the sales budget, we require to set a preceding plan so that we can allot the sources and the applications needed to sell the products, expand the customer base and regions. Any changes in the Budget can be recognized in the beginning sales budget so that the sales manager could give a realistic budget with maximum performance. Differences should also be recognized in every stage of growth of the sales budget.

As the budget is planned by taking inputs from all levels of the hierarchy, the whole team would cooperate to achieve it. In case of bankruptcy, the sales manager should have handle points to get the budget on track. He could also include some motivational circumstances like rewards, public commendations, and recognition in the budget, which will motivate the representatives to have a positive attitude, resulting in the achievement of the budget goals.

Selling the Sales Budget to Top Management

There should be unity between the Budgets presented by various groups. Top administration of Sales and Marketing should offer the Budget that predicts the future challenges and is aggressive, on with the plan submitted by the Heads of other divisions.

Every division usually demands additional funds and so there could be a departure from the sales budget. These differences should be directed by the sales managers and they should support each departure in their budgets, as these would change the profit rate. In other words, there should be an expanse for deviations as well in the sales budget.

8.4 FLEXIBLE BUDGETS AND MASTER BUDGETS (THEORY).

8.4.1 FLEXIBLE BUDGETS

8.4.1.1What is a Flexible Budget?

- A flexible budget adapts to variations in actual income levels. Actual returns or other action projects are inserted into the flexible budget once an accounting time has been completed, and it creates a budget that is particular to the inputs. The budget is then connected to real values for administration goals. The steps required to create a manageable budget are:
- 1. Identify all fixed costs and segregate them in the budget model.
- 2. Determinethe extent to which all variable costs change as activity measures change.
- 3. Create the budget model, where fixed costs are “hardcoded” into the model, and variable costs are stated as a percentage of the relevant activity measures or as a cost per unit of activity measure.
- 4. Enter actual activity measures into the model after an accounting period has been completed.This updates the variable costs in the flexible budget.

5. Enter the resulting flexible budget for the closed period into the accounting system for identification of real costs.

- This procedure differs from the more common static budget, which includes nothing but fixed amounts that do not change with real income levels. Budget versus original reports

under a flexible budget leads to yield varieties that are much more consistent than those made under a static budget since both the budgeted and real costs are based on the same activity measure. This means that the changes will likely be smaller than under a static budget, and will also be extremely actionable.

- A flexible budget can be produced that ranges in the level of refinement. Here are several changes to the concept:
- *Basic flexible budget***.** At its most simplistic, the flexible budget alters those costs that vary immediately with results. There is typically a percentage built into the model that is multiplied by real funds to appear at what expenses should be at a stated revenue level. In the case of the cost of goods sold, a cost per unit may be used, rather than a percentage of sales.
- *Intermediate flexible budget*. Some payments vary with other activity measures than revenue. For example, telephone expenses may vary with changes in headcount. If so, one can combine these other activity measures into the flexible budget model.
- *Advanced flexible budget*. Investments may only vary within specific ranges of interest or other projects; outside of those ranges, a varying balance of expenses may apply. A modern flexible budget will increase the dimensions for these expenses if the measures they are based on exceed their objective ranges. In short, a flexible budget provides a company a tool for analyzing actual to budgeted production at many levels of activity.

- **2.4.1.2 Advantages of Flexible Budgeting**
- The flexible budget is an appealing concept. Here are several advantages:
- *Usage in variable cost environment*. The flexible budget is particularly valuable in businesses where costs are closely aligned with the level of a business project, such as a retail environment where expenses can be separated and used as a fixed cost, while the cost of merchandise is directly linked to revenues.
- *Performance measurement*. Since the flexible budget restructures itself based on exercise levels, it is a good tool for estimating the performance of managers - the budget should closely follow expectations at any number of activity levels.
- *Budgeting efficiency*. Flexible budgeting can be used to more easily update a budget for which funds or other activity figures have not yet been achieved. Under this approach, managers give their approval for all fixed costs, as well as variable expenses as a proportion of revenues or other activity measures. Then the budgeting staff makes the remainder of the budget, which flows through the formulas in the flexible budget and automatically alters investment levels.

These points make the flexible budget an appealing model for the advanced budget user. However, before deciding to switch to the flexible budget, consider the following countervailing issues.

8.4.1.3 Disadvantages of Flexible Budgeting

The flexible budget at first appears to be an excellent way to resolve many of the difficulties inherent in a static budget. However, there are also a number of serious issues with it, which we address in the following points:

- *Formulation*. Though the flex budget is a good tool, it can be difficult to formulate and administer. One problem with its formulation is that many costs are not fully variable, instead having a fixed cost component that must be calculated and included in the budget formula. Also, a great deal of time can be spent developing cost formulas, which is more time than the typical budgeting staff has available in the midst of the budget process.
- *Closing delay*. A flexible budget cannot be preloaded into the accounting software for comparison to the financial statements. Instead, the accountant must wait until a financial reporting period has been completed, then input revenue and other activity measures into the budget model, extract the results from the model, and load them into the accounting software. Only then is it possible to issue financial statements that contain budget versus actual information, which delays the issuance of financial statements.
- *Revenue comparison*. In a flexible budget, there is no comparison of budgeted to actual revenues, since the two numbers are the same. The model is designed to match actual expenses to expected expenses, not to compare revenue levels. There is no way to highlight whether actual revenues are above or below expectations.
- *Applicability*. Some companies have so few variable costs of any kind that there is little point in constructing a flexible budget. Instead, they have a massive amount of fixed overhead that does not vary in response to any type of activity. For example, consider a web store that downloads software to its customers; a certain amount of expenditure is required to maintain the store, and there is essentially no cost of goods sold, other than credit card fees. In this situation, there is no point in constructing a flexible budget, since it will not vary from a static budget.

In short, a flexible budget requires extra time to construct, delays the issuance of financial statements, does not measure revenue variances, and may not be applicable under certain budget models. These are serious issues that tend to restrict its usage.

8.4.2 MASTER BUDGET

What is a Master Budget?

The master budget is the collection of all lower-level budgets provided by a company's different functional areas, and also covers budgeted financial statements, a cash forecast, and a funding plan. The master budget is typically performed in either a monthly or quarterly format, and usually includes a company's whole fiscal year. A descriptive text may be introduced with the master budget, which explains the company's strategic direction, how the master budget will help in accomplishing specific goals, and the management activities needed to achieve the budget. There may also be a review of the headcount changes that are required to achieve the budget.

A master budget is the primary planning tool that a management team works to direct the actions of a company, as well as to judge the performance of its various engagement centers. It is customary for the senior management team to evaluate different repetitions of the master budget and incorporate changes until it comes to a budget that allocates funds to produce the wanted results. Hopefully, a company uses participative budgeting to arrive at this final budget, but it may also be imposed on the organization by senior management, with little input from other employees.

The budgets that roll up into the master budget include:

- Direct labor budget
- Direct materials budget
- Manufacturing overhead budget
- Production budget
- Sales budget
- Selling and administrative expense budget
- The selling and managing investment budget may be further divided into budgets for individual departments, such as the accounting, engineering, facilities, and marketing departments. Once the master budget has been concluded, the accounting staff may access it into the company's accounting software so that the software can publish financial statements relating to budgeted and actual results. Smaller companies regularly assemble their master budgets using electronic spreadsheets. However, spreadsheets may contain formula errors, and also have a difficult time building a budgeted balance sheet. More substantial businesses use budget-specific software, which does not have these two problems.

Example of a Master Budget

Many lower-level budgets have special arrangements that are utilized to reach specific outcomes, such as the fully engaged cost of the finished goods inventory, or the number of units of goods to be manufactured. This is not the case for the master budget, which looks very much like a standard set of financial statements. The income statement and balance sheet will be in the normal format mandated by Generally Accepted Accounting Principles or International Financial Reporting Standards. The primary difference is the cash budget, which does not usually appear in the standard format of the statement of cash flows. Instead, it serves the more practical purpose of identifying specific cash inflows and outflows that will result from the rest of the budget

model. Here is an example of the cash budget:

Cash Budget

For the Year Ended December 31, 20XX

	Quarter 1	Quarter 2	Quarter 3	Quarter 4
Beginning cash	$100,000	$98,000	$95,000	$38,000
+/- Net profit (loss)	+25,000	+12,000	+40,000	+23,000
+ Depreciation	+15,000	+15,000	+22,000	+24,000
- Capital expenditures	-28,000	0	-80,000	-35,000
+/- Working capital changes	-14,000	-30,000	-39,000	-21,000
= Ending cash	$98,000	$95,000	$38,000	$29,000

The most challenging item to consider in the cash budget is the net difference in working capital from time to time. During periods of active growth, working capital can be a strongly negative number, since the company must spend more accounts receivable than natural. If the amount of working capital seems to be holding steady despite fast growth, then it is very likely that management has built an unreliable expectation into the budget to be able to collect records receivable more speedily than has been the case in the past.

A similar difficulty can begin with the record, which is another element of working capital. It generally takes more inventories to support more sales, so the portion of working capital composed of inventory can be required to improve in connection with more sales. Thus, it is very likely that a company feeling any amount of growth will forecast negative cash flows, because of the need to finance additional working funds.

Other Master Budget Issues

Another report sometimes involved in the master budget is a set of key production metrics that are determined based on the knowledge in the budget. For example, it may show accounts receivable turnover, or inventory turnover, or earnings per share. These metrics help test the validity of the budget model against actual results in the past. For example, if the accounts receivable turnover metric is much more economical than historical results, that could mean that the company is over-estimating its ability to collect accounts receivable quickly, which means that the number of accounts receivable shown in the balance sheet may be understated and the amount of cash may be exceeded.

Problems with the Master Budget

When a company performs a master budget, there is a powerful current for senior executives to force the organization to closely adhere to it by including budget goals in employee benefit plans. Doing so has the following effects: When choosing the budget, employees function to determine low sales and high costs, so that they can easily meet the budget and achieve their compensation plans.

· Forcing the organization to follow the budget requires a group of financial analysts who track down and report on variances from the plan. This adds unnecessary overhead expenses to the business.

· Managers tend to ignore new business opportunities, because all resources are already selected toward attaining the budget, and their goals are tied to the budget.

Thus, enforcing a master budget can skew the operational execution of a business. Because of this problem, it may be better to operate the master budget as just a rough guideline for management's near-term expectations for the business.

8.5 LET US SUM UP

Hence budgetary control is an essential medium for any organization to build a budget for future results. It helps the company in proper utilization and control of its support. Budgets are viewed and are based on the forecast which is not certain. Therefore the effectiveness of budgetary control depends on the availability and quality of the forecast.

The sales budget is the starting point in preparing the master budget. All other items in the master budget including production, purchase, inventories, and expenses, depend on it in some way. Thus budget helps the firm to avoid emergency hiring, prevent shortages, and reduce cost. By this, we come to know that all resources are available to us, and because of budget, we follow a systematic manner of using it. Resources are neither underutilized nor overutilized if

we follow properly. Budgets are an integral part of running any business efficiently and effectively.

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8.8 UNIT END EXERCISES

1. How do you calculate cash budget?
2. What is cash budget with example?
3. What are the 3 types of budgets?
4. What is a sales budget?
5. What are the difficulties in preparing a sales budget?
6. How do you prepare a sales budget?
7. What is the primary difference between a static budget and a *flexible budget*?
8. What are the three main parts of the master budget?
9. What are the two main components of a master budget?
10. What does a master budget include?

UNIT 3 - Chapter 9

Financial Management Concepts

9.0 OBJECTIVES:

After going through this unit, you will be able to:

The financial management is normally about reciprocity of financial resources of a concern. The objectives can be-

1. To assure a regular and sufficient stock of money for the required responsibilities.
2. To assure sufficient profit of the shareholders will rely on the profitability of the market price of the share of the shareholders.
3. To ensure effective use of money. Once the funds obtain, they should be utilized in the maximum possible way at the least cost.
4. To assure reliable investment, funds should be invested in protected activities so that sufficient profit can be obtained.
5. To arrangement of a sound capital structure-There should be good and reliable structure of funds so that stability is maintained between debt and equity capital.

9.1 INTRODUCTION:

The procedure of preparing, arranging, guiding and controlling the financial movements is called the financial management. For any firm or the company to handle the fund from purchese to utilization of the resources is known the financial management for that company which takes decision for future planning and benefits.

9.2 AN OVERVIEW:

Financial management offer the ways in which an association can increase capital for the different financial activities, the most useful and capable way to distribute of those capitals, practices to control over those funds, and how to share out the profit of those funds between the number of stakeholders.

Financial Management make sure that the association connects with its main purpose i.e. increasing the shareholders' prosperity, cost cutting in the finance, and other non-financial scheme of different stakeholders such as the administration, human resources, and suppliers.

To achieve the objectives of the organization, all the employees of the organization are functioning together intentionally. The objectives of the conventional organization increase the profit but the objectives of the current organizations which raise capital by issue of equity shares, are to increase shareholders prosperity. The employees work in the organization under different departments' viz., HR, finance, production, marketing, and R & D and nowadays, IT. All employees make decisions that help to increases shareholders' prosperity.

For running successfully any organization required enough capital. Without finance no organization can stand in the market. Now it is the basic need to understand the difference between money and finance. Money is that which you have for your use to full fill the basic requirements is called money but when this money or the fund you give somebody as the loan to buy an asset or to invest in a good deal that time it become finance. For example, if a bank gives a loan to buy a car or house then it is known as car finance or housing finance. Organizations increase funds from the public to buy a property or invest in the business. Efficient management of finance helps in increasing the shareholders' prosperity. In other words, financial management plays a main role in the maximization of the owner's prosperity.

9.2.1 Meaning and Scope:

One big misunderstanding of the people is, they think that business finance and corporate finance are the same things, but there is a huge difference between them. Business finance includes not only the individual landowner but also joint ventures and different organizations. Whereas corporate finance is limited to the industry finance only.

Corporate finance handles the financial problems of commercial organizations. Problems include financial exposure of the sponsorship of new enterprises and their management throughout the development, the accounting problems related to the difference between assets

and earnings, the managerial queries formed by development and spreading out, and finally, the financial adjustments mandatory for the support to a corporation which has come into financial issues. To manage all these problems is called financial management. Financial management is increasing resources and their useful practices to maximize shareholders' prosperity.

Financial Management is mainly related to three actions: (i) forecast financial requirements that are inference of money required for investment in fixed and current property or long-term and short-term property. (ii) Obtaining wealth once the essential amount of funds is predicted the next task is obtaining financial resources i.e., where and how to obtain the funds to finance that expected financial desires and (iii) providing capitals in business – means to provide the existing capitals among the best policies of property, that helps increases the shareholders' prosperity. Hence, financial management can decide three ways as investment, financing, and dividend decisions.

9.2.2 Scope/Elements:

1. Investment decision - In Investment decisions both the decisions of assets, fixed and current assets investment decisions are included.

2. financial decision - In a financial decision that decision is valuable which help to maximize the capital that can be obtained from the different resources, financing period, financing cost, and the returns

3. Dividend decision – This decision will taken by the finance manager which is useful in the distribution of net profit, which is devided into as follows.
    a. Dividend for shareholders- to decide the bonus and the rate of it.
    b. Retained profits- retained profits will depend upon the increase and diversification policies of the venture.

9.2.3 Objectives of Financial Management

The objectives of financial management are given below:

1. <u>Profit maximization</u>

To earn the maximum profit is the main aim of any type of economic activity. A business is also based on the purpose of earning profit. In another word, we can say that profit can be a measuring technique which explains the business efficiency.

The enterprises always pay attention to earn the maximum profit either for short term or for long term for the company. Because of uncertainties in the business, they can not give a guarantee for the long term profits, but it is possible to earn maximum profits in the long term also, if

- The decisions that will take by thefinance mnager should be perfect.
- He should utilize the funds of the company accurately.

2. Wealth maximization

Wealth maximization is another important objective of financial management. It means to gain most of the money for the stakeholders, and that's the reason the finance manager always takes efforts to offer as much as to share to the shareholders and also tries to boost the value of the shares in the market. Company performance decides the value of the shares in the market. Shares have the superior market value if the performance of the company is better and have lower market value if the performance of the company is poor.

3. Proper estimation of total financial requirements

One more vital objective of financial management is a proper estimation of total financial requirements. To decide on the estimate of the total financial requirements of the organization is the prior responsibility of the financial manager. For any company or organization finance manager should have a proper idea about the capital which is required for the start-up and to run the company, also he must know the requirements of the organizations for the fixed and working capital. Whatever the decision has been taken by the finance manager that judgment should be accurate otherwise, lack of finance or excess finance can occur in the organization. While the estimation finance manager should consider many factors like the technology used in the company, scale of operation, legal requirements, employees of the company, etc, so to make the judgment about the financial requirements is a very critical task.

4. Proper mobilization

Financial resource mobilization is also an important objective of financial management. Once the estimation of financial requirements is done, the next task of the finance manager is to decide the resources for the finance. Many Resources like shares, bonds, and bank loans are useful to the finance manager to assemble the funds for the company finance. An appropriate balance must be there between the owned finance and borrowed finance also company should have a loan of finance at a low rate of interest.

5. Proper utilization of finance

Financial management objectives include one more objective is the proper utilization of finance. This is the responsibility of the finance manager to make the most advantageous utilization of

the financial resources. Because of his, any decision company should not lose the project profit. Company's finance account should not chunk by the finance manager.

6. Maintaining proper cash flow

This objective of financial management is useful to maintain the regular cash flow of the company like rent, electricity bills, salaries, and purchases of material, etc. A good cash flow of the company raises the possibility of the existence and success of the company. Because of the strong cash flow of the company, the company can make many opportunities for the customer such as giving credit, giving cashback discounts on purchases, large scale purchasing, etc.

7. Survival of company

Today's business world is too much huge and so much competition is there. To exist in such competition is the hard work of the whole company. The finance manager should have awareness while taking the decision; one wrong decision can make a big loss for the company.

8. Creating reserves

Creating reserves is also the objective of financial management. When the company earns the profit from the projects, that complete Profit Company can not distribute within stakeholders. A company should keep some part of that profit for the future planning and the expanses and also for the emergency for the future.

9. Proper coordination

There should be proper coordination between the finance department and the other department of the company.

10. Create goodwill

Goodwill plays the important role in the financial management of the company. It is very useful to develop the representation and status of the company, which sustain the company in all the situations of the market.

11. Increase efficiency

Financial management also takes care to increase the efficiency of the company. Suitable sharing of financial resources into all the departments will increase the efficiency of the total company.

12. Financial discipline

Financial management generates a financial discipline. Financial discipline means:

- To invest finance only in economical fields. Compony got the high returns because of this.
- To avoid wastage and misuse of finance.

13. Reduce cost of capital

Financial management takes care to reduce the cost of capital. For that, it borrows money at a low rate of interest. To minimize the cost of capital, the finance manager arrange the capital structure.

14. Reduce operating risks

Financial management also reduces the operating risks. There are so many uncertainties in a business market. The finance manager's prior function is to reduce this risk. He should decide to prevent high-risk in the projects and take proper insurance.

15. Prepare capital structure

Financial management also prepares the capital structure. Owned finance and borrowed finance ratios are decided by the finance manager. For flexibility, liquidity, economy, and stability required proper balance between the different sources.

9.2.4 Functions of Financial Management:

1. **Estimation of capital requirements:** A finance manager has to estimate the capital necessities of the corporation. This will depend upon predictable costs and profits and future programs and policies of concern. Estimations have to be made in an adequate manner that increases earning capacity of the enterprise.
2. **Determination of capital composition:** Once the evaluation has been made, the capital structure has to be determined. This includes short- term and long- term debt equity analysis. This will rely on the amount of equity capital a business is possessing and extra funds that have to be raised from outside parties.
3. **Choice of sources of funds:** For supplementary finances to be procured, a business has many choices like-
    a. Issue of shares and debentures
    b. Loans to be taken from banks and financial institutions
    c. Public deposits to be drawn like in form of bonds.

Selection of factor will depend on competent merits and demerits of each source and period of financing.

4. **Investment of funds:** For the safety of investment and regular returns, the finance manager has to decide to distribute funds into advantageous ventures.
5. **Disposal of surplus:** The net earnings decisions have to be made by the finance manager. This can be done in two ways:
    a. Dividend declaration - It includes identifying the rate of dividends and other profits like bonus.

b. Retained profits - The volume has to be decided which will depend upon extended, innovational, diversification plans of the company.

6. **Management of cash:** The finance manager has to take decisions related to cash management. Cash is essential for several activities like reimbursement of remuneration and salaries, reimbursement of electricity and water bills, reimbursement to creditors, meeting current liabilities, maintenance of enough stock, buy of raw materials, etc.
7. **Financial controls:** The finance manager has not only to arrange, acquire and develop the funds but he also has to work out to manage the excess of finances. This can be finished from side to side with several techniques like ratio analysis, financial forecasting, cost and profit control, etc.

9.2.5 Features of Financial Management:

1- Management of general accounting procedures:

All accounting procedures of the business such as cash flow management, general ledger, expense, payments, and purchasing are included in the financial Management System. It proficiently manages all financial organizational processes.

2- Management of expense:

The financial management system of SolutionDots software manages the expenditure of the association in the form of certification; it contains all information regarding the spending requirements, necessities, and funds, etc.

3- Manage the budget:

Financial management helps in the supervision of finances control. It keeps the record of all financial statements that facilitate knowing regarding the current budget of the association and also helps in making decisions to control the budget efficiently.

4- Efficient management of time and work:

The financial management system helps in managing time and work resourcefully. It allows managing more work in less time capably.

5- Advanced reporting:

The financial management system can create information such as profit and loss statements, balance sheets, and other financial statements quickly. It allows the user to customize reports according to their demand and requirement.

6- Ensure data security:

The financial management system developed by SolutionDots System ensures its access to the only approved user. We understand that accounts data is important as well as confidential therefore financial management system keeps it secures from unauthorized persons.

7- Reduced the paperwork:

Financial management system maintains and updates all records and invoices automatically, online record management reduces the paperwork. Now there is no need to update and maintain manual records.

8- Complete Audit:

The financial management system maintains and updates the correct and total review of the organization.

9- Data Integrity:

The financial management system ensures data consistency and accuracy in all records updated by different departments.

9.2.6 Core Financial Management Decisions:

Financial decisions are concerned with the acquisition, financing, and management of finance with some goals in mind. As included in the contents of the modern approach the discussions of financial management can be broken down into three major decisions viz., (1) Investment decision; (2) Financing decision; and (3) Dividend decision. A firm takes these decisions concurrently and continuously in the normal course of business. The firm may not take these decisions in a sequence, but decisions have to be taken to exploit shareholders' prosperity.

1. **Investment Decision**: the investment decision is very important. It starts with a purpose of the entire amount of resources required to be held by the firm. In other words, the investment decision is about the selection of financial resources, on which a firm will invest funds. The necessary assets fall into two groups: (i) Long-term Assets (fixed assets: plant & machinery land & buildings, etc), which engage enormous venture and yield a profit over a while in future. Investment in long-term assets is generally known as "capital budgeting". It may be defined as the firm's decision to invest its existing capital most resourcefully in fixed assets with a predictable flow of profit over a series of years. (ii) Short-term Assets (existing assets: raw materials, working in the process, finished goods, debtors, hard cash, etc.,) that can be transformed into hard cash within an economic year without a reduction in value. Investment in current assets is generally known as "working capital management". It is a vital decision of a firm, as short-survival is the requirement for long-term achievement. There should balanced

assets in the firms. Additional assets decrease profit and there will be no risk, but having fewer assets is riskier and more profitable. Hence, the major aspects of working capital management are the trade-off between risk and profit. Management of working capital includes two aspects. One purpose of the amount required for running of business and second financing these assets.

2. **Financing Decision:** Once the investment decision has been taken then the next financing decision comes into the picture. The finance manager has to decide the amount of arrears and equity in the asset structure. It should be on optimum finance mix, which raises shareholders' prosperity. An appropriate balance will have to be struck between risk and profit. Arrears involve fixed interest, which may facilitate in raising the profit on equity but also increases risk. Increasing finances by the issue of equity shares are one permanent source, but the shareholders will expect higher rates of income. The two aspects of capital structure are One capital structure theory and two purposes of best possible capital structure.

3. **Dividend Decision:** The dividend decision is the third financial decision, which is about the dividend policy. The dividend is an element of profits, which are presented for allocation to equity shareholders. The payment of dividends should be analyzed about the financial decision of a firm. There are two options available in dealing with net profits of a firm, viz., allocation of earnings as dividends to the ordinary shareholders' where there is no need of maintenance of earnings or they can be retained in the firm itself if they are required for the financing of any business activity. But the allocation of dividends or retaining should be determined in terms of its effect on the shareholders' prosperity. The finance manager should decide the best possible dividend policy, which increases the market value of the share thereby the market value of the firm. Allowing for the factors to be considered while determining dividends is another feature of dividend policy.

9.3 OBJECTIVES OF TIME VALUE OF MONEY

Time Value of Money (TVM) is an important concept to investors. Intelligent investors have a preference to get money today rather than the same amount of money in the future because of money's potential to rise in value over a given period.

Money has time value because of various reasons such as uncertainty, risk, price increases, expenditure, and savings opportunities.

A timeline shows the timing and the quantity of each cash flow in the cash flow stream. To make intelligent investment decisions, it is very important to compute accurately more an Option is worth on the timeline.

Money, Interest, and Time are all interconnected. The composite interest would rise in the

exponential function as compared to the linear function of simple interest by time. The time value of money creates that there is a predilection of having money at present than a future point of time as the investor will have to pay in the future more for a rupee established today. Hence the investor may even agree to less today for a rupee to be received in the future.

Time Value of Money (TVM) is an essential concept in financial management. It can be used to evaluate investment alternatives and to come across solutions to a variety of investment procedures such as loans, mortgages, leases, savings, and annuities. TVM concept enables finance managers to come across the present value of a single addition of money or a series of equal, evenly-spaced payments or receipts promised in the future. On the other hand, finance managers can also decide the future value to which a single sum or a series of future payments will grow at a future date.

The value of money is different at different times. Since money can be placed to creative use, its value is special depending upon when it is acknowledged or paid. An efficient timing of cash flows can enable finance managers to make the right investment decisions for rising prosperity by rising the Net Present Value.

1.3.1 Importance of Security:

Security presents the terms of replacement of money between two parties. Securities are issued by companies, financial institutions, or the government. Savings and investments are linked through a wide variety of complex financial instruments known as securities.

Security is a tradable financial asset. The term commonly refers to any form of financial instrument. Securities such as bonds, debentures, notes, options, shares (stocks), and warrants are bought and sold in financial markets.

Security issuance allows borrowers to raise money at a reasonable cost. Security ownership allows investors to convert their savings into financial assets which provide a return. The investor in the security has a claim to the rights represented by the securities.

The objectives of the issuer and the investor are balancing and the securities market provides a vehicle to mutually satisfy their goals.

9.3.2 Valuations of Assetes/Businesses/Liabilities

Value is credited to a company when it creates profits that are in an overload of the shareholders' predictable profit through operations and strategic initiatives.

The market values the company based on its expected future performance (price-earnings multiple).

Assessment is the process of formative the current worth of an asset or a company. Valuation analysis is done to evaluate the potential merits of an investment. In finance, valuation is the

process of determining the present value (PV) of an asset.

Security valuation is essential for considering the value of tangible assets, level of debt, and other quantifiable data of the company issuing security and for various other reasons such as:

- Getting a true picture of the company
- Estimate the normal earning power, future profitability and growth, and dividend payout
- Decide on buying a business or selling a business as part of investment exercise
- Accounting, taxation, and regulatory requirements
- Fair treatment to a different set of stakeholders in case of equity swap

Valuation may be considered both a science and an art. However, Valuation can be more of an art than a science as only a few succeed in giving correct valuation advice based on experience and less on science. Conceptual understanding of the time value of money and risk-return relationship is essential for making valuation judgments about securities. The purpose of a valuation is to relate price to value and estimate if it is fairly priced, over-priced, or under-priced. By correct valuation, one can predict future market prices, or more generally, potential market prices, and profit from price movement.

9.3.3 Important Terms Relating To Time Value of Money:

1. Periods are evenly-spaced intervals of time.
2. Interest is a charge for borrowing money in the form of simple interest or compound interest.
3. Present Value is an amount today that is equivalent to a future payment, or series of payments, that has been discounted by an appropriate interest rate.
4. Future Value is the amount of money that an investment with a fixed, compounded interest rate will grow to by some future date.
5. Payments are a series of equal, evenly-spaced cash flows in the form of inflows or outflows.
6. An annuity is a series of equal cash flows paid at equal time intervals for a finite number of periods.
7. A lump sum is a single cash flow
8. A perpetuity is a type of annuity that has an infinite life
9. Any series of cash flows that doesn't conform to the definition of an annuity is considered to be an uneven cash flow stream
10. An amortization schedule is a table that shows each loan payment over the life of a loan, and a breakdown of the amount of interest and principal paid.
11. Discount rate is the interest rate that is used to convert between future values and present

values.

12. Internal Rate of Return: The compound average annual rate of return that is expected to be earned on an investment, assuming that the investment is held for its entire life and that the cash flows are reinvested at the same rate as the IRR.

9.3.4 Objectives of Time Value of Money

Following are the objectives of Time Value of Money in Detail

1. With this, you can Calculate the Future Value of Money

Time value of money teaches you that today 1$ value will not equal to the end value of money. You have right to get interest. This interest may be simple and compound. So, future value can be changed by changing the time period, rate of interest and method of calculating interest. With learning detail theory of time value of money, Following is simple formula of calculating the future value

FV = Principle (1+r /100)^ t

2. If You Have Future Value of Money, You can Calculate Present Value of Money

If you have give the offer of $ 7,00,000 at the end of 5th year with 10% rate of interest, you can find what is the today money which you will give. On this basis, you can decide whether you can give or not.

Following is simple formula of calculating the future value

FV / (1+r /100) ^ t = Principle

3. Calculating the Rate of Interest

If you have the principle value and future value, you can calculate the rate of interest. Before this, you to check whether your future value is on the basis of composite interest or simple interest.

If it is on the basis of simple interest

Simple Interest = Principle X Rate of interest / 100 X time

Rate of interest = Simple Interest X 100 X 1/ time X 1 / principle

If interest is calculated on composite basis

Rate of Interest = [{ (FV / Principle) ^ 1 / t } - 1] X 100

4. Calculate the Value of Installment

If you are recuring your debit with paying per month or per year installment. Bank or financial

institute will get both principal and interest from each installment for minimizing the risk of losing his interest. It can also be designed to accepting the time value of money intensely.

9.3.5 Calculation of Time Value of Money:

There are two methods to calculate Time value of money.

1. **Compounding** Compound interest is calculated on the total of earlier earned interest and the original principal amount.

The accrued amount FVn on a principal P after n payment periods at I rate of interest per payment period is given by:

$$FV = PV (1 + r)^n$$

Discounting: the process of finding the present value of cash flows. By discounting the future amount, at the given interest rate, we will get the present value of an investment to be made. A higher discount rate will result in a lower value for the amount in the future.
This rate also represents the opportunity cost as it captures the returns that an individual would have made on any best opportunity.

(a) 1.3.6 Present Value and Future Value:

Money invested today, paying a certain interest rate. The essence of Time Value of Money (TVM) calculations is to decide time value correspondence for a rate of interest or discount.

The future value of a lump sum amount invested at any one point of time with annual compounding can be calculated by using the following formula.

$$\text{Future Value } (FVn) = PV * (1 + i)^n$$

Present value is the amount of money today that is equivalent to a single payment or a stream of payments earned in the future, invested at a certain interest rate.

The formula for present value takes a future payment, or payments, and discounts them using the interest rate to find the worth of this money today. The higher the interest rate is, the lower the present value is today. The lower the interest rate is, the higher the present value is today.

$$\text{Present Value } (PV) = FVn / (1 + i)^n$$

9.4 GOALS OF FINANCIAL MANAGEMENT:

Some might offer goals such as maximize cash flows or maximize profit. Relatively minor problems with these goals relate to how to measure the cash flows—should they be the average cash flow over some period (and what period)?
· In other words these measures are *ambiguous*.
· Maximizing shareholder wealth is not ambiguous. There is one unique share price.

Larger Problem

The larger problem with measures such as maximizing profit or cash flows is that they lack *balance*. In finance and investments risk is balanced with reward. You can't have one without the other, and so you can't consider the reward without also considering the risk you *must* take to earn that reward.

· That is the problem with these possible measures. They consider reward (profit and cash flows) without considering the risk it takes to maximize them.

· Thus, setting these as goals of management may lead management to take excessive risks (because the risk isn't even considered)

Excessive Risk

As an example, say the goal was to maximize cash flow. Assume the following scenario.

· Your company has $100,000 to invest in houses. There are 100 houses, each house costs $100,000, and their prices will increase by 1% over the next year.

· You can borrow up to a maximum of 100-to-1 leverage.

· You will sell all investments at the end of the year.

· Assume interest rates and taxes are 0% (this only saves us from immaterial calculations).

Expected Cash Flow

Consider the two possible investments:

1. You can invest $100,000 in one house. In this case, you expect to earn $1,000 cash flow (or profit) over the year.

2. You can invest $1,000 each in 100 houses. Now you expect $100,000 in cash flow.

You can see maximizing cash flow or profit will simply instruct management to borrow as much as possible and use it all to buy houses (take on as much risk as possible).

Profit Maximization:

Profit maximization is a confirmed goal of financial management. Profit is the excess of returns over operating cost. Profit maximization is, therefore, maximizing returns given the fixed cost, or minimizing expenses given the returns, or a simultaneous maximization of returns and minimization of operating cost. Returns maximization is achievable through pricing and scale strategies. By raising the selling price one may realize returns maximization, pretentious command does not fall by a proportionate scale. By raising the quantity sold by exploiting the price-elasticity of the demand factor, returns can be maximized. Expenses minimization depends on the changeability of costs with volume, cost awareness, and market circumstances for inputs. So, a mix of factors is called for profit maximization.

Limiting Risk

So how does this limit risk? A firm may raise the risk to add to the value of the stock. Say the firm can pay $12 in dividends annually, but it will raise their cost of equity capital to 9%. Then the value of the stock is $133.33, and the management of the firm should take the additional risk.

· However, what if to increase dividends to $14, the firm's cost of equity becomes 11%. Then the firm's value is $127.27. The firm thus should not take on the additional risk. Generally, at a certain point, the increase in the cost of equity will always more than offset the increase in increased dividends.

· In this way, the goal of financial management naturally limits risk.

9.4.1 The scope of financial management

Economic concepts are directly useful with the banking administration approaches.

- Accounting plays a important role in management decision making and in **'financial management'**.
- It applies a large number of mathematical and statistical tools and concepts (also known as econometrics).
- Production management is the operational aspect of decision making requiring the support of **financial management**.
- The Finance department allocates resources for marketing and related activities that play a crucial role in a firm's marketing budget.

- It is related to the human resource department, which provides manpower to all the functional areas of management.

The conventional move toward to the scope of **financial management** refers to its subject matter, The term 'corporation finance' was used to describe what is now known in the academic world as ***'financial management'***. As the name suggests, the concern of corporation finance was with the financing of corporate enterprises. In other words, the scope of the finance function was treated by the traditional approach in the narrow sense of procurement of funds by the corporate enterprise to meet their financing needs.

The modern term **financial management** in a broad sense and provides a conceptual and analytical framework for financial making. According to it, the finance function covers both acquisition of funds as well as their allocations. Thus, apart from the issues involved in acquiring-external funds, the main concern of banking and finance management is the efficient and wise allocation of funds to various uses. Defined in a broad sense, it is viewed as an integral part of overall management. The new approach is an analytical way of viewing the financial problems of a firm. The main contents of this approach are what is the total volume of funds an enterprise should commit? What specific assets should an enterprise acquire? How should the funds require to be financed? Alternatively, the principal contents of the modern approach to **financial management** can be said to be: (i) How large should an enterprise be, and how fast should it grow? (ii) In what form should it hold assets? And (iii) what should be the composition of its liabilities? The three questions posed above cover between them the major financial problems of a firm. In other words, financial administration, according to the new approach, is concerned with the solution of three major problems relating to the financial operations of a firm, corresponding to the three questions of investment, financing, and dividend decisions. Thus, ***financial management***, in the modem sense of the term, can be broken down into three major decisions as functions of finance: (i) The investment decision, (ii) The financing decision, and (iii) The dividend policy decision.

9.5 Profits vs. Value Maximization

The important difference between the maximization of profits and the maximization of wealth is that the profits focus is on short-term earnings, while the prosperity focus is on increasing the overall value of the business entity over time. These differences are substantial, as noted below:

· *Planning duration*. Under profit maximization, the immediate increase of profits is paramount, so management may elect not to pay for discretionary expenses, such as advertising, research, and maintenance. Under wealth maximization, management always pays for these discretionary expenditures.

· *Risk management*. Under profit maximization, management minimizes expenditures, so it is less likely to pay for hedges that could reduce the organization's risk profile. A wealth-focused company would work on risk mitigation, so its risk of loss is reduced.

· *Pricing strategy***.** When management wants to maximize profits, it prices products as high as possible to increase margins. A wealth-oriented company could do the reverse, electing to reduce prices to build market share over the long term.

· *Capacity planning*. A profit-oriented business will spend just enough on its productive capacity to handle the existing sales level and perhaps the short-term sales forecast. A wealth-oriented business will spend more heavily on the capacity to meet its long-term sales projections.

It should be apparent from the preceding discussion that profit maximization is a strictly short-term approach to managing a business, which could be damaging over the long term.

9.6 Let us Sum Up

Financial management is a managerial decision-making process. Risk is an important factor in finance and it tends to be related to return. The company finance is depending on the assumption that the objective of the firm is to maximize shareholders' wealth. Financial decision making which includes investment, financing, and dividend decisions ought to be evaluated in the context of this objective. The main functions of financial managers are to plan to acquire and use funds for the maximum benefit of an organization.

9.7 List of References

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9.8 Unit End Exercises

Q1. What is the meaning and scope of financial management?

Q2. What is the importance of financial management?

Q3. What are the features of financial management?

Q4. Explain objectives of the financial management.

Q5. What are the Different Types of Financial Management?

Q6. What do you mean by long term financial resources? Discuss in detail method with which you can mobilize your financial resources.

Q7. 3Determination of capital structure of a company is influenced by a number of factors explain six such factors

Q8. What is meant by Working capital? How is it calculated? Explain the determinants of working capital requirements.

Q9. Every Manager has to take three major decisions while performing the finance function briefly explains them.

Q10. What strategies are available to a firm for financing its working capital requirement?

UNIT 3 - Chapter 10

Financial Management Concepts

Leverages.

10.0 OBJECTIVES:

The main objective is to find out the "Leverage and its impacts on company's performance and growth."

Other objectives are as follows:

- To understand the importance of leverage in determining the capital structure of a company.
- To understand the different types of leverages and their implications.
- To understand the leverages by analyzing examples.

10.1 INTRODUCTION:

The financial objective of every organization is to make the best use of the value of the business and this can be done through maximizing profit. This is done through enhancing the Earnings before Interest and Tax (EBIT) and the earnings per share (EPS). Here comes the fundamental nature of leverage, since it is correlated to a profit measure, which may be a return on investments or earnings before taxes. Its cost is about two important decisions: Cost structure decision and capital structure decision. Cost structure decisions occupy a suitable preference of the number of fixed costs and variable costs.

A combined both fixed and variable cost that maximizes EBIT is known as a suitable cost structure. On the other hand, capital structure decisions occupy the proper option between the owner's fund and the outsid-er's fund. A financing mix that increases shareholder's income can be referred to as the appropriate capital structure mix. Therefore leveraging is the magnification of EBIT and the return of shareholders with a suitable mix of fixed and variable costs and debt-equity mix, respectively.

10.2 AN OVERVIEW

Concept of Leverage:

The term leverage is the ability of an organization to produce a higher return by employing fixed assets or debt. It shows the effects of the investment patterns or financing patterns adopted by the firm. The employment of an asset for which the firm has to pay a fixed cost or interest has a substantial influence on the earnings available for equity stakeholders.

The fixed cost or interest acts as the basis and the leverage magnifies the influence. By leveraging, an organization can magnify the profits to the stakeholders by using fixed cost bearing funds. It relies on financial planning where it is preferred that a small modification in sales or EBIT will have a magnifying impact on EBIT or EPS respectively. It is important to note that the higher the degree of leverage, the higher is the risk as well as profit to the owners.

Definition of Leverage:

The employment of source of finance for which the organization has to pay a fixed cost or fixed return is called leverage. Various authors have defined leverage in different ways.

According to James C. Van Home, 'Leverage refers to the use of fixed cost in an attempt to increase (or lever up) profitability

In the words of J. E. Walter, 'Leverage may be defined as percentage return on equity and the net rate of return on total capitalization'.

Ezra Solomon defined leverage as 'the ratio of net returns on shareholders equity and the net rate of return on total capitalization'.

According to S. C. Kuchhal, the term leverage 'is used to describe a firm's ability to use fixed cost bearing assets or funds to magnify the return to its owners'.

Thus leverage involves the use of fixed cost in an attempt to raise productivity. It can b defined as; leverage is the reaction of an organization's return to fluctuations in profits and operating income, and the capacity of a firm to enlarge the influence follow-on in a higher return.

10.3 TYPES OF LEVERAGES OPERATING, FINANCIAL, COMPOSITE

10.3.1 Financial Leverage

An organization required capital to execute and control its activities. The finances are first requirment to set up a project and then to implement development, diversification and other plans. A decision has to be prepared about the composition of finances. The funds may be increased through two sources: owners, called owners equity, and outsiders, called creditor's equity. When an organization issues funds these are owners' funds, when it increases, funds by raising long-term and short-term loans it is called creditors' or outsiders' equity. a variety of means used to increase capital stands for the financial structure of a firm. So the financial structure is represented by the left side of the balance sheet i.e. liabilities side.

Usually, the short-term finances are eliminated from the methods of financing capital budgeting decisions, so; only long-term sources are taken as a part of the capital structure. The term capital structure refers to the connection between various long-term forms of financing such as debentures, preference share capital, equity share capital, etc.

Financing the setup projects's assets is a very critical problem in a business and as a general rule there should be proper unites of arrears and equity capital. The use of long-term fixed interest bearing debt and preference share capital along with equity share capital is called financial leverage or trading on equity. The long-term fixed interest behavior arrears is employed by a firm to earn more from the use of these financial resources than their cost so as to raise the return

on owner's equity. It is true that the fund structure cannot affect the total income of a firm but it can affect the share of earnings for equity stockholders.

The fixed cost finances are in employment in such a way that the income available for common stockholders is enlarged. A constant price of interest is remunerated on such long-term debentures. The interest is a legal responsibility and must be paid irrespective of profits earnings. The first choice of share capital also bears a fixed rate of dividend.

But, the distribution is given only when the business has surplus receipts. The equity shareholders are allowed extra income after spending interest and decision distributions. Financial leverage points to improve the resources available for equity shareholders using fixed-cost funds. If the profits gained by employing fixed cost capitals are more than their interest cost, then it will be to the advantage of equity bondholders to use such a capital structure. A firm is known to have favorable leverage if its earnings are more than what debt would cost. On the contrary, if it does not earn as much as the debt costs then it will be known as unfavorable leverage.

Every firm has to make its determination about the quantum of reserves to be obtained. When the cost of money is almost large about capital stock, an organization is said to be exchanging on their equity. On the other hand, if the price of debt is relatively low with capital stock, the company is said to be exchanging on thick equity.

10.3.1.1 Features of Financial Leverage

Following are the characteristics of Financial Leverage:

i. It is involved with fixed Financial Costs or the money capital of a business.

ii. It includes the connection between performing profit (EBIT) and earnings per share (EPS).

iii. It provides growth to Financial Risk in a business.

iv. It is higher in a company using a high amount of debt.

10.3.1.2 Interpretation of Financial Leverage

1. If DFL = 1 then a given % change in EBIT will appear in the same % change in EPS in the same direction i.e. 1 % increase in EBIT will result in 1% increase in EPS. Similarly, 1%

decrease in EBIT will result in 1% decrease in EPS. In such a case there is effectively no financial leverage.

2. A company should have Financial Leverage only if its operating profit is higher than its interest costs. Otherwise, it will result in more harm to the EPS of the company.

3. If DFL > 1, for example if DFL = 1.5 then 1% increase in EBIT will result in 1.5% increase in EPS. Similarly, 1% decrease in EBIT will result in 1.5% decrease in EPS. In such a case there is FINANCIAL LEVERAGE.

4. The higher the value of DFL, the higher the will be financial leverage.

5. Financial Leverage is favorable when operating profits are increasing because then the EPS will increase by a higher proportion. Financial leverage is unfavorable when operating profits are decreasing be¬cause then the EPS will decrease by a higher proportion.

6. When comparing two or more companies, the company with the highest DFL is the company the EPS of which is most “sensitive” to changes in operating profits.

7. A company should use high financial leverage if its ROI is higher than the cost of debt. In that case, the effect on EPS will be magnified.

Financial Risk:

Financial risk is the uncertainty of not being capable to give fixed financial obliga¬tions like the amount of interest on the debt. This risk is a purpose of the relevant amount of long-term account that a firm manages to finance its assets. The greater the balance of money resources in the total capitalization of a business, the longer will be the level of financial leverage and the greater will be the possibility of the business not being able to maintain the money resources, which in turn means greater financial risk. Hence there is a positive correlation between financial leverage and financial risk.

10.3.1.3 Application of Financial Leverage

Financial leverage arises out of the funds' structure determination of a firm. A finance manager can select whether the organization should accept more financial leverage or not. For choosing on whether to additional use claim in the assets structure or not the finance manager should examine the cost of shares financing with the company’s average Revenue on Investment (ROI).

i. If ROI > Cost of Debt:

This means that the business will get a profit on its funded account funds which are more than the cost of those debit funds. Hence, the use of debt will occur in positive net profits to shareholders and therefore more money should be employed. This position is also known as approving Financial Leverage or Trading on Equity.

ii. If ROI = Cost of Debt:

This indicates that the firm will receive a profit on shares that matches the price of those debt capitals. Therefore, the application of shares will not produce some supplementary net profit to sharers. Alternatively, the use of higher shares will only enhance financial risk. Hence, more extra leverage should not be accepted.

iii. If ROI < Cost of Debt:

This intends that the firm will receive a profit on spent money assets that are smaller than the price of those debt funds. So, the value of shares will result in a net loss to the firm, and profits to investment stockholders will decline. So in this case, the firm should not use any more debt.

10.3.1.4 Significance of Financial Leverage

i. Financial leverage points to a larger than proportionate improvement in EPS if producing earnings of the firm is growing. This presents supplementary profits to equity shareholders. Though, it can also create a different deterioration in EPS when EBIT declines. So, it is essential to use financial leverage judiciously.

ii. Stocks are a more affordable source of endowments than equity and ruling capital. Henceforward, the performance of more debt decreases the overall or weighted average cost of capital (WACC) of the organization. This provides the purpose of stockholders' property maximization.

iii. Most organizations practice WACC as the interest rate in capital budgeting decisions. A decline in WACC due to the use of financial leverage indicates that more plans will be beneficial and can be chosen.

10.3.2 Operating Leverag

Operating leverage outcomes from the appearance of fixed costs help in magnifying net operating income variations running from little changes in return. The fixed cost is managed as support of leverage. The variations in purchases are compared to changes in return. The fixed costs do not vary with the variation in sales.

Each rise in economics, fixed prices continuing the same, will increase the operating revenue. The operating leverage happens when a firm has fixed costs that must be recouped irrespective of sales amount. The fixed costs continuing the same, the rate variation in operating revenue will be more than the percentage change in sales.

The incident is known as operating leverage. The point of operating leverage depends on the number of fixed factors in the cost construction. Operating leverage can be defined utilizing a break-even or cost amount profit analysis.

The degree of leverage will be calculated as:

Operating Leverage = Contribution/Operating Profit

Contribution = Sales-Variable cost

Operating Profit = Sales – Variable Cost – Fixed cost

or O.P. = Contribution-Fixed Cost

The break-even point can be calculated by dividing the fixed cost by percentage of contribution to sales or P/V Ratio.

Break Even Point = Fixed Cost/P/V Ratio

P/V Ratio = Contribution/Sales

During production and sales run beyond the break-even point, the firm begins the extremely effective series of projects. At the breakeven point, the fixed costs are fully improved, any rise in sales exceeding this level will raise earnings equivalent to contribution. A firm operating with a high degree of leverage and higher breakeven point receives a good quantity of earnings.

If a firm does not have fixed costs then there will be no operating leverage. The percentage change in sales will be equal to the percentage change in profit. When fixed costs are there, the percentage variance in values will be more than the percentage in sales amount.

Thus, the degree of operating leverage can be calculated as below:

Degree of Operating Leverage = Percentage Change in Profits/Percentage change in Sales

llustration 1:

Following is the cost information of a firm:

Fixed cost = Rs. 50,000

Variable cost = 70% of sales

Sales = Rs. 2,00,000 in previous year and Rs. 2,50,000 in current year.

Find out percentage change in sales and operating profits when:

(i) Fixed costs are not there (no leverage)

(ii) Fixed cost are there (leveraged situation).

Solution:

(i)	*Previous year*	*Current year*	*Percentage Change*
	₹	₹	₹
Sales	2,00,000	2,50,000	25%
Less : Variable cost (70% of sales)	1,40,000	1,75,000	25%
Profit from operations	60,000	75,000	25%
(ii)	*Previous year*	*Current year*	*Percentage Change*
	₹	₹	₹
Sales	2,00,000	2,50,000	25%
Less : Variable cost (70% of sales)	1,40,000	1,75,000	25%
Contribution	60,000	75,000	25%
Less : Fixed cost	50,000	50,000	
Profit from operations	10,000	25,000	150%

Comments:

(1) In situation (i) where there are no fixed costs (or absence of leverage) the percentage change in sales and percentage change in operating profit is the same i.e. 25%.

(2) In situation (ii) where there are fixed costs, the leverage being occurring, the percentage change in profits (150%) is much more than the percentage change is sales (25%).

(3) The fixed cost element has helped in magnifying the percentage increase in operating profits.

Risk Factor:

A high leveraged condition will certainly expand the operating profits but it produces the risk component too. The percentage change in profits will be more in a condition with higher fixed costs as analyzed to that wherever fixed costs are more economical. The higher degree of leverage affects more reductions in operating profits. This position can be explained with the help of the following example.

Illustration 2:

Following information is taken from the records of a hypothetical company:

Calculate operating leverage under the following situations:

Solution:

	Situation A	*Situation B*	*Situation C*
	₹	₹	₹
Sales	8,000	8,000	8,000
Less : Variable cost	5,600	5,600	5,600
Contribution (C)	2,400	2,400	2,400
Less : Fixed Cost (F)	800	1,200	1,500
Operating Profit (OP)	1,600	1,200	900
Operating leverage	2,400	2,400	2,400
$\left(\frac{C}{OP}\right)$	1,600	1,200	900
	1.5	2.0	2.67
Break Even Point (BEP)			
$\left(\frac{F}{C} \times S\right)$	2,667	4,000	5,000
Margin of Safety Ratio			
$\left(\frac{OP}{C}\right)$	66.7%	50%	37.5%
Percentage of sales at break even point	33.3%	50%	62.5%

A 10 per cent increase in sales would be accompanied by an increase in operating profits of 15% in situation A, 20% in situation B and 26.7% in situation C. Situation C is of high operating

leverage since the running profit will rise by one 2½ times (26.7% for every 10% increase in Sales). This is a high-risk condition too because a small reduction in sales will result in more reductions in profits.

The margin of safety ratio is 66.7% in condition A which means that a sales decrease of this percentage will take the firm to break-even point (no profit no loss point). This ratio in situation C is only 37.5% which means that the firm can give the break-even situation much more early as compared to situation A.

Taking the percentage of sales at break-even point; it will reach 33.3% of sales in situation A, 50% in situation B, and 62.5% in situation C. In situation A the company will start earning profit at an early stage of sales while it will reach only beyond 62.5% in situation C. In situation A the company will start earning profit at an early stage of sales while in situation C, it will reach only beyond 62.5% of sales.

High operating leverage (situation C) has a low margin of security and has a thin pad for receiving shocks whereas a situation of low operating leverage (situation A) has a higher margin of safety ratio. This situation is less risky because any decrease in sales will not bring down the profits at a higher rate.

It can be assumed that a high leveraged situation brings in more profits with the rise in sales but at the same time it brings in more risk too.

10.3.2.1 Features of Operating Leverage

Following are the characteristics of operating leverage:

i. It is treated with fixed operating costs or fixed assets of an organization.

ii. It estimates the connection between sales revenue and operating profit.

iii. It provides rise to operating risk or business risk in a business.

iv. It is more important in a producing organization having a tremendous quantity of fixed operating costs than a trading organization that has less volume of fixed assets.

10.3.2.2 Interpretation of Operating Leverage:

1. If DOL = 1 then a given % difference in sales will result in the same % change in operating earnings in the same direction i.e. 1% increase in sales will result in 1% increase in operating profit. Similarly, 196 de-crease in sales will result in 1% decrease in operating profit. In such a case there is effectively NO OPERATING LEVERAGE.

2. A firm should have operating leverage only if its offering margin is higher than its fixed operating costs. Unless it will result in more injury to the organization.

3. If DOL > 1 for example if DOL =1.5 then 1% increase in sales will result in 1.5% increase in operating profit. Similarly, 1% reduction in sales will result in 1.5% reduction in operating profit. In this case, there is OPERATING LEVERAGE. The higher the amount of DOL, the higher the will be operating leverage.

4. Operating leverage is helpful when sales are rising because then the operating profits will rise by a higher dimension. Operating leverage is unfortunate when sales are reducing because then the operating profits will reduce by a higher dimension.

5. When matching two or more organizations, the company with the highest DOL is the company the profits of which are most "sensitive" to changes in sales.

Operating Risk (or Business Risk):

Operating risk is the risk of not being capable to match fixed operating costs like a discount, rent, etc. This risk is a capacity of the number of fixed assets that include fixed operating costs. The greater the dimension of fixed operating costs in the cost formation of an organization, the higher the will be operating risk.

Operating risk is also described as the variability in operating profits (EBIT) due to differences in sales. Hence there is an assertive relationship between operating leverage and operating risk. The higher the operating leverage the higher is the operating risk of a company.

10.3.2.3 Significance of Operating Leverage:

If a company has a greater degree of operating leverage, then even a small variation in sales levels will have a significantly bigger effect on EBIT in the corresponding area. A small

improvement in sales will significantly extend the operating profit (EBIT). At the same time, a small reduction in sales will also significantly reduce the operating profits (EBIT).

Hence, an organization should ever try to avoid having higher operating leverage if it is not convinced about the security of its sales. If the sales are varying and highly unsafe then a high DOL condition is a highly risky position.

10.3.2.4 Applications of Operating Leverage:

Operating leverage is applied for the following objectives:

i. For the selection of Investment projects – A organization should be cautious while choosing property projects. An organization should choose a project with lower operating leverage if all different elements remain the same.

ii. Operating leverage is essential for long-term interest preparation and budgeting as one can simply calculate the influence of a difference in sales revenue on operating profit.

iii. DOL intimates operating or Business Risk of an organization – Business Risk is the risk of not being capable to meet fixed operating cost commitments. It can be included as the variability of a company's operating profit (EBIT). One of the main causes of variability in operating profits is a change in economics which is very well taken by the degree of operating leverage. Therefore the degree of operating leverage in a way symbolizes the operating risk or business risk level of an organization. The higher the DOL the higher the will be business risk.

iv. Capital structure decision i.e. the mix of debt and equity capital, is also impressed by the company's operating leverage. Generally, when operating leverage is high, companies should avoid the unnecessary use of debt.

10.3.3 Composite Leverage

Both financial and operating leverage magnifies the return of the firm. Operating leverage influences the revenue which is the result of reproduction. On the other hand, financial leverage is the result of financial decisions.

The composite leverage concentrates awareness on the complete income of the business. The risk factor should be accurately estimated by the management before utilizing the composite leverage. The high financial leverage may be offset toward low operating leverage or vice-versa.

The degree of composite leverage can be calculated as follows:

Degree of Composite Leverage (DCL) = Percentage Change in EPS/percentage Change in Sales

Or, Composite Leverage = Operating Leverage Financial Leverage

Illustration 3:

A company has sales of Rs. 5,00,000, variable costs of Rs. 3,00,000, fixed costs of Rs. 1,00,000 and long-term loans of Rs. 4,00,000 at 10% rate of interest. Calculate the composite leverage:

Solution:

(*i*) Operating Leverage $= \dfrac{\text{Contribution}}{\text{Earning before interest and tax}}$

$= \dfrac{\text{Rs. } 2,00,000}{\text{Rs. } 1,00,000} = 2$

(*ii*) Financial Leverage $= \dfrac{\text{Sales} - \text{Variable cost} - \text{Fixed cost}}{\text{Sales} - \text{Variable cost} - \text{Fixed cost} - \text{Interest}}$

$= \dfrac{\text{Rs. } 5,00,000 - \text{Rs. } 3,00,000 - \text{Rs. } 1,00,000}{\text{Rs. } 5,00,000 - \text{Rs. } 3,00,000 - \text{Rs. } 1,00,000 - \text{Rs. } 40,000}$

$= \dfrac{1,00,000}{60,000} = \dfrac{5}{3}$

(*iii*) Composite Leverage = Operating Leverage × Financial Leverage $= \dfrac{2}{1} \times \dfrac{5}{3} = \dfrac{10}{3}$

Illustration 4:

A simplified income statement of Zenith Ltd. is given below. Calculate and interpret its degree of operating leverage, degree of financial leverage and degree of combined leverage.

Income Statement of Zenith Ltd. for the year ended 31st March 2005:

	₹
Sales	10,50,000
Variable Cost	7,67,000
Fixed Cost	75,000
EBIT	2,08 000
Interest	1,10,000
Taxes (30%)	29,400
Net Income	68,600

Solution:

(a) Operating Leverage $= \dfrac{\text{Contribution}}{\text{Earnings before interest and tax}}$

Contribution = Sales – Variable Cost = ₹ 10,50,000 –7,67,000 = ₹ 2,83,000

EBIT = ₹ 2,08,000 (given)

Operating Leverage $= \dfrac{2,83,000}{2,08,000} = 1.36$

Interpretation : Operating leverage of 1.36 indicates that 1% change in sales is likely to result in 1.36% change in earnings before interest and tax.

(b) Financial Leverage $= \dfrac{\text{Earnings before interest and tax}}{\text{Earnings before tax}}$

EBIT = ₹ 2.08,000 (given)

EBT = EBIT – Interest = ₹ 2.08,000 –1,10,000 = ₹ 98,000

Financial Leverage $= \dfrac{2,08,000}{98,000} = 2.12$

Interpretation : The financial leverage of 2.12 indicates that 1% change in EBIT is likely to cause a change of 2.12% in the net income of the company.

(c) Combined Leverage = Operating Leverage × Financial Leverage

= 1.36 × 2.12 = 2.88

Interpretation : Combined leverage of 2.88 indicates that 1% change in sales is likely to result in 2.88% change in net income of the company.

(a) Operating Leverage:

As the operating leverage for Q Ltd. is higher than that of P. Ltd; Q Ltd. has a higher degree of operating risk. The tendency of operating profit to vary disproportionately with sales is higher for Q Ltd. as compared to P. Ltd.

(b) Financial Leverage:

Since finance leverage for the two companies is the same, both the companies have the same degree of financial risk, i.e. the tendency of net disproportionately is the same for P. Ltd. and Q Ltd.

(c) Combined Leverage:

As the combined leverage for Q Ltd. is higher than P Ltd; Q Ltd. has overall higher risk as compared to P Ltd.

Illustration 5:

A firm has sales of Rs. 20,00,000, variable cost of Rs. 14,00,000 and fixed costs of Rs. 4,00,000 and debt of Rs. 10,00,000 at 10% rate of interest. What are the operating, financial and combined leverages? If the firm wants to double its Earnings before Interest and Tax (EBIT), how much of a rise in sales would be needed on a percentage basis?

Solution:

Statement of Profit

	₹
Sales	20,00,000
Less : Variable cost	14,00,000
Contribution	6,00,000
Less : Fixed cost	4,00,000
Operating Profit (EBIT)	2,00,000
Less : Interest at 10% on ₹ 10,00,000	1,00,000
Profit Before Tax (PBT)	1,00,000

Calculation of Leverages

(*a*) Operating Leverage $= \dfrac{\text{Contribution}}{\text{Operating Profit (EBIT)}}$

Or, O.L. $= \dfrac{6,00,000}{2,00,000} = 3.$

(*b*) Financial Leverage $= \dfrac{\text{Earings Before Interest and Tax}}{\text{Profit Before Tax}}$

Or, F.L. $= \dfrac{2,00,000}{1,00,000} = 2$

(*c*) Combined Leverage = Operating Leverage × Financial Leverage Or, C.L. = 3 × 2 = 6

Rise in Sales Needed to Double its EBIT:

As the operating leverage is 3, when sales increase by 100% operating profit will increase by 300%. Thus, 33⅓% rise in sales volume will increase the operating profit by 100%), i.e., double the earnings before interest and tax.

Verification:

	₹
Sales (after $33^1/_3$% increase)	26,66,667
Less : Variable cost	18,66,667
Contribution	8,00,000
Less : Fixed cost	4,00,000
Operating Profit or EBIT	4,00,000

Working Capital Leverage:

Working capital leverage measures the sensitivity of return on investment (ROI) of changes in the level of current assets (CA), symbolically:

WOL = Percentage Change in ROI/Percentage Change in CA

In case the earnings are not affected by the change in current assets, then working capital leverage can be simply calculated as:

WCL = CA/TA±DCA

Where, CA = Current Assets

TA = Total Assets

DCA = Change in the level of Current Assets

Illustration 6:

The following information is available for two companies:

	A Ltd.	₹*B Ltd.*
Fixed Assets	₹ 2,00,000	8,00,000
Current Assets	₹ 8,00,000	2,00,000
Total Assets	₹ 10,00,000	10,00,000
Earnings Before Interest and Tax	₹ 1,00,000	1,00,000

You are required to compare the sensitivity of earnings of the two companies for a 25% change in the level of their current Assets.

Solution:

Let us calculate the working capital leverage of the two companies, for a 25% reduction in current assets:

$$\text{WCL (A. Ltd)} = \frac{8,00,000}{10,00,000-2,00,000} = 1.0$$

$$\text{WCL (B. Ltd)} = \frac{2,00,000}{10,00,000-50,000} = 0.21$$

Looking at the WCL of the two Companies, we can say that the sensitivity of earnings for changes in the level of current assets of A Ltd. is for greater than that of B Ltd.

10.3.3.1 Significance of Combined Leverage:

(i) Understanding Changes in EPS:

Combined leverage explains the combined result of operating leverage and financial leverage of a firm on its incomes per share (EPS). Thus, it describes the changes in EPS on record of changes in sales.

(ii) Assessment of Total Risk:

Combined leverage helps us in determining the overall risk considered by the firm. It represents a merged impact of operating risk and financial risk on the EPS of the firm.

(iii) Helpful in Establishing a Proper Sequence of Operating and Financial Leverage:

A high degree of operating leverage together with a high degree of financial leverage performs the situation of the firm very risky. High operating leverage outcomes from employing the assets for which it has to pay higher fixed costs and high financial leverage returns from the use of a large amount of debt capital.

To keep the overall risk under flexible limits, the firm will have to strive for a precise mixture of operating and financial leverage. For this purpose, a firm that has found high operating leverage should use lower financial leverage, and on the other hand, a firm that has found lower operating leverage can afford to apply a higher degree of financial leverage.

10.4 COST OF EQUITY

What is the Cost of Equity?

Cost of Equity is the percentage of revenue a firm gives out to equity investors. A firm practices the cost of equity to evaluate the corresponding attractiveness of investments, including both internal projects and external procurement chances. Organizations typically utilize a mixture of equity and bond financing, with equity capital being extra costly.

10.4.1 What is the Cost of Equity?

How to Estimate Cost of Equity

The cost of equity can be determined by utilizing the CAPM (Capital Asset Pricing Model) or Dividend Capitalization Model (for companies that pay out dividends).

CAPM (Capital Asset Pricing Model)

CAPM takes into statement the riskiness of expenditure relevant to the market. The model is less accurate due to the predictions made in the calculation (because it uses historical information).

CAPM Formula:

$E(Ri) = Rf + \beta i * [E(Rm) – Rf]$

Where:

$E(Ri)$ = Expected return on asset i

Rf = Risk-free rate of return

βi = Beta of asset i

$E(Rm)$ = Expected market return

Risk-Free Rate of Return

The return required from a risk-free purchase (if counting the required records for a US company, the 10-year Treasury note could be used).

Beta

The measure of the methodical risk of the asset relative to the market. Beta can be obtained online or measured by using regression: dividing the covariance of the asset and market's returns by the variance of the market.

$\beta i < 1$: Asset i is less volatile (relative to the market)

$\beta i = 1$: Asset i's volatility is the same rate as the market

$\beta i > 1$: Asset i is more volatile (relative to the market)

Expected Market Return

This price is typically the normal return of the market (which the underlying agreement is a part of) over a detailed period (five to ten years is an appropriate range).

10.4.2 Dividend Capitalization Model

The Dividend Capitalization Model only refers to organizations that pay dividends, and it also implies that the dividends will grow at a constant rate. The model does not consider investment risk to the amount that CAPM does (since CAPM requires beta).

Dividend Capitalization Formula:

$Re = (D1 / P0) + g$

Where:

Re = Cost of Equity

D1 = Dividends/share next year

P0 = Current share price

g = Dividend growth rate

Dividends/Share Next Year

Organizations regularly declare dividends far in advance of the order. The data can be found in company filings. If the data cannot be found, an opinion can be made (using historical information to formulate whether the next year's dividend will be similar).

Current Share Price

The piece value of a firm can be obtained by searching the ticker or company name on the replacement that the stock is being purchased on, or by simply using a reliable search engine.

Dividend Growth Rate

The Dividend Growth Rate can be obtained by calculating the growth (each year) of the company's past dividends and then taking the average of the values. The growth rate for each year can be found by using the following equation:

Dividend Growth = $(D_t/D_{t-1}) – 1$

Where:

D_t = Dividend payment of year t

D_{t-1} = Dividend payment of year t-1 (one year before year t)

Example

Below are the dividend amounts paid every year by a company that has been operating for five years.

	Year 1	Year 2	Year 3	Year 4	Year 5
Dividend:	$1.00	$1.02	$1.04	$1.07	$1.10
Dividend Growth Rate:	N/A	=($1.02/$1.00)-1	=($1.04/$1.02)-1	=($1.07/$1.04)-1	=($1.10/$1.07)-1
Dividend Growth Rate:	N/A	2.00%	1.96%	2.88%	2.80%

Average:
=(2.00%+1.96%+2.88%+2.80)/4
2.41%

The average of the growth rates is 2.41%.

Dividend Capitalization Model Example

XYZ Co. is currently being sold at $5 per share and just declared a dividend of $0.50 per share, which will be funded out next year. Utilizing factual information, an investigator decided the dividend growth rate of XYZ Co. to be 2%. What is the cost of equity? D_1 = $0.50

- P_0 = $5

- g = 2%

R_e = ($0.50/$5) + 2%

R_e = 12%

The cost of equity for XYZ Co. is 12%.

Cost of Equity Example in Excel (CAPM Approach)

Step 1: Find the RFR (risk-free rate) of the market

Step 2: Compute or locate the beta of each company

Step 3: Calculate the ERP (Equity Risk Premium)

ERP = $E(R_m) – R_f$

Where:

$E(R_m)$ = Expected market return

R_f = Risk-free rate of return

Step 4: Use the CAPM formula to calculate the cost of equity.

$E(R_i) = R_f + \beta_i$*ERP

Where:

$E(R_i)$ = Expected return on asset i

R_f = Risk free rate of return

β_i = Beta of asset i

ERP (Equity Risk Premium) = $E(R_m) – R_f$

EFFECT =E6+(E7*E8)

	A	B	C	D	E	F	G	H
1								
2								
3		**Cost of Equity Calculator**						
4								
5			**Company A**		**Company B**		**Company C**	
6		Risk Free Rate	2.50%		2.50%		2.50%	
7		Beta	2.15		1.02		0.647	
8		ERP	6.00%		6.00%		6.00%	
9		**Cost of Equity**	**15.4%**		**=E6+(E7*E8)**		**6.4%**	
10								
11								

Company A:	**Company B:**	**Company C:**
$E(R_A) = 2.50\% + 2.15*6\%$	$E(R_B) = 2.50\% + 1.02*6\%$	$E(R_C) = 2.50\% + 0.647*6\%$
Cost of Equity = 15.4%	**Cost of Equity = 8.6%**	**Cost of Equity = 6.4%**

The company with the most powerful beta marks the highest cost of equity and vice versa. It makes sense because investors must be rewarded with a greater income for the risk of more escape (a higher beta).

10.4.3 Cost of Equity vs Cost of Debt

The cost of equity is normally extra costly than the value of debt. Equity investors are paid more generously because equity is more dangerous than debt, given that:

- Debtholders are delivered before equity investors (absolute priority rule).
- Debtholders are obtained cash, while equity investors are not.
- Debt is often achieved by particular assets of the firm, while equity is not.
- In transactions for taking less risk, debtholders have a more affordable necessary rate of revenue.

10.4.4 Cost of Equity vs WACC

The cost of equity concerns only equity properties, whereas the Weighted Average Cost of Capital (WACC) values for both equity and debt investments.

Cost of equity can be managed to gain the corresponding cost of an expense if the firm doesn't hold debt (i.e., the firm only raises money through issuing stock).

The WACC is practiced sooner for a firm with money. The price will regularly be more affordable because it uses a weighted average of the equity and debt rates.

10.4.5 Cost of Equity in Financial Modeling

WACC is typically implemented as a commission rate for unlevered free cash flow (FCFF). Since WACC estimates for the cost of equity and cost of debt, the value can be used to discount the FCFF, which is the entire free cash flow available to the firm. It is essential to redeem it at the rate it costs to finance (WACC).

The cost of equity can be accepted as a payment rate if you use levered free cash flow (FCFE). The cost of equity describes the cost to increase funds from equity investors, and since FCFE is the cash available to equity investors, it is the relevant rate to discount FCFE by.

10.5 PREFERENCE AND EQUITY SHARES

A share is a unit of use in a company and has an equivalent price that is affected by market forces. As per Section 43 of the Companies Act, 2013, a company's share capital is of two types of shares, namely – equity shares and preferential shares.

The major point of differentiation between equity share and preference share concerns to voting rights and distribution of dividend

10.5.1 What are Equity Shares?

Organizations issue these pieces to the public to increase capital. The funds thus grown are utilized for the development of a start-up. Since equity shares are non-redeemable, they serve as a long-term source of finance for organizations. The share wealth is held by the company throughout and is provided in the case of turning up. The performance equity shareholders avail the remaining share through liquidation presents them the actual risk beneficiaries of an organization. It is also a point of introduction of the difference between equity share and preference share.

Equity shares come with choosing rights, and its possessors are also entitled to receive surplus and claim company assets. The company's management determines the rate of dividend is distributed among such shareholders. Moreover, these shares are transferable and can be transferred without consideration. Notably, the unit of shares held by investors implies the balance of ownership they have in a said organization. Generally, they are purchased in the market through a stock exchange. The value of these shares is expressed in issue price, face value, market price, book value, intrinsic value, etc.

10.5.2 Types of Equity Shares

Equity shares appear on the liability side of a company's balance sheet. They do not have any types as such and are hence considered as ordinary stocks. Nonetheless, they are usually categorised as –

- Authorised share capital
- Subscribed share capital
- Issued share capital
- Paid-up capital
- Bonus shares
- Right shares
- Sweat equity shares

Equity shares offer substantial dividends to shareholders and also entitle them to benefit from price appreciation in investment value.

Also, their liquidity enables shareholders to sell them off effortlessly and gives rise to another point of difference between equity share and preference share.

On the other hand, besides being a permanent source of capital, equity shares also help companies to secure credit easily.

Both investors and creditors consider companies with large equity capital as creditworthy. Furthermore, the liability arising out of equity shares are required to be paid, and companies are also not obligated to pay a dividend to shareholders.

Let's proceed to the fundamentals of preference shares to understand the origin difference between equity share and preference share.

10.5.3 What are Preference Shares?

The assets that a firm increases through the issuance of preference shares are termed as preference share capital. These shares come with a fixed rate of dividend and a preferential right to avail profits and demand assets during liquidation. These shares are ranked between debt and equity in terms of preference and repayment of capital. Like equity shares, preference shareholders are also partial owners of a company. However, they are not entitled to voting preferences and hence do not possess the power to control or influence company-oriented decisions. Also, shareholders do not have a claim over the bonus shares and are a prominent preference shares and equity shares variety. What is most remarkable is that preference shares are related to debentures, and they could be changed to favored stock.

Furthermore, preference share issuers can repurchase the shares at a given date. These shares continue large dividends to their holders but do not come with a closing date. The judgment to claim dividends on preference shares lies with the administration, and it is not compulsory in case of loss. This is the most significant variation between equity share and preference share. Also, if a firm determines not to offer a dividend in a particular year, it must pay it to the shareholders later. Distinctly, stockholders can change their preference shares into equity shares and cannot be traded in the market.

10.5.4 Types of Preference Shares

These shares are listed in the part of stockholders' equity on the stability sheet and are placed before all other stocks.

The following are the main types of preference share –

I. Cumulative preference shares

II. Non-cumulative preference shares

III. Redeemable preference shares

IV. Non-redeemable preference shares

V. Convertible preference shares

VI. Participating preference shares

VII. Non-participating shares

It must be remarked that dividends spent on preference shares are not subtracted from taxes. Also, purchasing such shares creates a financial strain on the organization and consumes its assets. Likewise, when profits are gained organizations must spend off the arrears dividends, especially in the case of additive preference shares.

10.5.5 Difference between Equity and Preference Shares

These parameters highlighted in the table below help to distinguish between preference and equity shares effectively.

S.N.	**Parameter**	**Equity Share**	**Preference Share**
1	Definition	Equity shares represent the extent of ownership in a company.	Preference shares come with preferential rights when it comes to receiving dividend or repaying capital.
2	Dividend payout	Shareholders receive dividends after all liabilities have been paid off.	Preference shareholders are given more priority over equity shareholders when it comes to the dividend payment.
3	Rate of dividend	The rate fluctuates as per earnings.	Rate of dividend remains fixed.

4	Bonus shares	These shares are entitled to receive bonus against existing shareholdings.	These shares do not offer bonus against existing shareholdings.
5	Capital repayment	It is repaid at the end.	It is repaid before equity shares.
6	Voting rights	The shares come with voting rights.	Preferential shares do not have voting rights.
7	Role in management	Equity share comes with the power to participate in the company's management.	Preference share does not extend management rights.
8	Redemption	It cannot be redeemed.	It can be redeemed.
9	Convertibility	Shares cannot be converted.	Shares cannot be converted.
10	Arrears of dividend	Shareholders are not entitled to avail arrears of dividends.	Shareholders are likely to avail arrears of dividend along with current year's dividend.
11	Capitalisation	There is a high chance of over-capitalisation.	There is a relatively less chance of over-capitalisation.
12	Types	They are categorised as an ordinary stock of a company.	There are several types. E.g. participatory, non-participatory, convertible, non-convertible, cumulative, non-cumulative, etc.

13	Financing term	It serves as a means of long-term financing.	It serves as a means of midterm and long-term financing.
14	Mandate to issue	Companies must issue equity share capital.	All companies do not need to issue preference share capital.
15	Investment denomination	Equity shares have a lower denomination.	Most preference shares come with a high denomination.
16	Type of investors	It is suitable for risk-taking investors.	It is suitable for risk-averse investors.
17	Associated burden	Paying off equity dividend is not mandatory and depends entirely on the company's profit.	Companies are obligated to pay dividends to its preference shareholders.

Based on the distinction between equity share and preference share, it can be said that both stockholders profit in various ways. While equity stockholders exercise choosing the right and can take in company-oriented decisions, preferred stockholders have an upper-hand at the distribution of dividends.

Similarly, risk-averse individuals would get preference shares to be a more suitable financing option than equity shares which have a greater risk factor. On the other hand, from the view of a company owner, property shares serve as a long-term financing tool. Also, it has a lower financial obligation to shareholders when compared to preference shares.

Hence, depending on one's risk-taking capability and financial aims, investors can choose the most proper investment option from equity vs preference shares. Although, market knowledge should be given more preference when it occurs to investment.

10.6 BONDS AND DEBENTURES

Bonds & Debentures

Whether it may be a small enterprise, an incorporated firm, or the Government itself, the necessity for capital to make it work is ever received. Hiring is one of the most basic ways of availing of the needful capital. There are several ways to obtain money between which Bonds and Debentures are the obvious ones.

A bond and debenture both are debt instruments issued by the government or organizations. Both of these are fundraising tools for the issuer. Bonds are usually issued by the government, the firms of government, or by large corporations whereas debentures are issued by public organizations to raise money from the market. Sometimes both the words are used reciprocally but both are clearly different. Let's understand both the investment tools and how they are separate from each other.

A bond is a financial tool that gives the responsibility of the lender towards the borrower. A bond is a certificate proofing the contract of responsibility of the issuing organization for the price that the borrower owes to pay to the bondholders.

BONDS	**DEBENTURES**
Bonds are secure in nature.	Debentures can be secure as well as unsecured.
One can have bonds of a corporation, government agencies or it can be of any financial institution.	On the other hand debentures are issued by private companies.
Bonds are less risky comparatively.	Whereas debentures are at high risk.
Talking about liquidity bonds are at the first	Whereas in the case of debentures liquidity can only be done after the bondholders are

priority.	paid.
Bonds give you low interest, but it depends on the issuing body totally.	Whereas debentures give you high interest.

10.6.1 What is a Bond?

A bond is a guarded property as it is secured by deposits. In bonds, an asset is promised as the protection of lending so that if the issuer neglects to repay the amount, the bondholders can sell the asset to pay their bills.

Bonds are assigned for a fixed period. The credit on a bond is given at regular periods which are called tokens. Let's say you have purchased a bond of Rs.20,000 for 10 years at the interest of 20%. So at the end of every month, you will earn a token of Rs.2000 and at the end of the period, you will get your Rs. 20,000 back. A bond sometimes can be utilized as a constant source of income for retired persons. The future date on which your bond period will be over is known as the maturity date.

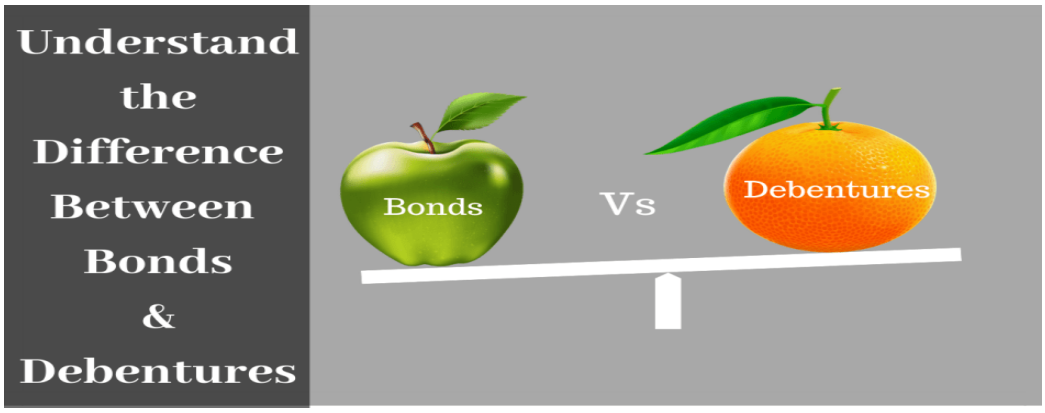
10.6.2 What is a Debenture?

A debenture is another form of money capital that is usually unsecured. Both the bonds and debentures are fundraisers but debentures are extra special. Debentures are not reversed by any of the assets of the issuer hence depend totally on the trust factors of the investor on the issuer. Debentures are issued by the issuer for any particular requirement such as future investments or to pay for expansions. The funds accumulated here are used property hence the debenture holders are employed as creditors of the organization.

10.6.3 Bond Vs Debenture – The Key Differences

Some of the prime differences between bonds and debentures are as follows:

1. Bonds are the financial tools declared by Government offices and also by Private companies for establishing extra funds from society. Debentures are issued by private/public firms for increasing funds from the investors.
2. Bonds are reversed by the asset of the issuer whereas debentures are not secured by any of the real assets or insurance. Debentures are issued and bought only on the creditworthiness and trustworthiness of the issuing party.
3. The interest rate of bonds is usually more economical than debentures. The lower interest rate represents the low-risk factor. On the other hand, debentures give you a high-interest rate but they are unsecured hence the risk part is more here.
4. The interest on a bond is returned to the bondholder monthly, half-yearly, or annually. The interest cost never changes as the interest spent is not reliant on the execution of the issuer. Negatively, if you purchase debentures, your interest rate may be high but the interest amount will be periodical depending on the representation of the issuer.
5. There is no minimum uncertainty included in bond investments but the risk factor is powerful in debentures.
6. At the time of liquidation, the bondholders are always given preference.
7. If you have bonds, you can never change them to equity shares, but debentures can be assigned to equity capitals.



Let's know the key difference based on the following circumstances:

Tenure Period: When it grows to the tenure period bonds are long-term investments as contrasted to debentures. However, this frequency depends on the issuing organization/body.

Risk Level: Bonds are less risky material for the moneylenders than debentures as bonds are reversed up by insurance and debentures are not.

Collateral requirement: Bonds want insurance to reverse it up on the same hand most of the debentures come collateral-free.

Interest it offers: Bonds usually appears low-interest-rate since it has high security for compensation. Whereas debentures offer a high rate of interest as they are not reversed up by any collateral and hence the only cause to believe them is the privilege of the issuer.

Payments: The installments for bonds are made monthly or yearly. The interest earned is mostly on an accrual basis. Another great thing with bonds is – the amounts made/interest has no relationship with the market representation of the organization or issuer. Whereas debentures offer periodical payments which highly depend on the organization's market performance.

Issuing body: Bonds are mostly given by the government and financial institutions whereas debentures are given by private organizations.

10.7 WEIGHTED AVERAGE COST OF CAPITAL

Definition of WACC

A firm's Weighted Average Cost of Capital (WACC) represents its blended price of capital beyond all references, including ordinary shares, preferred shares, and debt. The cost of each type of capital is weighted by its percentage of total assets and they are combined. This model will present a complete analysis of what WACC is, why it is practiced, how to measure it, and will give many instances.

WACC is applied in financial modeling as the discount rate to compute the net present value of a business.

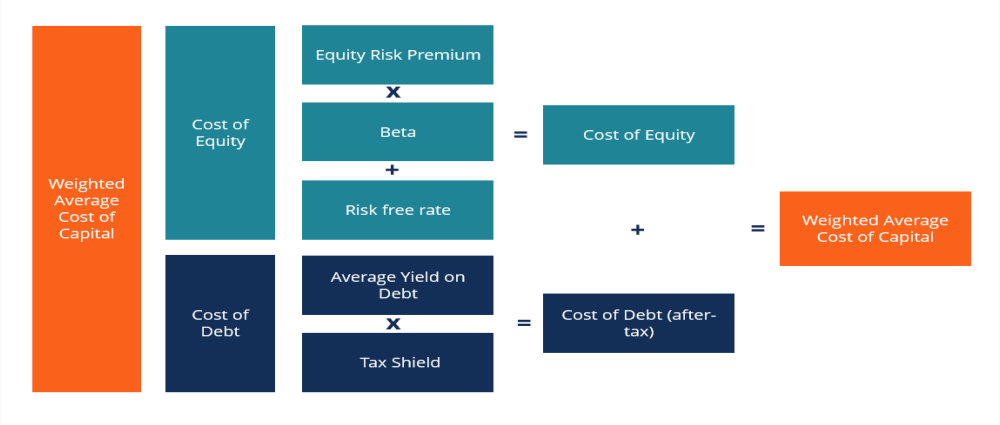


Image: CFI's Business Valuation Modeling Course.

What is the WACC Formula?

As shown below, the WACC formula is:

WACC = (E/V x Re) + ((D/V x Rd) x (1 – T))

Where:

E=marketvalue of the firm's equity (market cap)

D = market value of the firm's debt

V = total value of capital (equity plus debt)

E/V = percentage of capital that is equity

D/V = percentage of capital that is debt

Re = cost of equity (required rate of return)

Rd = cost of debt (yield to maturity on existing debt)

T = tax rate

An extended version of the WACC formula is shown below, which includes the cost of Preferred Stock (for companies that have it).

WACC

WACC = Cost of Equity * % Equity + Cost of Debt * % Debt * (1- Tax Rate)+ Cost of Preferred Stock * % Preferred Stock

The idea of WACC is to define the cost of each part of the company's funds structure based on the balance of equity, debt, and preferred stock it has. Each element has a cost to the organization. The firm pays a fixed rate of dividend on its debt and a fixed yield on its selected stock. Still, though a firm does not repay a fixed rate of revenue on common equity, it does often pay bonuses in the form of money to equity holders.

The weighted constant cost of funds is an essential part of a DCF valuation model and, thus, it is an important idea to agree with for finance experts, particularly for investment banking and corporate development roles.

WACC Part 1 – Cost of Equity

The cost of equity is computed using the Capital Asset Pricing Model (CAPM) which compares rates of return to volatilization (risk vs reward). Below is the formula for the cost of equity:

$$\mathbf{Re = Rf + \beta \times (Rm - Rf)}$$

Where:

Rf = the risk-free rate (typically the 10-year U.S. Treasury bond yield)

β = equity beta (levered)

Rm = annual return of the market

The cost of equity is an intended cost or an opening cost of funds. It is the rate of revenue stockholders want, in theory, to recompense them for the risk of funding in the assets. The Beta is a measure of a stock's volatilization of revenues relative to the overall market (such as the S&P 500).

Risk-free Rate

The risk-free rate is the revenue that can be gained by spending on risk-free bonds, e.g., U.S. Treasury bonds. Typically, the yield of the 10-year U.S. Treasury is utilized for the risk-free rate.

Equity Risk Premium (ERP)

Equity Risk Premium (ERP) is described as the increased yield that can be received over the risk-free rate by spending in the stock market. One easy method to determine ERP is to reduce the risk-free revenue from the market return. This data will usually be sufficient for the various fundamental financial analyses. But estimating ERP can be a much more complicated business.

Levered Beta

Beta refers to the volatility or riskiness of a stock relative to all other stocks in the market. There are a pair of ways to calculate the beta of a stock. The first and easiest way is to determine the company's historical beta (using regression analysis) or just pick up the company's regression beta from Bloomberg. The second and more thorough way is to make a new survey for beta using public company comparables. To use this approach, the beta of similar organizations is taken from Bloomberg and the beta for each company is calculated.

Unlevered Beta = Levered Beta / ((1 + (1 – Tax Rate) * (Debt / Equity))

The levered beta involves both market risk and the risk that arises from taking on debt. But, since various firms have various capital plans, unlevered beta (asset beta) is set to raise additional risk from debt to view pure marketing risk. The average of the unlevered betas is then measured and re-levered based on the fund's structure of the corporation that is being prized.

Levered Beta = Unlevered Beta * ((1 + (1 – Tax Rate) * (Debt / Equity))

In the largest situations, the firm's current funds structure is handled when the beta is re-levered. However, if there is data that the firm's funds structure might improve in the future, then beta would be re-levered using the firm's objective funds structure.

After calculating the risk-free rate, equity risk premium, and levered beta, the cost of equity = risk-free rate + equity risk premium * levered beta.

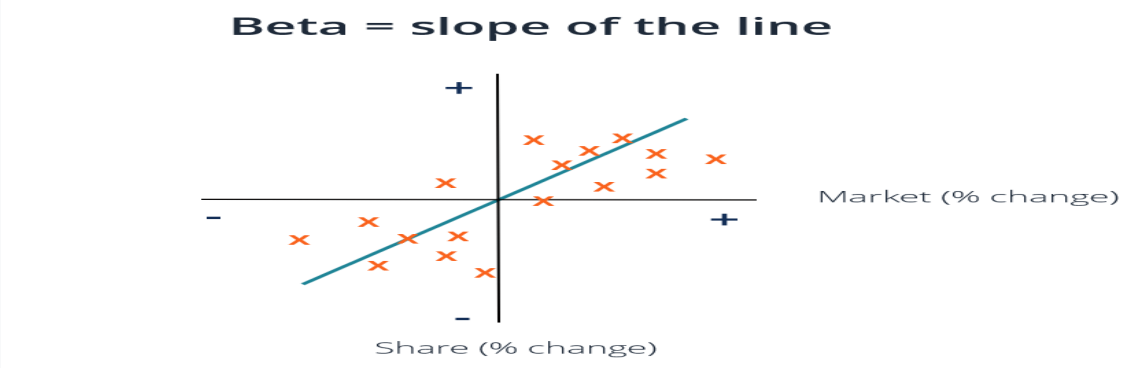


Image: CFI's Business Valuation Modeling Course.

WACC Part 2 – Cost of Debt and Preferred Stock

Defining the cost of debt and preferred stock is reasonably the most obvious part of the WACC estimation. The cost of debt is the yield to maturity on the firm's debt and the cost of preferred stock is the yield on the company's preferred stock. Simply increase the cost of debt and the yield on the preferred stock including the balance of debt and preferred stock in a company's funds structure, sequentially.

Since interest returns are tax-deductible, the cost of debt requires to be multiplied by (1 – tax rate), which is referred to as the value of the tax shield. This is not done for preferred stock because preferred dividends are funded with after-tax profits.

Take the weighted average current yield to maturity of all exceptional debt then increase it one minus the tax rate and you have the after-tax cost of debt to be second-hand in the WACC formula.

10.8 CAPITAL GEARING FUNDAMENTALS

What is Capital Gearing?

The term capital gearing applies to the ratio of debt an organization has related to equities. Assets gearing describes the financial risk of a business. It is also related to financial gearing or financial leverage. An organization is supposed to have a high capital gearing if the organization has a large debt as related to its equity.

For example, if a company is assumed to have a capital gearing of 3.0, it indicates that the corporation has debt thrice as much as its equity.

Understanding Capital Gearing

The rate of capital gearing may change concerning the enterprise a company is in. Enterprises that need a huge initial investment may have a large capital gearing ratio.

The capital gearing ratio serves as one of the important portions based on which moneylenders and investors think of a firm. If the firm has a large capital gearing ratio, it produces a negative impact on the thoughts of moneylenders as the organization won't be capable to get the payments in case there is a strike in its operations. Likewise, investors acknowledge the organizations in cyclical businesses risky.

In contrast, organizations with a large gearing ratio of a steady business may not act as a dangerous menace to moneylenders and investors. Reconsider the case of the service sector. Organizations in this sector require huge capital investments, and hence, their capital gearing ratio will be high. But, they are the monopolies, and their rate is extremely organized. Hence, their results stay extremely permanent.

At times, businesses may improve gearing to finance a leveraged buyout or get another organization.

Types of Capital Gearing

Capital gearing is of the following types:

1. High Gearing

The amount of equity share funds in the corporation is more limited than the Debt funds and preference share funds, that position is said to be high gearing.

In other words, when in any corporation common share capital is smaller than other fixed interest-bearing bonds, then it's identified as high gearing.

1. Low Gearing

When the price of equity share funds is more than the price of debt funds and preference share capital, then it is identified as low gearing.

In other words, in the state when the ratio of equity shares capital is more than fixed cost bearing bonds, it is known as low gearing.

Types of Capital Used in Business

The capital used in business may be divided into the following three parts, from the view of capital gearing:

*1. Fixed Cost Capital*The capital on which interest or dividends are funded at the fixed-rate that is called fixed cost capital.

It holds preference shares and debentures.

2. Variable Cost Capital

It involves equity share capital and its cost is unpredictable and changeable.

The amount of dividend repaid on its depends upon the management of the administrators and on the value left out after defeating the returns on fixed cost bearing capital from the total income.

3. No Cost Capital

No cost capital involves all those capital inputs, which are used for the development of the company, but on which no revenues are to be returned, like unpaid expenses, reserve funds, and business credit, etc.

Importance and Advantages of Capital Gearing

Following are the advantages of capital gearing:

1. By imposing capital gearing, any business may receive capital at the lowest costs.

2. The financial condition of the company may be established with the help of capital gearing and proper gearing of capital may be done for its effective performance also.

3. Any company may decide the ratios of its capital references in it, to make the best utilization of money.

4. The balanced mix of different bonds may be improved, by it.

5. Profit getting and variations may be regulated, by it.

6. It increases the qualitative features of the capital structure.

7. Capital gearing implements a reasonable profit to the capital structure. **As a result**, the investor, creditors and enterprise, all get profits.

8. Capital risks may be decreased by capital gearing and the profit earning potential of the Institution may be improved.

What is a financial gearing ratio?

Financial gearing ratios are a collection of traditional financial ratios that connect a company's debt to other financial metrics such as business equity or company assets. Gearing ratios express a quantity of financial leverage that resolves to what degree a company's actions are supported by shareholder equity in contrast with creditors' capitals. Gearing ratios can be a valuable part of primary analysis. Gearing ratio considerations help give transparency into the sourcing of a firm's performance funding, which contributes to more comprehensive penetration into a company's security and whether it can endure times of financial uncertainty.

Gearing ratio formulas

Each gearing ratio formula is calculated separately, but the majority of the formulas include the firm's total debts measured against variables such as equities and assets.

Debt to equity ratio

Possibly the most popular method to calculate the gearing ratio of a business is by using the debt to equity measure. Simply put, it is the business's debt divided by company equity.

Debt to equity ratio = total debt ÷ total equity

The debt to equity ratio can be changed into a percentage by multiplying the fraction by 100. This is possibly a simpler way to get the gearing of a company and is usually common practice.

Debt to equity percentage = (total debt ÷ total equity) × 100

Debt ratio

The debt ratio is very related to the debt to equity ratio, but as an option, it measures total debt against total assets. This ratio gives a measure to which degree a business's assets are financed by debt.

Debt ratio = total debts ÷ total assets

Equity ratio

Conversely, the equity ratio provides a measure of how financed a firm's assets are by shareholder's investments. Unlike the other gearing ratios, a higher percentage is often better.

Equity ratio = total equity ÷ total assets

How to calculate a gearing ratio

Gearing ratios can be calculated to show how well a business is operating. To calculate a debt to equity gearing ratio, you should divide a company's total debt by total equity. In most gearing ratios, the higher a gearing ratio percentage, the more risk that is connected with the business's operations.

Calculating gearing ratio example

Let's say that company ABC has the following financials:

Total Debt: £100,000

Total Equity: £400,000

Company ABC's debt to equity ratio can be calculate by taking the total debt divided by the total equity, then take the ratio and multiply it by 100 to express the ratio as a percentage.

(£100,000 ÷ £400,000 (× 100))

= 25% debt to equity ratio

Gearing ratio analysis

- The interpretation of gearing ratios is a very essential phase of fundamental analysis. Gearing ratios can vary exceedingly between industries, so it is often the best method to compare gearing ratios to the industry average, as opposed to connecting businesses from various enterprises or sectors.
- Note that the use of debt for financing a firm's services is not fundamentally a bad idea. The extra revenue from a loan can help a business to grow its services, enter new markets, and increase business presents, all of which could increase profitability in the long term.
- In the contrast, a business with a remarkably low gearing ratio could not be considering development opportunities when interest rates are low, eventually missing out on growth opportunities that their opponents may use. Hence, gearing ratios are not a comprehensive measure of a business's health and are just a portion of the full picture. Make sure to use gearing ratios as part of your primary analysis, but not as a standalone measure, and always use the ratios on a case-by-case basis.
- High gearing ratio vs low gearing ratio
- As mentioned above, when measuring the quality of a company's gearing ratio, it is recommended that you measure toward rivals in the same enterprise as they can vary wildly over enterprises. Below are some basic guidelines for analyzing high and low gearing ratios:

- **A high gearing ratio that exceeds 50%.** A gearing ratio that exceeds this amount would serve a highly geared (or highly levered) organization. The firm would be more at risk during times of financial uncertainty, as debt financing would raise a business's risk during economic downturns or interest rate spikes.
- **A mid-level gearing ratio between 25% and 50%.** A gearing ratio that is mid-level is known to be normal for well-established companies.
- ·**A low gearing ratio below 25%.** Investors, lenders, and any other parties analyzing the financial records would see a gearing ratio below 25% as very low risk.

Control and manage the gearing ratio

There are various ways a firm can try to indirectly manage and control its gearing ratio, usually by profit, debt, and expense management.

· **Debt management.** Possibly the most obvious is debt management. If a firm maintains its debt efficiently, it should be capable to decrease its gearing ratio. Corporations can take steps to pay off their debt and thus, acquire less interest long term. Firms can also use debt administration plans to withdraw using out more loans. Additionally, firms should attempt to renegotiate debt times to overcome long-term liabilities.

· **Increasing profits.** Increasing profits will help to improve stock price and thus, stockholder equity. Conversely, sometimes taking out loans, in this case, can help a business become more successful in the long term.

· **Reducing expenses.** Expense reduction will decrease liabilities and therefore increase the gearing ratio. Decreasing costs can include anything from renegotiating loan terms, improving business efficiency, and including basic cost controls.

10.9 LET US SUM UP

A company must be accurate while explaining its financial leverage situation because high leverage means high debts. Also, providing ownership may show to be uncertain for the organization and even result in tremendous loss and business failure.

Leverage ratios are applied to estimate the solvency of a firm, its financial structure, and how it works with the given fund (equity and debt). It is used by creditors, investors as well as internal management to evaluate the company's growth, ability to clear all dues/debts/interests.1–3

10.10 LIST OF REFERENCES

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10.11 UNIT END EXERCISES

1. What is a leveraged buyout? Why do companies do this?
2. How does leverage amplify profits and losses?
3. What must happen in order for an increase in leverage to be successful?
4. Compare operating leverage and financial leverage. Discuss the similarities and differences.
5. Why do we use leverage if it increases the risk of a firm?
6. The risk-free rate is 6.9%, the market risk premium is 10.6%, and the stock's beta is 0.25. What is the cost of common stock?
7. What is the difference between preference shares and equity shares?
8. **What Is A Callable Bond?**
9. What are the factors that affect weighted average cost of capital?
10. How many types of capital gearing are there?

UNIT 4 - Chapter 11

Tools and Techniques of Financial Management

Unit Structure

11.0 Objectives

After Completion of this unit you will be able to answer:

- What is ratio Analysis
- How many types of ratios?
- What is Fund flow statement and Cash Flow Statement?

- What is Statement of Changes in Working Capital
- What is Statement of Sources and Application of Funds

11.1 Introduction

Ratio analysis is the method or process by which the relationship of variables in financial accounting and especially of financial statements are computed, established and presented. It is an attempt to derive quantitative measures or guides concerning the financial position and profitability of business enterprise. Ratio analysis can be used in trend as well as static analysis.

11.2 Ratio Analysis

A ratio is a figure expressed in terms of another figure. It is a mathematical tool that measures the relationship between two figures, which are interrelated to each other and mutually interdependent. Ratio is expressed by dividing one figure by another related figure. Thus, ratio is an expressionrelating one number to another. It can be percentage ratio, pureratio, number of times, rupeesetc. It can be expressed as fraction or as pure ratio. Ratio analysis is useful in understanding, analyzing and interpretation Financial statement

11.3 Classification of ratios(Short-term Solvency and Long-termSolvency, Profitability)

There are ratios for different purposes, for different types of users and for different types of analysis. Ratio can be expressed under following heads majorly by considering Short term, Long term solvency and Profitability

1.Traditional Classification

2.Functional Classification

3.Users angle

Traditional Classification

Under this classification the ratio readily suggests through their names, their respective sources. From the point of view ratios are classified as follows.

1.Balancesheeet ratio of Financial ratios: They deal with relationship between two item and group items, which are together found int eh balance sheetfor example Ratio of current assets and Current liabilities, Ratio of stock to Working Capital etc.

2.Revenue statement ratio on Income Statement Ratio: These ratios deal with the relationship between two items or two groups of items which are both found in the income statement for example ratio of Net profit to Sales, ratio of Expense to Sales etc.

3.Composite ratio or Inter statement ratio or Combined Ratio: These ratios indicate the relationship between two items or two groups of items of which one is found in the balance sheet and other in the Income Statement for example ratio of return on capital employed, ratio of return on properties fund etc.

Functional Classification

The ratio may be classified in accordance with the purpose that it serves for the different users of accounting information. On this basis the ratio arecategorized asfollows.

1.Liquidity ratio: These ratiosanalyze short term and immediate financial status of a business organization and indicate the degree of the debt financing in capital structure of a firm.

2.Leverage ratio: These ratios measure the relationship between properties' fund and borrowed funds. They indicate the degree of debt financing in the capital structure of a firm.

3.Activity ratio: These ratios are designed to indicate the efficiency of a firm in utilizing its Montereyresources, its degree of productivity, effectiveness and its standards of performance. Hence, they are knowns efficiency and performance ratios

4.Profitability ratios: These ratios are intended to reflect the overallefficiency of the management of the concern/Organization, its ability to earn a handsome return on capital employed or on shares issued and the effectiveness of its investment strategies.

From the viewpoint of users

1.From shareholders point of view: Earning per share, return on proprietor's fund

2.From short term creditors: Current ratio and Liquid ratio

3.From long-term creditors and management point of view: Equityratio serves the purposes of long-termcreditors.

Balance Sheet Ratios

The Balance sheet ratios which are discussed in this chapter are

1. Current ratio
2. Liquid Ratio
3. Proprietary Ratio
4. Stock Working Capital Ratio
5. Capital Gearing Ratio
6. Debt Equity Ratio

Balance sheet Ratios:

1.Current Ratio: Current ratio is also known as solvency ratio or working capital ratio. Standard current ratio is 2:1

Current ratio indicates the short term financial position of the firm. It is expressed as a pure ratio. It is calculated as: Current Assets /Current Liabilities.

Current Assets consists of all the current assets of the company as such

1.Debtors

2.Cash and bank balance

3.Bills Receivables

4.Stock

5.Prepaid Expenses

Current Liabilities consists of the following

1.Creditors

2.Bills payable

3.Outstanding Expenses

4.bank Overdraft

2.Quick ratio

This ratio is also known as liquidity ratio or acid test ratio. Standard quick ratio is 1:1. Greater the ratio, stronger the financial position. It indicated the solvency and financial soundness of business. It is expressed ass pure ratio.

Quick ratio=Quick Assets/Quick Liabilities

Quick assets consist of

1.Debtors

2.Cash and bank balance

3.Bills Receivables

Quick Liabilities consist of

1.Creditors

2.Bills Payable

3.Outstanding Expenses

3.Debt Assets ratio

This ratio indicates the percentage, or the proportion of the total assets created by the company through short term and long-term debt.

Debt Assets ratio=Debt/Assets

Debt-All liabilities including short term and long-term

Assets-All asset that is fixed and current

4. Debt Equity ratio

It shows the proportion of debt to assets. It is expressed as pure ratio

Debt Equity Ratio=Debt/Equity

Debt-All liabilities including short term and long-term

Equity-Net worth +Preference Capital

5.Stock to working capital ratio

This ratio expresses the relationship between closing stock and working capital. This ratio expressed as percentage ratio.

Stock to Working capital ratio=Closing stock/Working Capital*100

6.Proprietrs Ratio

This ratio indicates the proportion of Properties funds to the total assets of the firm

Proprietors Ratio=Properties Fund/Total Assets

7.Capital Gearing Ratio

This ratio indicates the relationship between fixed income bearing securities to funds on which no fixed returns are to be paid. It is expressed as pure ratio.

Capital Gearing Ratio=Fixed Income Bearing securities/Non-Fixed Income bearing securities

Revenue Statement Ratio

Gross Profit ratio

This ratio indicates the efficiency of production and trading activities. It is expressed as percentage.

Gross Profit Ratio=Gross Profit/Net Sales*100

2. Operating ratio

It is index of managerial operation tocontrol operatingexpenses.

Operating ratio=Cost of goods sold operating expenses/Net sales*100

3.Expenses Ratio

The ratio of each item of expense or each groupof expenses to Net Sales is known as Expenses Ratio.

Administrative Expenses Ratio=Administrative expenses/Net Sales*100

Selling and Distribution Expenses Ratio=Selling and Distribution Expenses/Net Sales*100

Financial Expenses Ratio=Financial Expenses /Net Sales*100

Material Consumed Ratio=Non-Operating Expenses /Net Sales*100

4.Net Profit Ratio

It indicates relationship between Net profit and Net Sales.

Net profit before Tax Ratio=Net Profit before tax/Net Sales*100

Net Profit After Tax Ratio=Net Profit After tax/Net Sales *100

5.Net Operating Profit Ratio

This ratio indicates the relationship between net operating profit and net sales which is express in percentage.

Net Operating Profit=Gross profit minus all operating expenses

Net Operating Profit =Net operating Profit/Net Sales *100

6.Stock Turnover ratio

This ratio is also known as Inventory ratio or Inventory turnover ratio or Stock velocity ratio. This ratio measures the number of times stock turns or flows or rotates in an accounting period compared to the sales effected during the period.

Stock Turnover Ratio=Cost of Goods Sold/Average Stock

Average Stock=Opening stock Closing stock/2

When opening stock figure is not available closing stock can be considered as the average stock.

Combined Ratios

1Return on Capital Employed

This ratio explains the relationship between total profits earned by the Business and total investment made or total assetsemployed.This ratio thus measures the overall efficiency of business operations. This ratio is also known as Return on Total resources is calculated by dividing Net Profit before Interest on loans and debentures by total assets (Fixed assets and Current assets). This is always expressed as percentage.

Return on CapitalEmployed Ratio=Net Profit before Interest and Tax/Capital Employed*100

Capital Employed=Owned Funds+ Borrowed Funds

OR

Capital Employed=Fixed Assets Current Assets-Current Liabilities

2. Return on Proprietor’s Fund

It is also known as Return on Proprietors Equity or Return on ShareholdersInvestment. The above ratio indicates the relationship between net profit earned and total Proprietor’s Funds

Return on Proprietor’s Funds Ratio=Net profit after tax/Proprietor’s Fund*100

Proprietors Funds =Equity Share Capital Preference Share capital+ Reserve and surplus-Miscellaneous expenses

3. Return on Equity Share Capital

This ratio indicates the rate of earing on the equity or ordinary share capital

Return on Equity Share Capital ratio=Net Profit after tax-Preference Dividend /Equity Share Capital*100

4.Earnings Per Share

Earning per share is calculated to find out overall profitability od the organization. It is indicated by the following formula

Earnings Per share=Net Profit after tax-Preference Dividend /Number of equity Shares

5.Dividend Payout ratio

The purpose of this ratio is to find out the proportion of earnings used for payment of dividend and the proportion of earnings retained. The ratio is relationship between earnings per equity share and dividend per equity share.

6.Debtors Turnover ratio (Debtors Velocity)

Debtors Turnover ratio is also Known as Accounts Receivable Turnover Ratio or Average CollectionPeriod.It attempts to measure the collectability of debtors and other account receivable. It shows

The rate at which the trade debtors are being collected.

Debtors Turnover ratio=Credit Sales/Average Debtors AverageBills Receivable*360

Debt Collection period

It indicates the extent to which the debt has been collected in time.

Debt Collection Period=Number of days in a year/Debtors Turnover

7.Creditors turnover Period

Creditors turnover shows the speed with which payments are made to the supplier for purchase made from them. It is a relationship between net credit purchases and average creditors.

Creditors turnover ratio=Credit Sales/Average Creditors average bills payable*360

Creditors Turnover ratio is further used to find out the average rate of payables by using the following formula

Credit Collection Period=Number of days in a year/Creditor's turnover

11.4 Advantages and Limitations of Ratio Analysis

Ratio Analysis is an important and age-old techniques of financial analysis. The following are some of the advantages and limitations of it.

1Simplifies financial statement: It simplifies the comprehension of financial statements. Ratios tell the whole story of changes in the financial conditions of business.

2.Helps in Planning: It helps in Planning and forecasting. Ratios can assist management in its basic function of forecasting.

3.Facilitates interfirm Comparison: Ratio analysis helps in comparison of two firms or two divisions of one firm. They also reveal strong firms and weak firms.

4.Helps in investment decisions: It helps in investment decisions in the case of investors and lending decisions in the case of bankers.

5.Helps in Analysis: ratioanalysis helps in analyzing financial performance of companies and design strategies according to analysis.

Limitations of ratio Analysis

The ratio analysis is one of the most powerful tools of financial management. Though they are simple to calculate and easy to understand,they suffer from serious limitations.

1.Limitations of financial statements: Financial statements themselves are subject to several limitations. Thus ratios derived there from are also subject to those limitations. Financial Statements are affected to a very great extent by accounting conventions and concepts.

2.Comparative study required: Ratios are useful in judging the efficiency of business only when they are compared with past results of the business.

3.Ratios alone are notindicators: Ratios are only indicators; they cannot be taken as final regarding good or bad financial position of the business.

4.Incomparable: Not only industries differ in their nature, but also the firms of the similar businesses widely differ in their size and accounting procedures etc.It makes comparison of ratios difficult and misleading

5.Limited use of single ratio: A single ratio usually does not convey much of sense. To make a better interpretation several ratios must be calculated which is likely to confuse the analyst than help him in making any good decision.

Conceptual Check

1.Name any two Profitability ratios

2.Name any two-composite ratio

3.Explain any two advantages of ratio analysis

Let'ssee practical aspect of ratios through example.

1.5 Exercise

Q.1 The Following g is the Profit and Loss account and Balancesheet of Zoya Ltd

Profit and Loss Account for the year ended 31st March 2019

Particulars	Rs	Particulars	Rs.
To cost of sales :		By sales	400000
Opening stock 30000			
Add purchases 300000			
330000			
Less Closing stock 50000	280000		
Gross Profit C/d	120000		
	400000		400000

To Expenses	20000		
To Net Profit C/d	100000		
	120000		120000
To Provision for tax	40000	By Net Profit b/d	100000
To Dividend	20000		
To Net Profit	40000		
	100000		100000

Balance Sheet as on 31st March 2019

Liabilities	Rs	Assets	Rs.
Share Capital(Rs.10)	200000	Plant and machinery	80000
Reserves	10000	Land and Building	20000
Profit and Loss Account	40000	Stock	50000
Creditors	40000	Debtors	80000
		Cash and bank	60000
Total	290000	Total	290000

Market Price of an Equity share is Rs 5.

Calculate the following ratios:

1. Stock Turnover ratio
2. Debtors turnover ratio
3. Creditors Turnover ratio
4. Return on Capital Employed
5. Return on Proprietors fund

6. Earnings per share
7. Dividend pay-outratio

Solution

1.Stock Turnover Ratio=cost of Goods sold/Average stock

=28000/40000

=7 times

Average Stock=Opening stock closing stock/2

=30000+50000/2

=40000

2.Debtors Turnover ratio=Credit Sales/Average Debtors

=400000/80000

=5 times

Collection Period=Number of days in a year/Debtors Turnover

=365/5

=73 days

3 Creditors Turnover ratio=Credit Purchases/Average creditors

=300000/50000

= 6 times

Average age of creditors=Number of days in a year/Creditor's turnover

=365/6

=61 days

4.Return on Capital Employed=Net Profit before interest and tax/Capital Employed

Capital Employed=Equity capital+Reserves+ Profit and Loss Account

=200000+10000+40000

=250000

ROCE= 100000/250000*100

40%

5.Return on Proprietors Fund=Net Profit after tax/Proprietors Fund*100

Net Profit after tax=100000-40000

=60000

Proprietors Fund = Equity Capital+ Reserves+ Profit and Loss Account

= 200000+10000+40000

=250000

=60000/250000*100

=24%

Earnings Per share=Net Profit after tax-Preference dividend/Number of equity shares

=60000/20000

=3

6.Dividend payout Ratio=Dividend per equity share/Earnings per equity share

Dividend for equity share=Total dividend/Number of Equity shares

=20000/20000

=1

=1/3

=0.33

Q.2

The summarized final accounts of two companies are as follows

Liabilities	Atul Ltd	Amul Ltd	Assets	Atul Ltd	Amul Ltd
Share capital	88000	88000	Fixed Assets	121000	96800
Reserves	42900	35200	Current Assets	125400	103400
8%Debentures	22000	22000			
Current Liabilities	93500	55000			
	246400	200200	Total	246400	200200

Revenue Statement for the Year

	Atul Ltd	Amul Ltd
Income		
Sales	330000	2640000
Less Cost of sales	237600	198000
	92400	66000
Less Operating Expenses	63800	44000
Net profit before tax	28600	22000
Less Tax	12100	9240
Profit after tax	16500	12760
Less Dividend	8800	6600
Retained earnings	7700	6160

You are required to calculate following ratios

1. Proprietary Ratio
2. Capital Gearing ratio
3. Gross Profit ratio

4. Operating ratio
5. Return on Proprietors equity ratio
6. Expenses ratio
7. Net Profit ratio

Solution

	Atul Ltd	Amul Ltd
1.Proprietors Ratio=Proprietors Fund/Total Assets*100 Proprietors Fund=share capital +Reserves Total Assets =Fixed Assets+ Current Assets	=88000+42900/(121000+125400)*100 =130900/246400*100 =53.13%	=88000+35200/ (96800+103400) *100 =123200/200200*100 =61.54%
2.Capital gearing Ratio= Funds with fixed interest and dividend /Funds with no fixed interest and dividend =8%Debentures /Share Capital Reserves	=22000/88000+42000 =0.17	=22000/88000+35200 =0.18
3.Gross Profit ratio=Gross Profit/Net Sales*100	=92400/33000*100 =28%	=66000/264000*100 =28%
4.Operating Ratio= Cost of Goods sold+	=237600+63800/330000*100 =91.33%	198000+44000/264000*100 91.67%

Operating Expenses/Net Sales*100		
5.Return on Capital Employed = Net Profit before Interest and tax/Capital Employed *100 Capital Employed=Proprietors Fund+ Loan Fund	=28600/(130900+22000)*100 =18.71%	=22000/ (123200+22000) *100 =22000/145200*100 =15.15%
6.Return on Proprietors Equity= Net Profit after tax-Preference Dividend/Proprietors equity*100 Proprietors Equity=Proprietors Fund	=16500/130900*100 =12.61%	=12760/123200*100 =10.36%
Expense Ratio= Expenses/Net Sales *100	=63800/237600*100 =19.33%	=44000/264000*100 =16.67%
Net Profit Ratio= Net Profit after tax/Net Sales *100	=16500/330000*100 =5%	=12760/264000*100 =4.83%

11.6 Practice Questions

Q.1Follwing is the Profit and Loss Account andBalance Sheet of Asha Ltd

Profit and Loss Account for the year ended 31st March 2020

Particulars	Rs	Particulars	Rs.
To cost of sales:		By sales	370000
Opening stock 20000			
Add purchases 280000			
300000			
Less Closing stock 50000	250000		
Gross Profit C/d	120000		
	370000		370000
To Expenses	20000	By Gross Profit b/d	120000
To Net Profit C/d	100000		
	120000		120000
To Provision for tax	40000	By Net Profit b/d	100000
To Dividend	20000		
To Net Profit	40000		
	100000		100000

Balance Sheet as on 31st March 2019

Liabilities	Rs	Assets	Rs.
Share Capital (Rs.10)	200000	Plant and machinery	70000
Reserves	10000	Land and Building	30000
Profit and Loss Account	40000	Stock	60000
Creditors	50000	Debtors	80000
		Cash and bank	60000

Total	300000	Total	300000

Calculate the following ratios:

1. Stock Turnover ratio
2. Debtors turnover ratio
3. Creditors Turnover ratio
4. Return on Capital Employed
5. Return on Proprietors fund
6. Net profit ratio

Q.2

The summarized final accounts of two companies are as follows

Liabilities	Sanchi Ltd	Samar Ltd	Assets	Sanchil Ltd	Samar Ltd
Share capital	100000	100000	Fixed Assets	126000	107000
Reserves	44000	32000	Current Assets	124000	110000
8%Debentures	20000	20000			
Current Liabilities	86000	65000			
Total	250000	217000	Total	250000	217000

Revenue Statement for the Year

	Sanchi Ltd	Samar Ltd
Income		
Sales	420000	500000
Less Cost of sales	250000	200000
	170000	300000

Less Operating Expenses	70000	150000
Net profit before tax	100000	150000
Less Tax	30000	52500
Profit after tax	70000	97500
Less Dividend	10000	10000
Retained earnings	60000	87500

You are required to calculate following ratios

1. Proprietary Ratio
2. Capital Gearing ratio
3. Gross Profit ratio
4. Operating ratio
5. Return on Proprietors equity ratio
6. Expenses ratio
7. Net Profit ratio

11.7 Fund Flow Statement

The fund flow statement replicates movement of fund duringperiod i.e. Changesin working capital. Sources considerofthetransactionsthatrisesnetworkingcapitalandtheirapplicationscompriseoftransactionsthatdecreaseworkingcapital. Fund Flow statement is essential from Working capital point of view. Fund Flow statement specifies various sources of funds andworking capital and its application

11.8 Sources and Application of Funds (Changes in Working Capital)

SourcesofFunds

Thesourceoffundsare categorized in following manner

Internal sourcesFunds from operations is the only internal source of funds.

However,following changes will be required in the figure of Net Profit for finding out realfundsfromoperations:

*Add*thefollowingitemsastheydonotresultinoutflowoffunds:

(i) Depreciationonfixedassets.

(ii) Preliminaryexpensesorgoodwill,etc.,writtenoff.

(iii) Contributiontodebentureredemptionfunds,transfertogeneralreserve,etc.,ifthey havebeendeductedbeforearrivingatthefigureofnetprofit.

(iv) Provision for taxation or proposed dividend are typically taken as appropriation ofprofits only and not current liabilities for the purposes of Funds Flow Statement. Tax or dividends truly paid are taken asapplicationsoffunds.Similarly,interimdividendpaidisshownasanapplicationoffunds. All these items will be added back to net profit, if already deducted, to findfundsfromoperations.

(v) Lossonsaleoffixedassets.

*Deduct*thefollowingitemsastheydonotincreasefunds:

(i) Profitonsaleoffixedassetssincethefullsaleproceedsaretakenasaseparatesourceoffund sandinclusionherewillresultinduplication.

(ii) Profitonrevaluationoffixedassets.

(iii) Non-operating incomes such as dividend received or accrued dividend, refund ofincome-tax, rentreceivedoraccruedrent.Theseitems increasefunds,but theyarenon-operatingincomes.Theywillbeshownunderseparateheadsas‘sourceoffunds’intheFund sFlowStatement.

IncasetheProfit andLossAccountshows‘Net Loss’,this shouldbetakenasanitemwhichdecreasesthefunds.

Theusestowhichfundsareputarecalled‘applicationsoffunds.

Followingaresomeofthepurposesforwhichfundsmaybeused:

Purchase of fixed assets

Purchase of fixed assets such as land, building, plant,machinery, long-term investments,

etc., effects in decrease of current assets without anydecrease in current liabilities. Hence, there will be a flow of funds. But in case shares ordebenturesareissuedforpurchaseoffixedassets,therewillbenoflowoffunds.

Paymentofdividend

Paymentofdividendresultsindecreaseofafixedliabilityand,therefore,itaffectsfunds.Generally, recommendationofdirectorsregardingdeclara-tion of dividends (i.e. proposed dividends) is purely taken as an appropriation of profitsandnotasanitemchanging theworkingcapital.

Payment of fixed liabilities

Payment of a long-term liability, such as redemption ofdebenturesorredemptionofredeemablepreferenceshares,resultsinreductionofworkingcapitaland henceitistakenasanapplication offunds.

Payment of tax liability

Provision for taxation is normally taken as an appropriationof profits and not as an application of funds. But if the tax has been paid, it will be takenasanapplicationoffunds.

Preparation of FundsFlowStatement

A funds flow statement shows change in working capital. It will, therefore, be better forthestudentstopreparefirstaScheduleofChangesinWorkingCapital beforepreparingaFundsFlow Statement.

Statement of changes in working capital

The statement of changes in working capitalcanbepreparedbycomparingthecurrentassetsandthecurrentliabilitiesoftwoperiods.Itmaybei nthefollowingform.

Items	*ason* ...	*ason* ...	*Change*	
			Increase	*Decrease*

CurrentAssets:				
Cash and Bank Balance				
Marketable Securitas				
Stock in trade				
Debtors				
Prepaid Expenses				
Current Liabilities				
Bankoverdraft				
Creditors				
Outstanding				
Expenses				
NetIncrease/DecreaseinWorking Capital:				

Points to be noted

(i) Increaseinacurrentasset,resultsinincrease(+)in‘workingcapital.’

(ii) Decreaseinacurrentasset,resultsindecrease(–)in‘workingcapital.’

(iii) Increaseinacurrentliability,resultindecrease(–)in‘workingcapital.’

(iv) Decreaseinacurrentliability,results increase(+)in‘workingcapital.’

Sources		**Applications**	
IssueofShareCapital	x	Redemption ofpreferenceshares	x
IssueofDebentures	x	RedemptionDebentures	x
SaleofFixedAssets	x	RepaymentofloanTermloans	x

SaleofInvestments	x	Purchased of Fixed Assets	x
LongtermLoans	x	PurchasedofInvestment	x
Decrease in working capital	x	Dividendpaid	x
Funds from operations(CashTrading Profit)	x	IncomeTaxpaid	x
		Buy-Backof Equityshares	x
		Increaseinworkingcapital	x
	xx		**xx**

Specimen of Fund Flow statement

Fund Flow statement as on ----

11.9 Cash Flow Statement

Information about the cash flow of an enterprise is useful in providing users of financial statements with a basis to assess the ability of the enterprise to generatecash and cash equivalents and the needs of the enterprise to utilize those cash flows.Theeconomicdecisionsthataretakenbytheusersrequireanevaluationoftheabilityof an enterprise to generate cash and cash equivalents and the timing and uncertaintyof their generation. In view of the importance of cash flows in decision making, anenterprise should prepare a cash flow statement giving both inflows and outflows ofcash during a particular period. A cash flow statement, when used in conjunction withother financial statements, provides information that enables its users to evaluate thechanges in net assets of an enterprise, its financial structure and its ability to affecttheamountandtimingsofthecashflowsinorder toadapttochangingcircumstances.

11.10 Cash Flow Statement -Terms used

There are various specific terms used in the process of preparation of cash flow statement and hence it is important to understand the meaning of such terms. Hence,

Let us understand precisely the terms involved in preparation of the statement.

Definition of cash

As per AS 3,this would include cash in hand and savings, current account balance with banks(also referred to as demand deposits)with banks and cash equivalence

Cash Equivalents

Cash Equivalent is defined as, short term and highly liquid investments that are readily convertible into cash and which are subject to insignificant risk of changes in values. An investment normally be called as cash equivalent only when it has a short-term maturity of say three months or less from the date of acquisition. Generally, investment in shares would not be considered. Since cash and cash equivalent is taken together as a starting point of a cash flow statement.

Cash Flow

Cash Flows are inflow and outflow of cash and cash equivalent. Major cash inflows are like issue of new shares for cash, receipts of long-term loans from bank, financial institutions etc, receipts of short-term loans from banks, financial institutions or any other entities, sale of assets and investments, dividend and interest received, cash generated from operations. Some major cash outflows are redemption of preference shares, purchase of fixed assets or investments, repayment of long-term and short-term borrowings, decrease in deferred payment liabilities, loss from operations, payment of tax, dividend etc.

Classification of Activities

As per AS 3 Cash Flow Statement should report cash inflows during the period categorized into Operating, Investing and Financing Activities.

Cash Flow from Operating Activities

The cash Flows generated from major revenue generating activities of the business are covered under this head. Cash Flow from operating activities is the indicator of the extent to which the operations of the business organization have generated sufficient cash to maintain the operating capability to pay dividend, repay loans and make new investment. Following are the cash flows from operating activities:

1. Cash receipts from royalties, fee, commission etc.
2. Cash receipts and payments relating to future contract, forward contract etc,
3. Cash payments to employees.

4. Cash payments or refunds of income tax(except when such payments or refunds relate to investing of financing activities)
5. Cash receipts from sale of goods and services.
6. Cash receipts and payment arising from purchase and sale of trading securities.

Cash Flows from Investing Activities:

These are the acquisitions and disposal of long-term assets and other investments not included in cash equivalents. This represents the extent to which the expenditures have been made for resources intended to generate future incomes and cash flows, Following are the cash flows from investing activities:

1.Repayments of loans given

2.Cash payments for purchase of fixed assets

3.Cash payments for purchase of shares/debentures etc in other entities.

4.Cash receipts from sale of fixed assets

5.Loans and advances given to third parties.

Cash Flows from Financing Activities:

Financing activities are the activities that result in changes in size and compositions of Owner's equity and borrowings of the enterprise. Separate disclosure is important because it is useful in predicating claims on future cash flows by providers of funds. Following are the cash flows from financing activities:

1. Cash receipts from issue of share capital
2. Cash receipts from issue of debentures, loans
3. Cash repayments of amount borrowed
4. Cash payment to redeem preference shares

Notes: Investing and financing activities that do not require the use of cash or cash equivalent should be excluded from cash flow statement. Following are some items of the said nature.

- Acquisitions of assets by assuming directly related liabilities
- Acquisitions of business by means of issue of shares
- Conversion of debt into equity

Adjustments and treatments

1.Extraordinary Items

Cash flow related to extraordinary items should be classifies as arising from operating investing or financing as suitable. Legal expenses incurred in case of disputed land and building is classifies as investing activity. Loss of stock by theft should be classifies ass operating activity.

2.Non-Cash Transactions

Investing and Financing transactions that do not require cash excluded from cash flow statement. These tranctions do not have direct impact on current cash flow though they affect capital and assets of the business. On Cash transactions include the purchase of assets by issue of shares and debentures, conversion of debentures into shares, etc. These transactions are shown as footnote below Cash Flow statement.

Dividend and Interest In the case of Non-financial business enterprises, dividend and interest are not considered ass operating activities of the business. Therefore, they are not shown as part of cash flow from operating activities. Cash flows arising from interest and dividend paid are excluded from cash flow from operations and are classified as cash flows from financing activities. Dividends and interest are received are classified as non-operating and reported as cash inflows from investing activities. Dividends and interest received are classified as non-operating and reported as cash inflows from investing activities.

3.Foreign Currency Cash Flows

These flows should be recorded in the organization's reporting currency by applying the exchange rate at the cash flows. The effect of changes in the exchange rate on cash and cash equivant held in foreign currency should be reported as separate item ass part of reconciliation of the changes in the cash funds during the period under consideration.

4.Income tax

Cash flows arising from taxes on income generated and distributed should be disclosed separately as cash flows from operating activities unless they can be specially identified with financing and investing activities. Corporate dividend tax paid should be disclosed a part of financing activities and capital gain tax on sale of property should be regarded as investing activities.

5.Acquiring /Disposing of subsidiaries and other business Unit

Cash flow arising out of these should be classified as investing activities. The separate presentation of the Cash flow effects of acquisition and disposal is required. The presentation accordingly given provides fair view of the related transactions.

6.Other Disclosures

The organization should disclose the amount of significant cash and Cash equivalents balances held by business that are not available for use by it. For example, bank balance of a foreign branch is not available due to foreign exchange controls

Methods of calculation of Cash flows from operating activities

The most information provided in cash flow statement is cash flow from operating activities. Cash flow from operations include cash receipts from the sale of goods and rendering of services, fee commsion,cash receipts from royalties, other revenue, Cash payment to suppliers of goods,tax,tax refund, cash payment to employees,etc.Net profit disclosed by the Income statement does not specify the net cash provided by the operating activities. In order to calculate net cash provided by the operating activities revenues and expenses are replaced by actual receipts and payments in cash. There are two methods of calculation of cash flow from operating activities as given below:

Direct Method

Under this method, major classes of gross cash receipts and gross cash payments are obtained from the records for determination of cash flow from operating activities:

1.Cash sale of goods and services

2.Collection from customers

3.Cash payment of salaries and wages of employees

4Csh payment of income tax

5. Cash payment of purchase of inventories

6Cash payment for various operating expenses

7.Receipts of royalties, fee, commission and other revenues

Profit and Loss Account for all the item on accrual basis. Various items in the Profit and Loss Account are adjusted for changes in related items in current assets and current liabilities in order to decide Profit and Loss Account on Cash Basis. The balancing figure in the Profit and Loss Account expose Cash from operating activities. Certain additional adjustments are given below.

Cash inflow from sales

Sales in the profit and loss account show cash sales and Credit sales. For deciding cash flow from credit sales, it is adjusted for debtors and Bills Receivables.

	Rs
Add : Credit Sales	XX
Debtors and Bills Receivables at the beginning	XX
Less Debtors and Bills Receivable at the end	XX
Cash flow from Sales	XX

Cost of Sales on Cash Basis

Cost of Sales as per Profit and Loss Account is adjusted for stock of goods to get purchases and then purchases are adjusted for creditors at the beginning and at the end of the year to decide cash outflow of cost of sales

Purchases=Cost of Sales-Opening stock closing stock

	Rs
Add : Purchases	XX
Opening creditors	XX
Less Closing Creditors	XX
Cash outflow on Purchases	XX

Expenses on Cash Basis

Expenses debited to Profit, and Loss Account are analysed to decide cash outflow on account of payment of expenses as under:

	Rs
Expenses in Profit and Loss Account	XX
Add Outstanding at the beginning	XX
Less Outstanding at the end	XX
Cash outflow on account of expenses	XX

Cash Outflow on Account of Insurance

	Rs	
Insurance Premium (in profit and Loss Account		XX
Less Prepaid in the beginning	XX	

Add Prepaid at the end	XX
Cash outflow on account of Insurance	XX

Proforma Of Direct Method

	Rs
Cash Sales	XX
Add collection from Debtors	XX
Gross Cash receipts from Operations	XX
Less Cash Operating Expenses	XX
Net Cash Generated by Operation	

Indirect Method

In this method cash from operating activities is calculated by adjusting net profit and loss instead of individual item exhibited in the income statement.Net Profit and Loss is adjusted for changes during the period. After ascertaining Net Operating Profit, adjustments regarding changes in current assets and current liabilities are made shown below.

Adjustments to eb made to Net Profit

Current Assets and Current Liabilities		
	Add	Delete
Current Assets	Decrease	-
Current Assets	-	Increase
Current Liabilities	Increase	-
Current Liabilities	-	Decrease

Conceptual check

1.What is fund flow statement

2.Define Cash Flow statement

11.11 List of References

1. Financial Management by Khan and Jain -TataMcGraw Hills Publications
2. Financial Management by Srivastavand Misra -Oxford Publications
3. UOM IDOL Notes

UNIT 5 - CHAPTER 12

CAPITAL BUDGETING

12.0 OBJECTIVES

- To find out the profitable capital expenditure.
- To know whether the replacement of any existing fixed assets gives more return than earlier.
- To decide whether a specified project is to be selected or not.
- To find out the quantum of finance required for the capital expenditure.
- To assess the various sources of finance for capital expenditure.
- To evaluate the merits of each proposal to decide which project is best.

12.1 INTRODUCTION

Capital Budgeting: Capital budgeting is the process of making investment decision in long-term assets or courses of action. Capital expenditure incurred today is expected to bring its benefits over a period of time. These expenditures are related to the acquisition & improvement of fixes assets.

Capital budgeting is the planning of expenditure and the benefit, which spread over a number of years. It is the process of deciding whether or not to invest in a particular project, as the investment possibilities may not be rewarding. The manager has to choose a project, which gives a rate of return, which is more than the cost of financing the project. For this the manager has to evaluate the worth of the projects in-terms of cost and benefits. The benefits are the expected cash inflows from the project, which are discounted against a standard, generally the cost of capital.

12.2 CAPITAL BUDGETING

One of the important aspects of Financial Management is proper decision making in respect of investment of funds. Successful operation of any business depends upon the investment of resources in such a way as to bring in benefits or best possible returns from any investment. An investment can be simply defined as expenditure in cash or its equivalent during one or more time periods in anticipation of enjoying a net inflow of cash or its equivalent in some future time period or periods. An appraisal of investment proposals is necessary to ensure that the investment of resources will bring in desired benefits in future. If the financial resources were in abundance, it would be possible to accept several investment proposals which satisfy the norms of approval or acceptability. Since resources are limited a choice has to be made among the various investment proposals by evaluating their comparative merit. It is apparent that some

techniques should be followed for making appraisal of investment proposals. Capital Budgeting is one of the appraising techniques of investment decisions. Capital Budgeting is defined as the firm's decision to invest its current funds most efficiently in long term activities in anticipation of an expected flow of future benefits over a series of years. It should be remembered that the investment proposal is common both for fixed assets and current assets.

Capital budgeting decision may be defined as "Firms decisions to invest its current funds most efficiently in long term activities in anticipation of an expected flow of future benefits over a series of year. The firm's capital budgeting decisions will include addition, disposition, modification and replacement of fixed assets"

An organization undertakes multiple projects with different capital requirements, rates of return, and time duration.

For example, some projects may need investment over a longer period of time, whereas others need investments only in the initial years.

"Capital Budgeting is a kind of thinking that is necessary to design and carry through the systematic programme for investing stockholders' money"-Joel Dean.

Since every project requires investment; therefore, an organization should take project selection decisions very prudently to ensure the optimum utilization of funds invested.

Any wrong selection of a project may incur heavy losses for the organization. In addition, the reputation and goodwill of the organization may also get affected.
An organization needs to evaluate the capital requirements of a project and the returns generated from it, before selecting a project. This can be done with the help of capital budgeting, which is a process of determining the actual profitability of a project. In other words, capital budgeting is a process that helps in planning the investment projects of an organization in the long run. The long- term investments of an organization can be purchase and replacement of fixed assets, new product launching or expansion of existing products, and research and development.

The capital budgeting process can be effective if an organization determines the total capital expenditure for a project that is expected to generate returns over a particular period of time. An organization uses various techniques to determine the total expenditure for a project and rate of return yielded from it. Some of the popular techniques are net present value, internal rate of return, payback period, sensitivity analysis, and decision tree analysis.

Concept of Capital Budgeting:
Capital budgeting is a planning process that is used to determine the worth of long-term investments of an organization. The long- term investments of the organization can be made in purchasing a new machinery, plant, and technology.

In other words, capital budgeting is a method of identifying, evaluating, and selecting long-term investments. The concept of capital budgeting has a great importance in project selection as it helps in planning capital required for completing long-term projects. Selection of a project is a major investment decision for an organization.

Therefore, capital budgeting decisions are included in the selection of a project. In addition, capital budgeting helps in estimating costs and benefits involved in a particular project. A project is not worth investing, if it does not yield adequate return on invested capital.

Some of the management experts have defined capital budgeting in the following ways:

1) According to Charles T. Homgreen, "Capital Budgeting is long-term planning for making and financing proposed capital outlays."

2) As per Richards and Greenlaw, "The capital budgeting generally refers to acquiring inputs and long-run returns."

3) In the words of G. C. Philipattos, "Capital budgeting is concerned with the allocation of the firm's scarce financial resources among the available market opportunities. The consideration of investment opportunities involves the comparison of the expected future streams of earnings from a project; with the immediate and subsequent stream of expenditures for it."

4) According to Joel Dean, "Capital Budgeting is a kind of thinking that is necessary to design and carry through the systematic programme for investing stockholders' money."

5) According to Keller and Ferrara, "Capital Budgeting represents the plans for the appropriation and expenditure for fixed asset during the budget period".

6) Robert N. Anthony defined as "Capital Budget is essentially a list of what management believes to be worthwhile projects for the acquisition of new capital assets together with the estimated cost of each product".

12.3 NEED OF CAPITAL BUDGETING DECISION

The selection of the most profitable project of capital investment is the key function of Financial Manager. The decisions taken by the management in this area affect the operations of the firm for many years. Capital budgeting decisions may be generally needed for the following purposes:

a) Expansion; b) Replacement; c) Diversification; d) Buy or lease and e) Research and Development.

a) Expansion: The firm requires additional funds to invest in fixed assets when it intends to expand the production facilities in view of the increase in demand for their product in near future. Accordingly the current assets will increase.

In case of expansion the existing infrastructure – like plant, machinery and other fixed assets is inadequate, to carry out the increased production volume. Thus the firm needs funds for such project. This will include not only expenditure on fixed assets (infrastructure) but also an increase in working capital (current assets).

b) Replacement: The machines and equipment used in production may either wear out or may be rendered obsolet due to new technology. The productive capacity and competitive ability of the firm may be adversely affected. The firm needs funds or modernisation of a certain machines or for renovation of the entire plant etc., to make them more efficient and productive. Modernization and renovation will be a substitute for total replacement, where renovation or modernization is not desirable or feasible, funds will be needed for replacement.

c) Diversification: If the management of the firm decided to diversify its production into other lines by adding a new line to its original line, the process of diversification would require large funds for long-term investment. For example ITC and Philips company for their diversification.

d) Buy or Lease: This is a most important decision area in Financial Management whether the firm acquire the desired equipment and building on lease or buy it". If the asset is acquired on lease, there have to be made a series of annual or monthly rental payments. If the asset is purchased, there will be a large initial commitment of funds, but not further payments. The decision – making area is which course of action will be better to follow? The costs and benefits of the two alternative methods should be matched and compared to arrive at a conclusion.

e) Research and Development: The existing production and operations can be improved by the application of new and more sophisticated production and operations management techniques. New technology can be borrowed or developed in the laboratories. There is a greater need of funds for continuous research and development of new technology for future benefits or returns from such investments.

12.4 SIGNIFICANCE OF CAPITAL BUDGETING

The significance of capital budgeting is explained in the following points:

(a) Long-term Applications:

Implies that capital budgeting decisions are helpful for an organization in the long run as these decisions have a direct impact on the cost structure and future prospects of the organization. In addition, these decisions affect the organization's growth rate.

Therefore, an organization needs to be careful while making capital decisions as any wrong decision can prove to be fatal for the organization. For example, over-investment in various

assets can cause shortage of capital to the organization, whereas insufficient investments may hamper the growth of the organization.

(b) Competitive Position of an Organization:
Refers to the fact that an organization can plan its investment in various fixed assets through capital budgeting. In addition, capital investment decisions help the organization to determine its profits in future. All these decisions of the organization have a major impact on the competitive position of an organization.

(c) Cash Forecasting:
Implies that an organization needs a large amount of funds for its investment decisions. With the help of capital budgeting, an organization is aware of the required amount of cash, thus, ensures the availability of cash at the right time. This further helps the organization to achieve its long-term goals without any difficulty.

(d) Maximization of Wealth:
Refers to the fact that the long-term investment decisions of an organization helps in safeguarding the interest of shareholders in the organization.

If an organization has invested in a planned manner, shareholders would also be keen to invest in the organization. This helps in maximizing the wealth of the organization. Capital budgeting helps an organization in many ways. Thus, an organization needs to take into consideration various aspects.

12.5 TYPES OF CAPITAL

OWNED CAPITAL	BORROWED CAPITAL
Equity	Financial institutions,
Preference	Commercial banks or
Retained Earnings	The general public in case of debentures.

Convertible Debentures	
Venture Fund or Private Equity	

12.5.1 Owned Capital

Owned capital also refers to equity. It is sourced from promoters of the company or from the general public by issuing new equity shares. Promoters start the business by bringing in the required money for a start-up.

Following are the sources of Owned Capital:

- Equity
- Preference
- Retained Earnings
- Convertible Debentures
- Venture Fund or Private Equity

Owned capital / proprietary capital

i) Equity Shares:- The equity shareholders are the owners of the firm, who, through the voting rights attaching to their shares, exercise ultimate control over the firm. As Owners of the firm, the equity shareholders bear the greatest risk. If the firm traces unsuccessfully, the equity

Shareholders are the first to suffer in terms of lack of evidences and probably falls in the market value of their shares. If the firm collapses (it is put into liquidation) it is again the equity shareholders who will be at the bottom of the list with his claim for repayment of his investment.

On the other hand, the fruits of the firm's success principally benefit equity shareholders, other participants in the firm employees, lenders, suppliers etc. tend to earn returns not related to the firm's success. Thus once the claims of these other claimants are met, the balance accrues to the ordinary shareholders.

ii) Preference Shares

Preference shares form part of the risk bearing ownership of the firm but since preference shareholders usually have the right to the first slice of any dividend paid, they bear less risk than

do ordinary shares investors' expectations of returns from preference share are therefore, lower than expectation from ordinary shares in the same firm, Historically preference shares have been a significant source of corporate finance.

iii) Retained Profits (Earnings)

It may be surprising when it is stated that retained profits is a source of new equity finance. However, profits certainly lead to a net increase in funds and retaining these or part of them, rather than paying them out as dividends is effectively as way of raising finance. After all if the full profit were paid out as dividends and then share holders bough new shares with their dividend money, this would have much the same, effect as retaining the funds in the first place.

In fact retained profits are a very important source of finance, accounting for over half of all the long term finance raised by firms over recent years.

Further, when the business grows and internal accruals like profits of the company are not enough to satisfy financing requirements, the promoters have a choice of selecting ownership capital or non-ownership capital. This decision is up to the promoters. Still, to discuss, certain advantages of equity capital are as follows:

- It is a long-term capital which means it stays permanently with the business.
- There is no burden of paying interest or installments like borrowed capital. So, the risk of bankruptcy also reduces. Businesses in infancy stages prefer equity for this reason.

1**2**.5.2 Borrowed Capital

Borrowed or debt capital is the finance arranged from outside sources. These sources of debt financing include the following:

- Financial institutions,
- Commercial banks or
- The general public in case of debentures

Bank Loans

Bank term loans differ from over drafts by being for fixed periods, fixed amounts and by having fixed interest rates payable on them.

Loans can be made for anything from a few months to six or seven years. Repayment on either be made in full at the end of the period or (more usually_ in installments throughout its life, interest being paid as part of those installments. Loans can also be granted in installments as well

as in lump sums. Installment loans are often by companies to finance the construction of projects, however, with this type of loan if the whole amounts not drawn within a certain period the outstanding funds are cancelled.

Loans have the disadvantage that interest is payable on the entire amount regardless of whether the company uses all of the money or not, although it is possible to negotiate to repay some or all of the loan before it is due. Another possible disadvantage is that the interest rate is fixed for the duration of the loan or at least for each say, six months period ad so if market rates fall the company could loss out. On the other hand fixed rates are an advantage in times of raising interest rates.

In this type of capital, the borrower has a charge on the assets of the business which means the company will pay the borrower by selling the assets in case of liquidation. Another feature of the borrowed fund is a regular payment of fixed interest and repayment of capital. Certain advantages of borrowing are as follows:

- There is no dilution in ownership and control of the business.
- The cost of borrowed funds is low since it is a deductible expense for taxation purpose which ends up saving on taxes for the company.
- It gives the business the benefit of leverage.

12.6 ESTIMATION OF FIXED CAPITAL

Fixed capital involves allocation of firm's capital to long term assets or projects. Managing fixed capital is related to investment decision and it is also called Capital Budgeting. The capital budgeting decision affects the growth and profitability of the company.

The long term assets bring benefits over a long period and investment in these assets involves huge amount of funds. The capital budgeting decisions include purchase of land, building, plant and machinery, change of technology, expenditure of advertising campaign, research and development etc.

Factors Affecting Requirement of Fixed Capital:
Investment in fixed assets is for longer duration and is called fixed capital. Fixed capital is financed through long term sources of finance such as equity shares, preference shares, debentures, long term loans, etc.

Factors Affecting Requirement of Fixed Capital:

- Nature of Business:

- Scale of Operation:
- Technique of Production:
- Technology Up-gradation:
- Growth Prospects:
- Diversification:
- Availability of Finance and Leasing Facility:
- Level of Collaboration/Joint Ventures:

The requirement of fixed capital depends upon various factors which are explained below:

1. Nature of Business*:*

The type of business Co. is involved in is the first factor which helps in deciding the requirement of fixed capital. A manufacturing company needs more fixed capital as compared to a trading company, as trading company does not need plant, machinery, etc.

2. Scale of Operation*:*

The companies which are operating at large scale require more fixed capital as they need more machineries and other assets whereas small scale enterprises need less amount of fixed capital.

***3.* Technique of Production:**

Companies using capital-intensive techniques require more fixed capital whereas companies using labour-intensive techniques require less capital because capital-intensive techniques make use of plant and machinery and company needs more fixed capital to buy plants and machinery.

4. Technology Up-gradation*:*

Industries in which technology up-gradation is fast need more amount of fixed capital as when new technology is invented old machines become obsolete and they need to buy new plants and machinery whereas companies where technological up-gradation is slow they require less fixed capital as they can manage with old machines.

5. Growth Prospects*:*

Companies which are expanding and have higher growth plan require more fixed capital as to expand they need to expand their production capacity and to expand production capacity companies need more plant and machinery so more fixed capital.

6. Diversification*:*

Companies which have plans to diversify their activities by including more range of products require more fixed capital as to produce more products they require more plants and machineries which means more fixed capital.

7. Availability of Finance and Leasing Facility:
If companies can arrange financial and leasing facilities easily then they require less fixed capital as they can acquire assets on easy installments instead of paying huge amount at one time. On the other hand if easy loan and leasing facilities are not available then more fixed capital is needed as companies will have to buy plant and machinery by paying huge amount together.

8. Level of Collaboration/Joint Ventures:
If companies are preferring collaborations, joint venture then companies will need less fixed capital as they can share plant and machinery with their collaborators but if company prefers to operate as independent unit then there is more requirement of fixed capital

12.7 METHODS OF RAISING CAPITAL

METHODS OF RAISING CAPITAL

1. Public Issue of Shares: The company can raise a substantial amount of fixed capital by issue of shares- equity and preference. In India, however, equity shares are more popular as compared to preference shares. The issue of shares requires a number of formalities to be completed such as approval of prospectus by S.E.B.I., appointment of underwriters, bankers, and registrars to the issue, filing of the prospectus with the registrar of companies, and so on.

2. Rights Issue of Shares: A Right issue is issue of shares to the existing shareholders of the company through a Letter of Offer made in first instance to the existing shareholders on pro data basis. The shareholders have a choice to forfeit this right partially or fully. The company, then issue this additional capital to public. This is an inexpensive method as underwriting commission, brokerage are very small. Rights issue prevents dilution of control but it may conflict with the broader objective of wider diffusion of share capital.

3. Private Placement of Shares: This is a method of raising funds from a group of financial institutions and others who are ready to invest in the company.

4. Issue of Debentures: There are companies who collect long term funds by issuing debentures- convertible, or, non convertible. Convertible debentures are very popular in the Indian market.

5. Long Term Loans: The company may also obtain long term loans from banks and financial institutions like I.D.B.I., I.C.I.C.I., and so on. The funding of term loans by financial institutions often acts as an inducement for the investors to sub- scribe for the shares of the company. This is, because, the financial institutions study the project report of the company before sanctioning loans. This creates confidence in the investors, and they too, lend money to the company in form of shares, debentures, fixed deposits, and so on.

6. Accumulated Earnings (Reserves): The Company often resorts to ploughing back of profits that, is, retaining a part of profits instead of distributing the entire amount to shareholders by way

of dividend. Such accumulated earnings are very useful at the time of replacements, or, purchases of additional fixed assets.

Rights Issue: Rights issue is an invitation to the existing shareholders to subscribe for further shares to be issued by a company. A right simply means an option to buy certain securities at a certain privileged price within a certain specified period. The Company Act, 1956 lays down the manner in which further issue of shares, whether equity or preference, is to be made so as to ensure equitable distribution of shares without disturbing the established equilibrium of shareholding in the company. According to Section 81 of the Companies Act, whenever a public limited company proposes to increase its subscribed capital by the allotment of further shares, after the expiry of two years from the formation of the company or the expiry of one year from the first allotment of shares in the company, whichever is earlier, the following conditions or procedure must be followed:

1. Such shares must be offered to holders of equity shares in proportion, as nearly as circumstances admit, to the capital paid-up on those share.

2. The offer must be made by giving a notice specifying the number of shares offered.

3. The offer must be made to accept the shares within a period specified in the notice being not than 15 days.

4. Unless the articles of association of the company provide otherwise, the notice must also state that the shareholder has the right to renounce all or any of the shares offered to him in favor of his nominees.

Shares so offered to existing shareholders are called Right Shares as the existing equity shareholders of the public company have a first right of allotment of further shares. The offer of such shares to the existing equity shareholder is known as Privileged Subscription or Right Issue. The prior right of the shareholders is also known as pre-emptive right. After expiry of the time specified in the notice or on receipt of earlier information from the shareholder declining to accept the shares offered, the Board of Directors may dispose them off in such a manner as they think most beneficial to the company.

Advantages of Rights Issue

1. It ensures that the control of the company is preserved in the hands of the existing shareholders.

2. The expenses to be incurred, otherwise if shares are offered to the public, are avoided

3. There is more certainty of the shares being sold to the existing shareholders.

4. It betters the image of the company and stimulates enthusiastic response from shareholders and the investment market.

5. It ensures that the directors do not misuse the opportunity of issuing new shares to their relatives and friends at lower prices on the one hand and on the other get more controlling rights in the company.

12.8 SOURCES OF CAPITAL

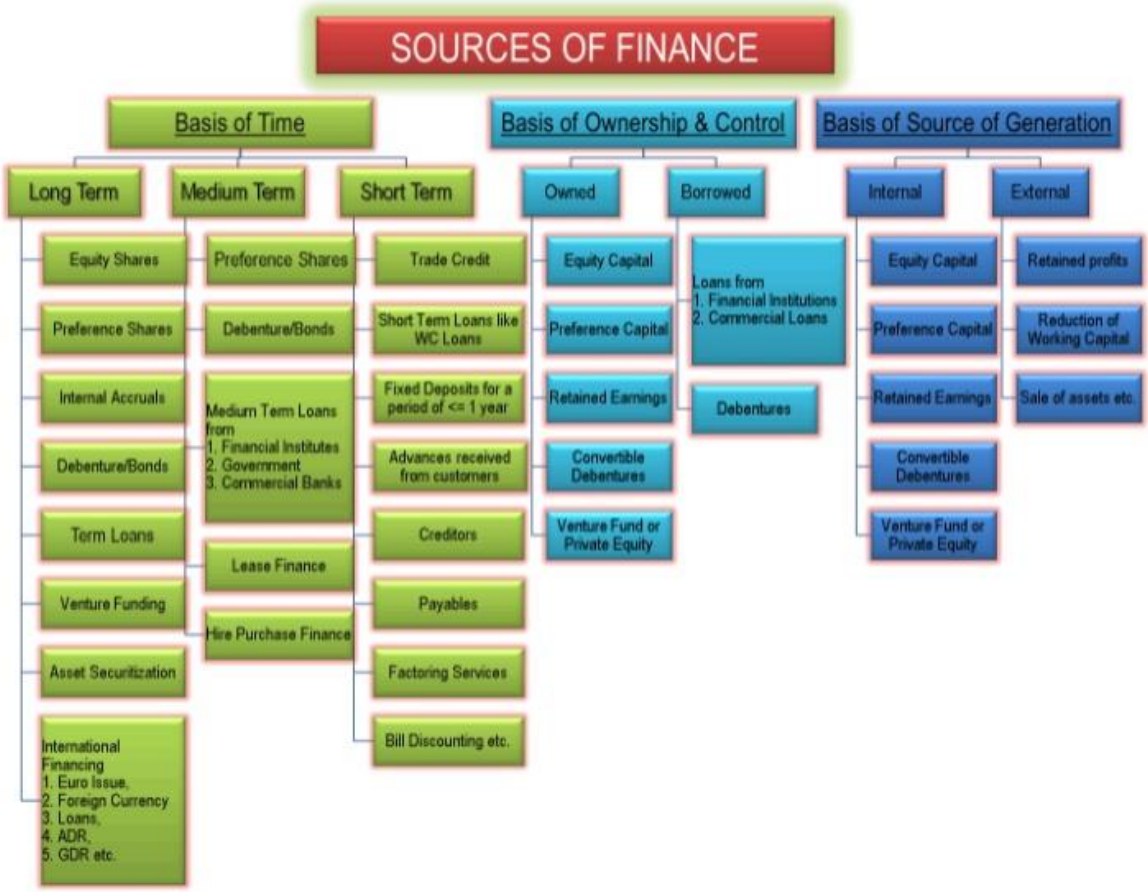
- Long-Term Sources of Finance
- Medium Term Sources of Finance
- Short Term Sources of Finance
- Owned Capital
- Borrowed Capital
- Internal Sources
- External Sources

Sources of finance for business are equity, debt, debentures, retained earnings, term loans, working capital loans, letter of credit, euro issue, venture funding etc. These sources of funds are used in different situations. They are classified based on time period, ownership and control, and their source of generation. It is ideal to evaluate each source of capital before opting for it.

Sources of capital are the most explorable area especially for the entrepreneurs who are about to start a new business. It is perhaps the toughest part of all the efforts. There are various capital sources, we can classify on the basis of different parameters.

Having known that there are many alternatives to finance or capital, a company can choose from. Choosing the right source and the right mix of finance is a key challenge for every finance manager. The process of selecting the right source of finance involves in-depth analysis of each and every source of fund. For analyzing and comparing the sources, it needs the understanding of all the characteristics of the financing sources. There are many characteristics on the basis of which sources of finance are classified.

On the basis of a time period, sources are classified as long-term, medium term, and short term. Ownership and control classify sources of finance into owned and borrowed capital. Internal sources and external sources are the two sources of generation of capital. All the sources have different characteristics to suit different types of requirements. Let’s understand them in a little depth.



According to Time Period

Sources of financing a business are classified based on the time period for which the money is required. The time period is commonly classified into the following three:

LONG TERM SOURCES OF FINANCE / FUNDS	MEDIUM TERM SOURCES OF FINANCE / FUNDS	SHORT TERM SOURCES OF FINANCE / FUNDS
Share Capital or Equity Shares	Preference Capital or Preference Shares	Trade Credit

Preference Capital or Preference Shares	Debenture / Bonds	Factoring Services
Retained Earnings or Internal Accruals	Lease Finance	Bill Discounting etc.
Debenture / Bonds	Hire Purchase Finance	Advances received from customers
Term Loans from Financial Institutes, Government, and Commercial Banks	Medium Term Loans from Financial Institutes, Government, and Commercial Banks	Short Term Loans like Working Capital Loans from Commercial Banks
Venture Funding		Fixed Deposits (<1 Year)
Asset Securitization		Receivables and Payables
International Financing by way of Euro Issue, Foreign Currency Loans, ADR, GDR etc.		

I) Long-Term Sources of Finance

Long-term financing means capital requirements for a period of more than 5 years to 10, 15, 20 years or maybe more depending on other factors. Capital expenditures in fixed assets like plant and machinery, land and building, etc of business are funded using long-term sources of finance. Part of working capital which permanently stays with the business is also financed with long-term sources of funds. Long-term financing sources can be in the form of any of them:

- Share Capital or Equity Shares
- Preference Capital or Preference Shares
- Retained Earnings or Internal Accruals
- Debenture / Bonds
- Term Loans from Financial Institutes, Government, and Commercial Banks
- Venture Funding
- Asset Securitization
- International Financing by way of Euro Issue, Foreign Currency Loans, ADR, GDR, etc

II) Medium Term Sources of Finance

Medium term financing means financing for a period of 3 to 5 years and is used generally for two reasons. One, when long-term capital is not available for the time being and second when deferred revenue expenditures like advertisements are made which are to be written off over a period of 3 to 5 years. Medium term financing sources can in the form of one of them:

- Preference Capital or Preference Shares
- Debenture / Bonds
- Medium Term Loans from
  - Financial Institutes
  - Government, and
  - Commercial Banks
- Lease Finance
- Hire Purchase Finance

III) Short Term Sources of Finance

Short term financing means financing for a period of less than 1 year. The need for short-term finance arises to finance the current assets of a business like an inventory of raw material and finished goods, debtors, minimum cash and bank balance etc. Short-term financing is also named as working capital financing. Short term finances are available in the form of:

- Trade Credit
- Short Term Loans like Working Capital Loans from Commercial Banks
- Fixed Deposits for a period of 1 year or less
- Advances received from customers
- Creditors

- Payables
- Factoring Services
- Bill Discounting etc.

According to Ownership and Control:

Sources of finances are classified based on ownership and control over the business. These two parameters are an important consideration while selecting a source of funds for the business. Whenever we bring in capital, there are two types of costs – one is the interest and another is sharing ownership and control. Some entrepreneurs may not like to dilute their ownership rights in the business and others may believe in sharing the risk.

According to Source of Generation:

Based on the source of generation, the following are the **internal and external sources of finance:**

INTERNAL SOURCES	**EXTERNAL SOURCES**
Retained profits	Equity
Reduction or controlling of working capital	Debt or Debt from Banks
Sale of assets etc.	All others except mentioned in Internal Sources

I) Internal Sources

The internal source of capital is the one which is generated internally by the business. These are as follows:

- Retained profits
- Reduction or controlling of working capital
- Sale of assets etc.

The internal source of funds has the same characteristics of owned capital. The best part of the internal sourcing of capital is that the business grows by itself and does not depend on outside parties. Disadvantages of both equity and debt are not present in this form of financing. Neither ownership dilutes nor fixed obligation / bankruptcy risk arises.

II) External Sources

An external source of finance is the capital generated from outside the business. Apart from the internal sources of funds, all the sources are external sources.

Deciding the right source of funds is a crucial business decision taken by top-level finance managers. The usage of the wrong source increases the cost of funds which in turn would have a direct impact on the feasibility of the project under concern. Improper match of the type of capital with business requirements may go against the smooth functioning of the business. For instance, if fixed assets, which derive benefits after 2 years, are financed through short-term finances will create cash flow mismatch after one year and the manager will again have to look for finances and pay the fee for raising capital again.

Graduated Lease

Generally speaking, when we talk about lease payments, this means a fixed amount as a lease rate. However, in the Graduated Lease, the payment is variable or depends on periodic appraisals of the property. Or both parties agree to adjust the monthly payment periodically. So, if the value of the property increases after the appraisal, the landlord can increase the monthly payment.

12.9 FEATURES OF CAPITAL BUDGETING

Capital budgeting is a crucial decision and to understand the concept in a better way, let us go through its following features:

1. **Huge Funds**: Capital budgeting involves expenditures of high value which makes it a crucial function for the management.
2. **High Degree of Risk**: To take decisions which involve huge financial burden can be risky for the company.
3. **Affects Future Competitive Strengths**: The company's future is based on such capital expenditure decisions. Sensible investing can improve its competitiveness, whereas a wrong investment may lead to business failure.
4. **Difficult Decision**: When the future is dependant on capital budgeting decisions, it becomes difficult for the management to grab the most appropriate investment opportunity.
5. **Estimation of Large Profits**: Any investment decision taken by the company is made with the perspective of earning desirable profits in the long term.
6. **Long Term Effect**: The effect of the decisions taken today, whether favorable or unfavorable, will be visible in the future or the long term.
7. **Affects Cost Structure**: The company's cost structure changes with the capital budgeting; for instance, it may increase the fixed cost such as insurance charges, interest, depreciation, rent, etc.
8. **Irreversible Decision**: A decision once taken is tough to be amended since it involves a high-value asset which may not be sold at the same price once purchased.

12.10 SUMMARY

Capital Budgeting represents the plans for the appropriation and expenditure for fixed asset during the budget period .

capital budgeting is a process that helps in planning the investment projects of an organization in the long run. The long- term investments of an organization can be purchase and replacement of fixed assets, new product launching or expansion of existing products, and research and development.

In case of expansion the existing infrastructure – like plant, machinery and other fixed assets is inadequate, to carry out the increased production volume. Thus the firm needs funds for such project. This will include not only expenditure on fixed assets (infrastructure) but also an increase in working capital (current assets).

Modernization and renovation will be a substitute for total replacement, where renovation or modernization is not desirable or feasible, funds will be needed for replacement.

An organization needs to be careful while making capital decisions as any wrong decision can prove to be fatal for the organization. For example, over-investment in various assets can cause shortage of capital to the organization, whereas insufficient investments may hamper the growth of the organization.

Capital investment decisions help the organization to determine its profits in future. All these decisions of the organization have a major impact on the competitive position of an organization.

If an organization has invested in a planned manner, shareholders would also be keen to invest in the organization. This helps in maximizing the wealth of the organization.

Owned capital also refers to equity. It is sourced from promoters of the company or from the general public by issuing new equity shares. Promoters start the business by bringing in the required money for a start-up.
The equity shareholders are the owners of the firm, who, through the voting rights attaching to their shares, exercise ultimate control over the firm.
Borrowed or debt capital is the finance arranged from outside sources.
Bank term loans differ from over drafts by being for fixed periods, fixed amounts and by having fixed interest rates payable on them.

The long term assets bring benefits over a long period and investment in these assets involves huge amount of funds. The capital budgeting decisions include purchase of land, building, plant and machinery, change of technology, expenditure of advertising campaign, research and development etc.

Rights issue is an invitation to the existing shareholders to subscribe for further shares to be issued by a company. A right simply means an option to buy certain securities at a certain privileged price within a certain specified period.

QUESTIONS:

Q1) Explain Capital Budgeting

Q2) Explain need of Capital Budgeting

Q3) Explain significance of Capital Budgeting

Q4) What are different types of Capital

Q5) What are methods of Raising Capital

Q6) What are the Sources of Capital

Q7) Explain Features of Capital Budgeting.

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Unit 5 – Chapter 13

WORKING CAPITAL

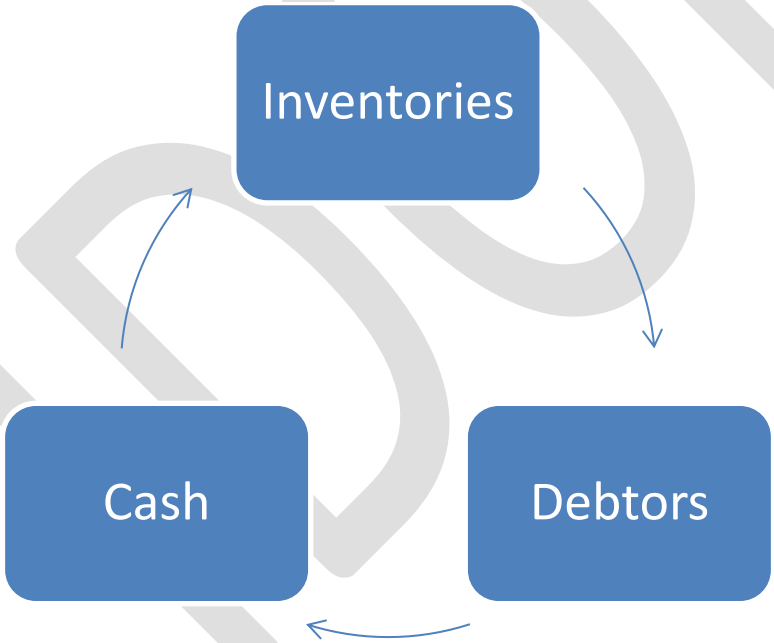
13.0 Objectives

- Define the concept Working Capital and classify the same.
- Elaborate the determinants of Working Capital.
- Explain the advantages of maintaining adequate amount of working capital.
- Discuss the disadvantages of inadequate amount of working capital

13.1 Introduction

In ordinary parlance, the capital available for meeting the day-to-day requirements of an enterprise is regarded as 'working capital'. Normally, after investment in fixed assets (e.g. land and buildings, plant and machinery, furniture and fittings), a part of the capital is kept in the business for supporting the day-to-day normal operations. This is **workingcapital.** Figure shows the changing pattern of working capital in a firm.

The various concepts of working capital are explained in the sections those follow.



Circulating nature of working capital.

13.2WORKING CAPITAL MEANING

Every business needs funds for two purposes — for its establishment and to carry out its day to day operations. Long term funds are required to create production, facilities through purchase of fixed assets such as plant, machinery land, building, furniture etc. investment in these assets- represent that part of firm's capital which is blocked on a permanent or fixed basis and is called fixed- capital. Funds are also needed for short term purposes for the purchase of raw materials,

payment of wages and other day to day expenses etc. these funds are working capital funds. Thus invested in current assets keep evolving- fat and are being constaulty converted into cash and this cash flow again in exchange for other current assets. Hence it is also known as "revolving .or circulating capital or short term capital."

DEFINITION

"Working a capital has ordinarily been defined as the excess of current assets over current liabilities"

IDEAL DEFINITION

"A firm's working capital consists of its investments in current assets which include short term assets such as cash and bank balance, inventories, receivables & marketable securities.

Objectives of Working Capital

The basic objectives of working capital management are as follows :

- By optimizing the investment in current assets and by reducing the level of current liabilities the company can reduce the locking up of funds in working capital thereby, it fan improve the return on capital employed in the business.

- The second important objective of working capital management is that the company should always be a position to meet its current obligations which should properly be supported by the current assets available with the firm. But maintaining excess funds in working capital means locking of funds without return.

- The firm should manage its current assets in such away that the marginal return on investment in these assets is not less than the cost of capital employed to finance the current assets.

- The firm should maintain proper balance between current assets and current liabilities to enable the firm to meet its day to day financial obligations.

13.3 GROSS WORKING CAPITAL OR CURRENT ASSETS

'Gross working capital' represents the aggregate of current assets that are converted, in the ordinary course of business, into cash within one accounting year. Examples are as follows:

- Current investments
- Inventories (e.g. raw materials, working-in-progress and finished goods)
- Trade receivables (net of provisions for doubtful debts)
- Bills receivables
- Advances/inter-company loans (short term)
- Prepayments
- Accrued income
- Cash at bank and in hand

As mentioned earlier, current assets constantly change from one form to the other. For example, in a manufacturing enterprise, cash is used to procure raw materials, pay wages and expenses. The raw materials are put in the process for conversion into finished goods that are then on sale on credit and become debtors. Finally, debtors are converted into cash. Current assets are, therefore, short-lived and their life-span does not normally exceed one year.

13.4 NET WORKING CAPITAL OR NET CURRENT ASSETS

In this case, working capital is represented by the excess of current assets over current liabilities. It is also known as 'net current assets.' Thus,

Working capital = Current assets* - Current liabilities.*

According to revised IAS 1, an asset is treated as a current asset when it complies with any one of the following criteria- it is expected to be realized, or intended for sale or consumption, within the company's normal operating cycle, i.e. the time between acquisition of an asset for processing and its realization in cash or cash equivalent, or it is held primarily for the purpose of trading, or it is expected to be realized within 12 months after the reporting date, or it is cash or cash equivalent (that is, short-term investment which can be realized within a period of 3 months) unless it is restricted from being exchanged or used to settle a liability for at least 12 months after the reporting date.

Where, however, an operating cycle cannot be identified, it should be assumed to be equivalent to a period of 12 months.

Earlier, we have itemized the components of current assets. Current liabilities are those which are liquidated, in the ordinary course of business, within one accounting year normally out of the current assets or funds from operations. Examples are as follows:

- Short-term borrowings

- Short-term provisions
- Trade payables
- Bank overdraft (of temporary nature)
- Bills payables
- Outstanding liabilities currently payable
- Outstanding or accrued expenses

The net current assets concept of working capital is considered superior to the the current assets or gross concept because, in the long run, what matters is the surplus of current assets over current liabilities to show the financial strength or liquidity of the firm. Accordingly, this concept is widely used.

Normally, the aggregate of current assets should exceed the aggregate of current liabilities to leave a surplus or positive balance in the company. Conventionally, when the current assets are twice the current liabilities, the liquidity position of a firm is considered satisfactory. In practice, however, the margin may be dependent on many factors, i.e., the nature of the business, efficiency with which various components of current liabilities, the liquidity position of a firm is considered satisfactory. In practice, however, the margin may be dependent on many factors, viz. the nature of the business, efficiency with which various components of current assets and liabilities are managed, credit reputation, and others rather than the above conventional approach.

In extreme situation, when current liabilities exceed current assets, the working capital is negative and gives a danger signal. In such a case, “fire-fighting” measures need to be taken to remedy the abnormal situation.

13.5 WORK1NG CAPITAL REQUIREMENT

There are two components, of working capital as under 1. Current Assets - Current Assets are those assets which in the ordinary -course of business can be converted into cash within a short period of normally one accounting ,year

2. Current liabilities- Current liabilities are those liabilities which are intended to be paid in the ordinary course of business within a short period of normally one accounting year.

CONSTITUENTS OF

Current Assets	Current Liabilities
Cash in hand and bank balance	Bills payable
Bills Receivables	Sundry creditors or accounts payable
Sundry Debtors	Accrued bi outstanding expense
Short term loans, advances	Short term, loans, advances & deposit
Inventories of	Dividend payable

Stock Raw materials Work-in-process Stores & spares Finished goods Temporary investment of surplus fund	
Temporary investments of surplus fund	Bank overdraft
Prepaid Expense	Provision for taxation
Accrued Incomes	

Concept - There are two concepts of working capital

A. Balance Sheet Concept

B. Operating Cycle/Circular Flow Concept

A. Balance Sheet Concept — There are two interpretations of working capital under the balance sheet concept:

1. Gross Working capital — In the broad sense, the term working capital refers to the gross working capital represents the amount of funds invested in current assets.

2. Net working capital — In a narrow sense, the term working capital refers to the net working capital. Net working capital is the excess of current assets over current liabilities.

Networking capital = Current. Assets Current Liabilities

B. Operating .Cycle/Circular Flow Concept. Funds thus invested in current Assets keep revolving fast and are being constantly converted into cash and this cash flow out again in exchange for other, current assets. Hence, it is also known as revolving or circulating capital

The term Working Capital also called gross working capital refers to the firm's aggregate of Current Assets and current assets are these assets which can be convertible into cash within an accounting period, generally a year. Therefore, they are Cash or mere cash resources of a business concern. However, we can understand the meaning of Working Capital from the following:

a. "Working capital means the funds available for day-to-day operations of an enterprise. It also represents the excess of current assets over current liabilities including short-term loans". — Accounting Standards Board, The Institute of Chartered Accountants of India.

b. “Working capital is that portion of a firm’s current assets which is financed by short term funds.”— Gitman, L.J. From the above definitions, we can say that the working capital is the firm’s current assets or the excess of current assets over current liabilities.

However, the later meaning will be more useful in most of the times as in all cases we may not find excess of current assets over current liabilities.

Concepts of Working Capital Working capital has two concepts:
i) Gross working capital and
ii) Net working capital.
Gross Working capital refers to the total of the current assets and not working capital refers to the excess of the current assets over current liabilities. Though both concepts are important for managing it, gross working capital is more helpful to the management in managing each individual current assets for day-to-day operations. But, in the long run, it is the net working capital that is useful for the purpose.

When we want to know the sources from which funds are obtained, it is not working capital that is more important and should be given greater emphasis. The definition given by the Accountants, U.S.A., will give clear view of working capital which is given below:
Working capital sometimes called net working capital, is represented by excess of current assets over current liabilities and identifies the relatively liquid portion of total enterprise capital which constitutes a margin of better for maturing obligations within the ordinary operation cycle of the business.”
Each concern has its own limitations and constraints within which it has to decide whether it should give importance to gross or not working capital.

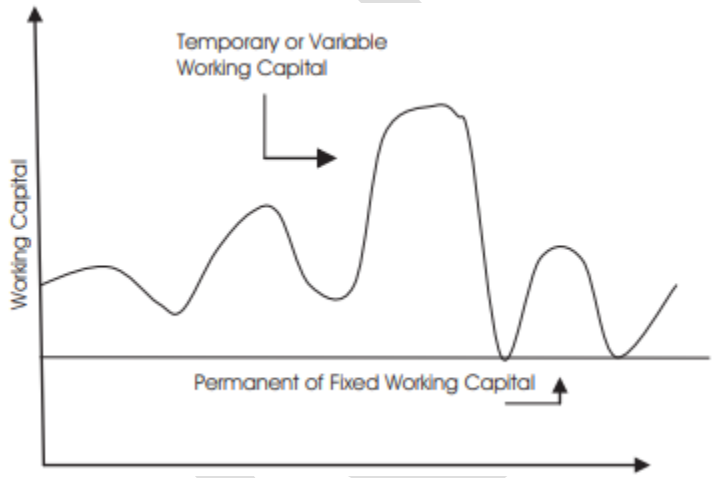
13.6 KINDS OF WORKING CAPITAL

There are two kinds of working capital, the distinction of which made keeping in view the nature of such funds in a business concern, which are as follows:
(a) Rigid, fixed, regular or permanent working capital; and
(b) Variable, seasonal, temporary or flexible working capital.

Every business concern has to maintain certain minimum amount of current assets at all times to carry on its activities efficiently and effectively. It is indispensable for any business concern to keep some material as stocks, some in the shape of work-in-progress and some in the form of finished goods. Similarly, it has to maintain certain amount of cash to meet its day-to-day requirements. Without such minimum amounts, it cannot sustain and carry on its activities. Therefore, some amount of working capital i.e., current

assets is permanent in the business without any fluctuations like fixed assets and such amount is called Working Capital. To say precisely, Permanent Working Capital is the irreducible minimum amount of working capital necessary to carry on its activities without any interruptions. It is that minimum amount necessary to outlays its fixed assets effectively.

On the other hand, temporary working capital is that amount of current assets which is not permanent and fluctuating from time to time depending upon the company's requirements and it is generally financed out of short term funds, It may also high due to seasonal character of the industry as such it is also called seasonal working capital.



Time

13.6.1 ADEQUACIES AND INADEQUACIES OF WORKING CAPITAL

Working Capital of a business should be commensurate with its needs. Too high or too low working capital of a business or two extremes of working capital are equally dangerous to the existence of the business enterprise itself. High amount of working capital, though increases its liquidity position but reduces its profitability and on the other hand too low working capital though increases its profitability reduces its liquidity. Both such extreme situations may cause business concerns to shut down.

13.6.2 DANGER OF TOO HIGH AMOUNT OF WORKING CAPITAL

(a) It results in unnecessary accumulation of inventories and gives chance to inventory mishandling, wastage, pilferage, theft, etc., and losses increase.
(b) Excess working capital means idle funds which earns no profits for the business.
(c) It shows a defective credit policy of the company resulting in higher incidence of bad debts and adversely affects Profitability.
(d) It results in overall inefficiency

13.6.3 DANGER OF INADEQUATE OR LOW AMOUNT OF WORKING CAPITAL

(a) It becomes difficult to implement operating plans and achieve the firm's profit target.

(b) It stagnates growth and it will become difficult to the firm to undertake profitable ventures for non availability of working capital funds.

(c) It may not be in a position to meet its day-to-day current obligations and results in operational inefficiencies.

(d) The Return on Investment falls due to under utilisation of fixed assets and other capacities of the business concern.

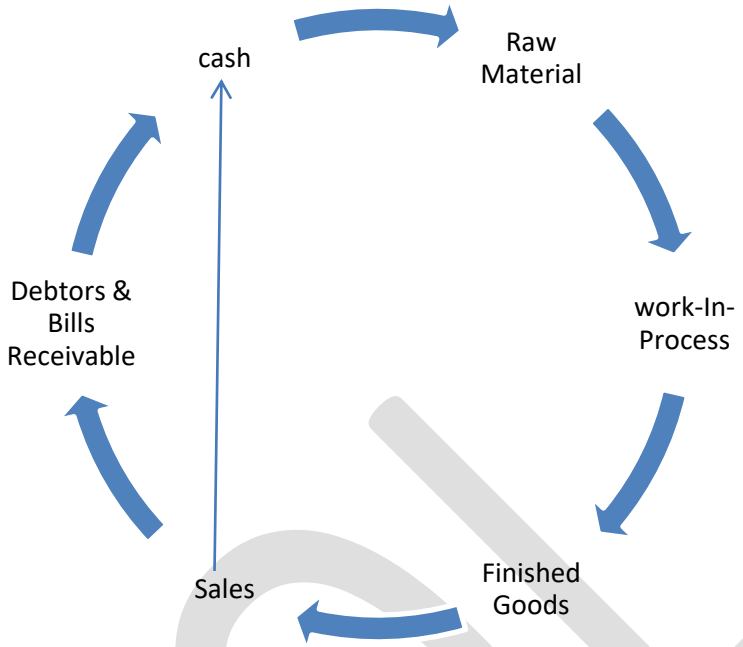
(e) Credit facilities in the market will be lost due to faulty working capital.

(f) The reputation and goodwill of the firm will also be impaired considerably

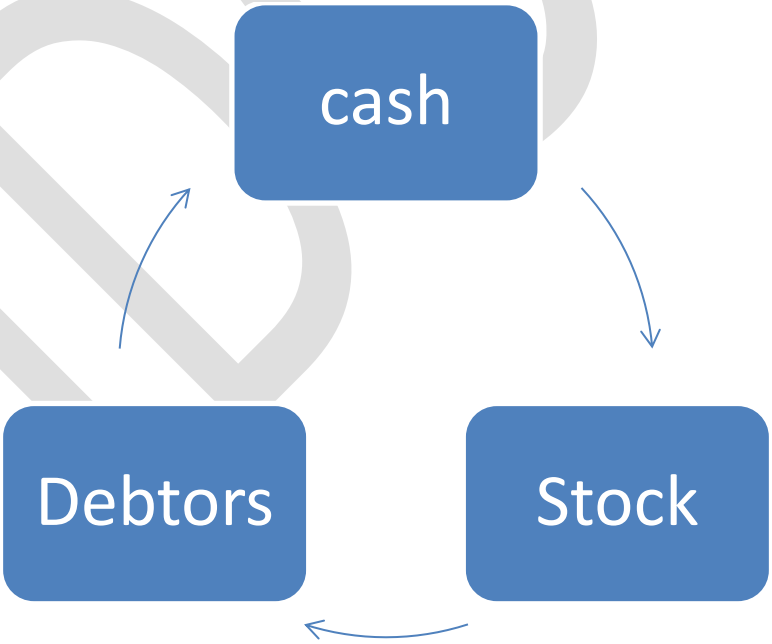
13.7 WORKING CAPITAL CYCLE

Working Capital Cycle or Operating Cycle are synonymous terms in the context of management of working capital. Any business concern, whether it is of financial nature, trade organisation or a manufacturing organisation needs certain time to net fruits of the efforts. That is, by investment of cash, producing or doing something for some time will fetch profit. But soon after the investment of cash, it cannot get that profit by way of cash again immediately. It takes time to do so. The time required to take from investment of cash in some assets and conversion of it again into cash termed as operating or working capital cycle. Here the cycle refers to the time period.

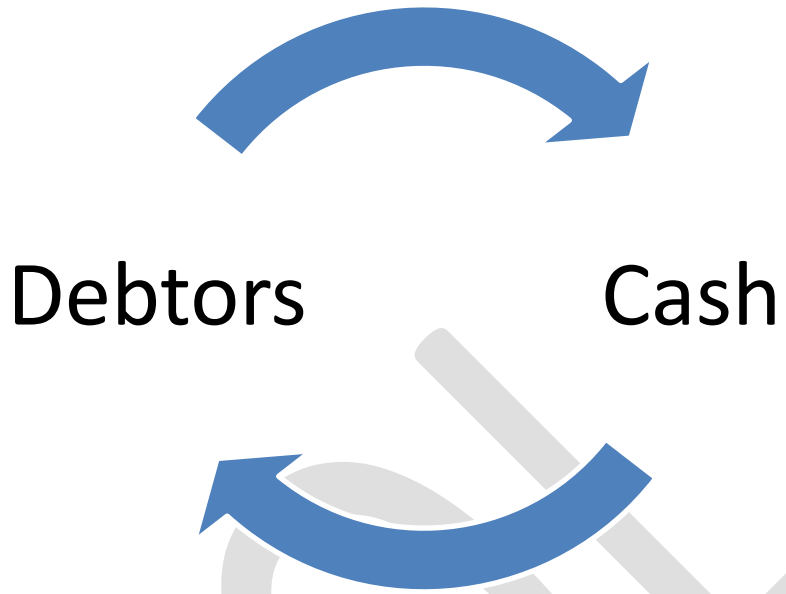
Chart for Operating Cycle or Working Capital Cycle.



In case of trading concerns, the operating cycle will be:
Cash → Stock → Debtors → Cash.



In case of financial concerns, the operating cycle will be:
Cash → Debtors → Cash only.



It is obvious from the above that the time gap between the sales and their actual realization of cash is technically termed as Operating Cycle or Working Capital Cycle.
The period of working capital cycle may differ from one business enterprise to the other depending upon the nature of the enterprise and its activities. It means the pattern of working capital cycle do change according to its activities.

13.8 DETERMINANTS OF WORKING CAPITAL

The size or magnitude and amount of working capital will not be uniform for all organizations. It differs from one type of organization to the other type of organization. Depending upon various conditions and environmental factors of each and every organization. There are many factors that determine the size of working capital. However, there are some factors, which are common to the most of the business concerns. Such factors are enumerated below:

1. **Nature and size of the Business**: A company's working capital requirements depends on the activities it carried on and its size too. For instance, public utility organisation or service organization where its activities are of mere service nature, does not require high amount of working capital, as it has no need of maintaining any stocks of inventories. In case of trading organization the magnitude of working capital is high as it requires to maintain certain stocks of goods as also some credit to debtors. Further, if we go to manufacturing organisation the cycle period of working capital is high because the funds are to be invested in each and every type of inventory forms of raw-material, work-in-

progress, finished goods as also debtors. Industrial units too require a large amount of working capital.

2. **Production Policies**: These policies will have a great significance in determining the size of the working capital. Where production policies are designed in such a way that uniform production is carried on throughout the accounting period, such concern requires a uniform and lesser amount of working capital. On the other hand, the concerns with production policies according to the needs of the customers will be peak at sometimes and require high amount of working capital. In seasonal industries too, where production policies are laid down tightly in the business season requires a high amount of working capital.

3. **Process of Manufacture**: If the manufacturing process of a particular industry is longer due to its complex nature, more working capital is required to finance that process, because, longer the period of manufacture, the larger the inventory tied up in the process and naturally requires a high amount of working capital.

4. **Growth and Expansion of Business**: A business concern at status requires a uniform amount of working capital as against the concerns which are growing and expanding. It is the tendency of any business organization to grow further and further till its saturation point, if any. Such growth may be within theexisting units by increased activities. Similarly, business concerns will expand their organization by establishing new units. In both the cases, the need for working capital requirement increases as the organization increases.

5. **Fluctuations in the Trade Cycle**: Business activities vary according to the general fluctuations in the world. There are four stages in a trade cycle which affects the activities of any business concern.Accordingly, the requirements of working capital are bound to change. When conditions of boom prevail, it is the policy of any prudent management to build or pile up large stock of inventories of various forms to take the advantage of the lower prices. Such fluctuation causes a business concern to demand for more amount of working capital. The other phase of trade cycle i.e., depression i.e., low or absence of business activities cause business concerns to demand for more working capital. In condition of depression, the products produced are not sold due to fall in demand, lack of purchasing power of the people. As a result of which entire production obtained was not sold in the market and high inventories are piled up. Therefore, there arises the need for heavy amount of working capital. Thus, the two extreme stages of trade cycles make the business concerns to demand for more working capital. In the former case due to acts and policies of management and in the latter case due to natural phenomena of trade cycle.

6. **Terms and conditions of Purchases and Sales**: A business concern which allows more credit to its customers and buys its supplies for cash requires more amount of working capital. On the other hand, business concerns which do not allow more credit period to its customers and seek better credit facilities for their supplies naturally require lesser amount of working capital.

7. **Dividend Policy**: A consistent dividend policy may affect the size of working capital. When some amount of working capital is financed out of the internal generation of funds such affect will be there. The relationship between dividend policy and working, capital is well established and very few companies declare dividend without giving due consideration to its effects on cash and their needs for cash. If the dividend is to be declared in cash, such outflow reduces working capital and therefore, most of the business concerns declare dividend now-a-days in the form of bonus shares as such retain their cash. A shortage of working capital acts as powerful reason for reducing or skipping cash dividend.

8. Price Level Changes: The changes in prices make the functions of a finance manager difficult. The anticipations of future price level changes are necessary to avoid their affects on working capital of the firm. Generally, rising price level will require a company to demand for more amount of working capital, because the same level of current assets requires higher amount of working capital due to increased prices.

9. Operating Efficiency: The Operating efficiency of a firm relates to its optimum utilization of resources available whether in any form of factor of production, say, capital, labour, material, machines etc.; If a company is able to effectively operate its costs, its operating cycle is accelerated and requires relatively lessor amount of working capital. On the other hand, if a firm is not able to utilize its resources properly will have slow operating cycle and naturally requires higher amount of working capital.

10. Percentage of Profits and Appropriation out of Profits: The capacity of all the firms will not be same in generating their profits. It is natural that some firms enjoy a dominant and monopoly positions due to the quality of its products, reputations, goodwill etc. (for example Colgate Tooth Paste, Bata Chapels etc.,) and some companies will not have such position due to poor quality and other inherent hazards. The company policy of retaining or distribution of profits will also affect the working capital. More appropriation out of profits than distribution of profit necessarily reduces the requirements of working capital.

11. Other Factors: Apart from the above general considerations, there may be some factors responsible for determination of working capital which are inherent to the type of business. Some of such factors may be as follows:

(a) General co-ordination and control of the activities in the organization.

(b) Absence of specialization of products and their advantages.

(c) Market facilities.

(d) Means of transport and communication system.

(e) Sector in which the firm works i.e., private or public sector etc.

(f) Government policy as regard to:

i) Imports and Exports

ii) Tax considerations.

(g) Availability of labor and its organization.

(h) Area in which it is situated such as backward, rural sub-urban, etc.,

13.9METHODS AND SOURCES OF RAISING CAPITAL

Accruals

The major accrual items are wages and taxes. These are simply what the firm owes to its employees and to the government.

Trade Credit

Trade credit represents the credit extended by the supplier of goods and services. It is a spontaneous source of finance in the sense that it arises in the normal transactions of the firm without specific negotiations, provided the firm is considered creditworthy by its supplier. It is an important source of finance representing 25% to 50% of short-term financing.

Working capital advance by commercial banks

Working capital advance by commercial banks represents the most important source for financing current assets.

Forms of Bank Finance:

Working capital advance is provided by commercial banks in three primary ways: (i) cash credits / overdrafts, (ii) loans, and (iii) purchase / discount of bills. In addition to these forms of direct finance, commercials banks help their customers in obtaining credit from other sources through the letter of credit arrangement.

Cash Credit / Overdrafts: Under a cash credit or overdraft arrangement, a pre-determined limit for borrowing is specified by the bank. The borrower can draw as often as required provided the out standings do not exceed the cash credit / overdraft limit.

Loans: These are advances of fixed amounts which are credited to the current account of the borrower or released to him in cash. The borrower is charged with interest on the entire loan amount, irrespective of how much he draws.

Purchase / Discount of Bills: A bill arises out of a trade transaction. The seller of goods draws the bill on the purchaser. The bill may be either clean or documentary (a documentary bill is supported by a document of title to goods like a railway receipt or a bill of lading) and may be payable on demand or after a usance period which does not exceed 90 days. On acceptance of the bill by the purchaser, the seller offers it to the bank for discount / purchase. When the bank discounts / purchases the bill it releases the funds to the seller. The bank presents the bill to the purchaser (the acceptor of the bill) on the due date and gets its payment.

Letter of Credit: A letter of credit is an arrangement whereby a bank helps its customer to obtain credit from its (customer's) suppliers. When a bank opens a letter of credit in favour of its customer for some specific purchases, the bank undertakes the responsibility to honour the obligation of its customer, should the customer fail to do so.

Positive and Negative Working Capital

The net working capital of a firm may be positive or negative

- The positive net working capital represents the excess of current assets over current liabilities.
- Sometimes the net working capital turn to be negative when current liabilities are exceeding the current assets. The negative working capital position will adversely affect the operations of the firm and its profitability. The chronic negative working capital situation will lead to closure ofbusiness and the enterprise is said to be technically insolvent.

Disadvantages of Negative Working Capital

The disadvantages suffered by a company with negative working capital are as follows

- The company is unable to take advantage of new opportunities or adopt to changes
- Fixed assets cannot be used effectively in situation of working capital shortage
- The operating pans cannot be achieved and will reduce the profitability of the firm.
- It will stagnate the growth of the firm.
- Employee morale will be lowered due to financial difficulties
- The operating inefficiencies will creep into daily activities

- Trade discounts are lost. A company with ample working capital is able to finance large stocks and can, therefore, place large orders.
- Cash discounts are lost. Some companies will try to persuade their debtors to pay early by offering them a cash discount, off the price owed.
- The advantage of being able to offer a credit line to customers are foregone.
- Financial reputation is lost result in non cooperation from trade creditors in times of difficulty.
- There may be concerned action by creditors and will apply to court for winding up.
- It would be difficult to get adequate working capital finance frombanks, financial institutions.

Particulars	**Amount ₹**	**Amount ₹**
Current assets		
Raw material stock	xx	
Work in process stock	xx	
Finished goods stock	xx	xxx
Sundry debtors		xx
Bills receivable		xx
Short term investments		xx
Cash and bank balances		xx
Gross Working capital		**xxx**
Less :		
Current liabilities		
Creditors for materials	xx	
Creditors for expenses	xx	
Bills payable	xx	
Tax liability	xx	
Short term loans	xx	**xxx**
Net working capital		**xxx**

1. Current Assets ₹ 20,000
2. Current Liabilities other than borrowings ₹ 15,000
3. Core Current Assets ₹ 2,000

Then the permissible bank borrowings under the three methods is as follows:

Method I = 0.75 (Current Assets – Current Liabilities)
= 0.75 (20,000 – 5,000)

= ₹11,250

Method II = 0.75 (Current Assets) – Current Liabilities
= (0.75 x 20,000) – 5,000 =
₹ 10,000
Method III = 0.75 (Current Assets – Core Current Assets) – Current Liabilities
= 0.75 (20,000 – 2,000) – 5,000 =
₹ 8,500

Illustration 1

A company has prepared its annual budget, relevant details of which are reproduced below.

(a) Sales ₹ 46.80 lakhs : 78,000 units 25% cash sales and balance on credit
(b) Raw material cost : 60% of sales value
(c) Labourcost : ₹ 6 per unit
(d) Variable overheads : ₹ 1 per unit
(e) Fixed overheads: ₹ 5 lakhs (including ₹1,10,000 as depreciation)
(f) Budgeted stock levels:
Raw materials: 3 weeks
Work-in-progress: 1 week (Material 100%, Labour& overheads 50%)
Finished goods: 2 weeks
(g) Debtors are allowed credit for 4 weeks.
(h) Creditors allow 4 weeks credit.
(i) Wages are paid bi-weekly, i.e. by the 3rd week and by the 5th week for the 1st & 2nd weeks and the 3rd & 4th weeks respectively.
(j) Lag in payment of overheads: 2 weeks
(k) Cash-in-hand required: ₹ 50,000

Prepare the Working Capital budget for a year for the company, making whatever assumptions that you may find necessary

Solution:

Unit Selling Price and Cost	₹
Selling price Cost: Raw materials	60
Cost:	
Raw materials	36
Labour	6
Variable overheads	1

Fixed overheads (excluding depreciation)	5
Total Cost per unit	48

Statement showing Working Capital Required

Current Assets		
Raw materials	(78,000 units x ` 36 x 3/52)	1,62,000
Work-in-progress	(78,000 units x ` 42 x 1/52)	63,000
Finished goods	(78,000 units x ` 48 x 2/52)	1,44,000
Debtors	(78,000 units x ` 60 x 75/100 x 4/52)	2,70,000
Cash in hand		50,000
	(a)	6,89,000
Current Liabilities		
Creditors	(78,000 units x ` 36 x 4/52)	2,16,000
Lag in wages	(78,000 units x ` 6 x 2/52)	18,000
Lag in payment of overheads	(78,000 units x ` 6 x 2/52)	18,000
	(b)	2,52,000
Net working capital required	(a) – (b)	4,37,000

Note:

1. Total sales for 4 weeks is 6,000 units. Excluding 25% cash sales, credit sales amounts to 4,500 units.
2. One year is assumed to be of 52 weeks.

Illustration 2

A company plans to manufacture and sell 400 units of a domestic appliance per month at a price of ₹ 600 each. The ratio of costs to selling price are as follows:

	(% of selling price)
Raw materials	30%
Packing materials	10%
Direct labour	15%
Direct expense	5%

Fixed overheads are estimated at ₹ 4,32,000 per annum.

The following norms are maintained for inventory management:

Raw materials 30 days

Packing materials 15 days

Finished goods 200 units
Work-in-progress 7 days
Other particulars are given below:
(a) Credit sales represent 80% of total sales and the dealers enjoy 30 working days credit. Balance 20% are cash sales.
(b) Creditors allow 21 working days credit for payment.
(c) Lag in payment of overheads and expenses is 15 working days.
(d) Cash requirements to be 12% of net working capital.
(e) Working days in a year are taken as 300 for budgeting purpose.
Prepare a Working Capital requirement forecast for the budget year.
Solution:
Selling Price and Cost per unit

Raw materials	(` 600 x 30/100)	180
Packing materials	(` 600 x 10/100)	60
Direct labour	(` 600 x 15/100)	90
Direct expenses	(` 600 x 5/100)	30
Fixed overheads	[` 4,32,000 / (400 x 12)]	90
Total cost		450
Profit		150
Selling Price per unit		600

Forecast of Working Capital Requirement:

Current Assets	
Raw materials stock (` 4800 x 180 x 30/300)	86,400
Packing materials stock (` 4800 x 60 x 15/300)	14,400
Working in progress (` 4800 x 285 x 7/300)	31,920
Finished goods stock (` 450 x 200 units)	90,000
Debtors (` 4800 x 80/100 x ` 600 x 30/300)	2,30,400
(a)	4,53,120
Current Liabilities:	
Creditors for raw material suppliers (` 4800 x 180 x 21/300)	60,480
Creditors for packing material (` 4800 x 60 x 21/300)	20,160
Creditors for expenses and overheads (` 4800 x 120 x 15/300)	28,800
(b)	1,09,440
Net Working Capital (a) – (b)	3,43,680
Add: Cash required (12% of net working capital)	41,242
Total Working Capital Required	3,84,922

Note:

- Work in progress is valued with raw material cost at 100% and 50% of wages, overheads and expenses.

- Debtors are valued at selling price.

Illustration 3:

A Company provided the following data:

	Cost per unit (₹)
Raw materials	52.00
Direct labour	19.50
Overheads	39.00
Total Cost	110.50
Profit	19.50
Selling Price	130.00

The following additional information is available:

(a) Average raw materials in stock: one month.
(b) Average materials in process: half-a-month
(c) Average finished goods in stock: one month
(d) Credit allowed by suppliers: one month
(e) Credit allowed to debtors: two months.
(f) Time lag in payment of wages: one and a half weeks.
(g) Overheads: one month
(h) One-fourth of sales are on cash basis.
(i) Cash balance is expected to be ₹ 1,20,000.

You are required to prepare a statement showing the Working Capital needed to finance a level of activity of 70,000 units of annual output. The production is carried throughout the year on even basis and wages and overheads accrue similarly. (Calculation be made on the basis of 30 days a month and 52 weeks a year).

Solution:

Statement showing estimate of Working Capital

Current Assets:		3,03,333
Stock of Raw material (70,000 units x 52 x 30/360)		
Work-in-progress:		
Raw materials(70,000 units x 52 x 15/360)	1,51,667	
Direct labour (70,000 units x 19.50 x 30/360 x 1/4)	28,437	
Overheads (70,000 units x 39 x 30/360 x 1/4)	56,875	2,36,979
Stock of finished goods (70,000 units x 110.50 x 30/360)		6,44,583
Debtors (70,000 units x 130 x 60/360)		15,16,667
Cash balance		1,20,000
	(a)	28,21,562
Current Liabilities		
Creditors for raw material (70,000 units x 52 x 30/360)		3,03,333

Creditors for wages (70,000 units x 19.50 x 1.5/52) Creditors for overheads (70,000 units x 39 x 30/360)		39,375 2,27,500
	(b)	**5,70,208**
Net Working Capital	**(a) – (b)**	**22,51,354**

Illustration 4:

From the following data, compute the duration of the operating cycle for each of years:

	Year 1	**Year 2**
Stock:		
Raw materials	20,000	27,000
Work-in-progress	14,000	18,000
Finished goods	21,000	24,000
Purchases	96,000	1,35,000
Cost of goods sold	1,40,000	1,80,000
Sales	1,60,000	2,00,000
Debtors	32,000	50,000
Creditors	16,000	18,000

Assume 360 days per year for computational purposes.

Solution:

Calculation of operating cycle

	Year 1	**Year 2**
Current Assets: 1.Raw material stock = $\frac{\text{Stock of raw material}}{\text{Purchases}}$ x 360	(20 / 96) x 360 = 75 days	(27 / 135) x 360 = 72 days
2. WIP turnover = (WIP / COGS) x 360	(14 / 140) x 360 = 36 days	(18 / 180) x 360 = 36 days
3.Finished goods turnover = (Finished good/ COGS)x360	(21 / 140)x 360 = 54 days	(24 / 180)x 360 = 48 days
4.Debtors turnover = (Debtors / Sales) x 360	(32 / 160) x 360 = 72 days	(50 / 200)x 360 = 90 days
Total (A)	237 days	246 days
Creditors period = (Creditors / Purchases)x 360	(16 / 96) x 360 = 60 days	(18 / 135) x 360 = 48 days
Total (B)	60 days	48 days
Operating cycle (A-B)	177 days	198 days

Illustration 5:

(a) From the following details, prepare an estimate of the requirement of Working Capital:

Production	60,000 units
Selling price per unit	₹ 5
Raw material	60% of selling price
Direct wages	10% of selling price
Overheads	20% of selling price
Materials in hand	2 months requirement
Production Time	1 month
Finished goods in Stores	3 months
Credit for Material	2 months
Credit allowed to Customers	3 months
Average Cash Balance	₹ 20,000

Wages and overheads are paid at the beginning of the month following/ In production all the required materials are charged in the initial stage and wages and overheads accrue evenly.

(b) What is the effect of Double Shift Working on the requirement of Working capital?

Solution:

a) **Computation of requirement of Working Capital**

Annual production 60,000 units

Monthly production 5,000 units

Unit Cost Sheet

Particulars	
Selling price	5.00
Cost of Raw Material 60% of 5=3.00	
Wages 10% of 5=0.50	
Overheads 20% of 5=1.00	
Total cost per unit	4.50
Profit per unit	0.50

Current Assets:		₹	₹
Stock of Raw material	3 x 60000 x $\frac{2}{12}$		30,000
Work in Progress:			
Raw Materials	3 x 60,000 x $\frac{1}{12}$	15,000	

Wages + Overheads	1.50 x 60,000 x $\frac{1}{12} \times \frac{1}{2}$		18,750
Stock of Finished Goods	4.50 x 60,000 x $\frac{3}{12}$		67,500
Debtors (on sales)	5.00 x 60,000 x $\frac{3}{12}$		75,000
Cash			20,000
Total Current Assets	**(A)**		**2,11,250**

Current Liabilities:		
Creditors	3 x 60,000 x $\frac{2}{12}$	30,000
Outstanding wages	0.50 x 60,000 x $\frac{1}{12}$	2,500
Outstanding overheads	1x 60,000 x $\frac{1}{12}$	5,000
Total Current Liabilities (B)		**37,500**

Working Capital: (A-B) = 2,11,250 – 37,500 = ` 1,73,750

b) **Effects of Double shift working:**

The following assumptions are made before estimating the Working Capital requirement for double shift working:

1. Production will be 10000 units per month or 1,20,000 units per year.
2. Materials may not be required at double rate. Due to inventory control measures it may be taken as 2/3
3. WIP will be the same at 5000 units. This will not increase as WIP of first shift will be handed over to second shift.
4. 50% of overheads are assumed as fixed. This will not increase due to double shift working.

On the basis of above assumptions, the following capital requirement is estimated as follows:

Current Assets:			
Stock of Raw material		30,000 + 30000 x $\frac{2}{3}$	50,000
Work in Progress:			
Raw materials	3 x 60,000 x $\frac{1}{12}$	15,000	
Wages + Overheads	**1.25 x 60,000 x $\frac{1}{12}$ x $\frac{1}{2}$	3,125	18,125
Stock of finished Goods	4.25 x 1,20,000 x $\frac{3}{12}$		1,27,500

Debtors (on sales)	5.00 x 1,20,000 x $\frac{3}{12}$		1,50,000
Cash (double)			40,000
Total Current Assets			3,85,625
Current liabilities:			
Creditors		3 x 1,20,000 x $\frac{2}{12}$	60,000
Outstanding wages		0.5 x 1,20,000 x$\frac{1}{12}$	5,000
Outstanding overheads (Fixed Overheads remain same)		2,500	
(Variable Overheads double as before)		5,000	7,500
Total Current Liabilities (B)			72,500

Working Capital required for two shifts: (A-B) = 3,85,625 – 72,500 = ₹ 3,13,125
Therefore additional working capital required for second shift = 3,13,125 – 1,73,750 = ₹ 1,39,375

** Calculation of Cost per unit

	Single shift	Double shift	
Raw material Cost	3.00	3.00	
Wages	0.50	0.50	
Overhead expenses:			
Fixed	0.50	0.25	(Production in 2 shifts are doubled
Variable	0.50	0.50	
Cost per unit	4.50	4.25	

Illustration 6:

Estimate the requirement of total capital of the following project with an estimated production of 250 m/t per annum of chemical X, presently imported and which can be entirely sold at the rate of it's landed cost of ₹ 8,500 per m/t. You are also required to find out.

(i)Percentage of yield on investment;
(ii) Percentage of profit on sales;
(iii) Rate of cash generation per annum before tax.

Details of the proposed project for expected production of 250 m/t are as under:

i) Investment	
Land	1,00,000
Building	8,00,000
Plant and Machinery	12,00,000
ii) Cost of Production (p.a)	
Imported Raw Material	6,50,000
Indigenous Raw Material	6,26,000
Salaries and Wages	1,35,000
Repairs and Maintenance on Plant Cost	5%
on Building	2%
Depreciation on Plant cost	7%
on Building Cost	2 ½ o%
Administrative and other expenses	50,000
Steam requirement ₹ 7,000 m/t	₹ @ ₹ 16 per m/t
Power	6,000
Packing Drums (of 500 kg. capacity)	30 each
iii) Working Capital requirement	
Imported Raw Material stock	6 months
Indigenous Raw Material and Packing Material stock	3 months
Stock of Finished Products	1month
Credit to Customers	1month
Credit from suppliers (only on Indigenous Raw Material and Packing Material)	1 month
Cash expenses	1 month

Solution:

Working notes:

1.Packing of drums of 500g each. It is assumed of 500kg each. Cost of production per annum (production of chemical x – 250m / t).

		in lakhs ₹
Imported Raw Material		6.50
Indigenous Raw Material		6.26

Salaries & Wages		1.35
Repairs and Maintenance : 5% on 12,00,000 2% on 8,00,000	 0.60 0.16	 0.76
Depreciation 7 % on 12,00,000 2.5 % on 8,00,000	 0.84 0.20	 1.04
Administration & Other Expenses		0.50
Steam	7000 x 16	1.12
Power		0.06
Packing drums (250 m/t) / 500 kg. = 500 nos. @ 30 each		0.15
Total Cost		17.74
Sales	250 x 8500	21.25
Profit		3.51

2. Working Capital requirement

Particulars	Basis of calculation	Amount
Imported Raw Material stock	(6 / 12) x 6.5	3.25
Indigenous Raw Material and Packing Material	6.26 + 0.15 = 6.41 x (3 / 12)	1.60
Stock of finished goods	At works cost excluding depreciation & admin exp = 17.74 – 1.04 – 0.5 = (16.20/12)	1.35
Credit to customers	17.74 - 1.04 = (16.70 / 12)	1.39
Cash Expenses	Salaries, wages, repairs, admin, steam, power = 3.79 / 12	0.32
Current Assets		7.91
(Less): Credit from suppliers	6.41 / 12	0.53
Working Capital requirement		7.38

Requirement of Total Capital:

Land	1.00
Building	8.00
Plant and Machinery	12.00

Working Capital	7.38
	28.38

i. percentage of yield on investment = Profit / Investment x 100
= (3.51 / 28.38) x 100= 12.37 %

ii. percentage of profit on sales = Profit / Sales x 100
= (3.51 / 21.25) x 100 = 16.52 %

iii. cash generation per annum before tax

	₹
PBT	3.51
Add. Depreciation	1.04
Cash generation before tax	4.55

Rate = (4.55 / 28.38) x 100 = 16.03 %

Illustration 7:

Solaris Ltd. sells goods in domestic market at a gross profit of 25 percent, not counting on depreciation as a part of the 'cost of goods sold'. Its estimates for next year are as follows:

Sales - Home at 1 month's credit	1,200
Exports at 3 months' credit, selling price 10 percent below home price	540
Materials used (suppliers extend 2 months' credit)	450
Wages paid, ½ month in arrears	360
Manufacturing expenses, paid 1 month in arrears	540
Administrative expenses, paid 1 month in arrears	120
Sales promotion expenses (payable quarterly - in advance)	60
Income - tax payable in 4 installments of which one falls in the next financial year	150

The company keeps 1 month's stock of each of raw materials and finished goods and believes in keeping ` 20 lakh as cash. Assuming a 15 percent safety margin, ascertain

the estimated Working Capital requirement of the company (ignore work -in-process).

Solution:

Statement showing determination of Working Capital

		(Amount in ₹ lakhs)
Current assets	₹	Computation
Cash	20.00	
Raw Material	37.50	(450 lakhs / 12)
Finished Goods	122.50	(1,470 lakhs / 12)
Debtors Domestic market	100.00	(1,200 / 12)
Export market	135.00	(540 x)
Sales promotion expense	15.00	(60 lakhs x $\frac{3}{12}$)
Total Current Assets (A)	430.00	

`	
Current Liabilities	₹
Raw Materials(450 x 2 / 12)	75.00
Wages (360 / 24)	15.00
Manufacturing expenses (540 /12)	45.00
Administration expenses (120/12)	10.00
Total Current Liabilities (B)	145.00
Net Current Assets	285.00
Add: Safety margin @ 15%	42.75
Working Capital Requirement	327.75

Working notes :

1. Cost of Production

`

	in lakhs
Material used	450
Wages paid	360
Manufacturing exp	540
Administration exp	120
Total	1470

2. Tax aspect is ignored as it is to be paid out of profits.

Illustration 8:

Camellia Industries Ltd. is desirous of assessing its Working Capital requirements for the next year. The finance manager has collected the following information for the purpose.

`	
Estimated cost per unit of finished product	₹
Raw materials	90
Direct labour	50
Manufacturing and administrative overhead (Excluding depreciation)	40
Depreciation	20
Selling overheads	30
Total Cost	230

The product is subject to excise duty of 10 percent (levied on cost of production) and is sold at ` 300 per unit.

Additional information:

(i) Budgeted level of activity is 1,20,000 units of output for the next year.

(ii) Raw material cost consists of the following:
Pig iron 65 per unit
Ferro alloys 15 per unit
Cast iron borings 10 per unit

(iii) Raw materials are purchased from different suppliers, extending different credit period.
Pig iron 2 months
Ferro alloys ½ months
Cast iron borings 1 month.

(iv) Product is in process for a period of 1/2 month. Production process requires full unit (100 percent) of pig iron and ferroalloys in beginning of production: cost iron boring is required only to the extent of 50 percent in the beginning and the remaining is needed at a uniform rate during the process. Direct labour and other overheads accrue similarly at a uniform rate throughout production process.

(v)Past trends indicate that the pig iron is required to be stored for 2 months and other materials for 1 month.

(vi) Finished goods are in stock for a period of 1 month.

(vii) It is estimated that one-fourth of total sales are on cash basis and the remaining sales are on credit. The past experience of the firm has been to collect the credit sales in 2 months.

(viii) Average time-lag in payment of all overheads is 1 month and ½ month in the case of direct labour.

(ix) Desired cash balance is to be maintained at ` 10 lakh. You are required to determine the amount of Net Working Capital of the firm. State your assumptions, if any.

Solution:

Determination of net working capital of CAMELLIA Industries Ltd

Current Assets	₹
Minimum desired cash balance	10,00,000
Raw Materials : Pig iron Ferry alloys Cast iron borings	 13,00,000 [1,20,000 x 65 x (2 / 12)] 1,50,000 [1,20,000 x 15 x (1 / 12)] 1,00,000 [1,20,000 x 10 x (1 / 12)]
WIP	6,62,500 x [1,20,000 x 132.5 (1/24)]
Finished goods	18,00,000 [1,20,000 x 180 x (1/ 12)]
Debtors	60,00,000 [1,20,000 x 300 x (2/12)]
Total Current Assets: (A)	1,00,12,500

Current liabilities	₹
Creditors: Pig iron Ferry alloys Cast iron borings Outstanding Wages	 13,00,000 [1,20,000 x 65 x (2/12)] 75,000 [1,20,000 x 15 x (1 / 24)] 1,00,000 [1,20,000 x 10 x (1 / 12)] 2,50,000 [1,20,000 x 50 x (1 / 24)]
Outstanding Total Over heads	7,00,000 [1,20,000 x 70 x (1 / 12)]
Total current liabilities (B)	24,25,000

Working Capital (A-B) = 1,00,12,500 – 24,25,000 = 75,87,500

Working Notes:

*Determination of Work in Process	₹
Pig iron	65.00
Ferry alloys	15.00
Cast iron boring (0.5 x 10)	5.00
Other costs –	
Cast iron borings	2.50

Dir. Labour (0.5 x 50)	25.00
Mfg. and admn OHs (0.5x40) 20.00	47.50
	132.50

SUMMARY

Working a capital has ordinarily been defined as the excess of current assets over current liabilities.

A firm's working capital consists of its investments in current assets which include short term assets such as cash and bank balance, inventories, receivables & marketable securities.

By optimizing the investment in current assets and by reducing the level of current liabilities the company can reduce the locking up of funds in working capital.

The company should always be a position to meet its current obligations which should properly be supported by the current assets available with the firm.

The firm should maintain proper balance between current assets and current liabilities to enable the firm to meet its day to day financial obligations.

Gross working capital represents the aggregate of current assets that are converted, in the ordinary course of business, into cash within one accounting year.

Working capital = Current assets - Current liabilities

Gross working capital represents the amount of funds invested in current assets.

Net working capital is the excess of current assets over current liabilities.

(a)Rigid, fixed, regular or permanent working capital; and

(b) Variable, seasonal, temporary or flexible working capital.

In case of trading concerns, the operating cycle will be:

Cash → Stock → Debtors → Cash.

In case of financial concerns, the operating cycle will be:

Cash → Debtors → Cash only.

Determinants of working capital are nature and size of the business, production policies, process of manufacture, growth and expansion of business, fluctuations in the trade cycle, Terms and conditions of Purchases and Sales and Dividend Policy.

QUESTIONS

1. Explain Working Capital and its kinds.

2. What are the determinants of Working Capital?

3. What are the various sources of Working Capital?

PRACTICAL PROBLEMS

1. The board of Directors of Nanak Engineering Company Private Ltd. request you to prepare a statement showing the Working Capital requirements forecast for a level of activity of 1,56,000 units of production.
   The following information is available for your calculation:
   a.

	Per unit
Raw materials	90
Direct labour	40
Overheads	75
	205
Profits	60
Selling price per unit	265

`

b. (i) Raw materials are in stock on average one month.
(ii) Materials are in process, on average 2 weeks.
(iii) Finished goods are in stock, on average 1 month.
(iv) Credit allowed by supplier one month.
(v) Time lag in payment from debtors two months
(vi) Lag in payment of wages 1½ week.
(vii) Lag in payment of overheads is one month.

20% of the output is sold against cash. Cash in hand and at bank is expected to be ` 60,000. It is to be assumed that production is carried on evenly throughout the year, wages and overheads accrue similarly and a time period of 4 weeks is equivalent to a month.
Hint: Current Assets ₹ 84,21,000, Current liabilities ₹ 21,60,000

2. On 1st April, 2011 the Board of Directors of Calci Limited wishes to know the amount of Working Capital that will required to meet the programme of activity they have planned for the year. The following information is available.

i) Issued and paid-up capital ₹ 2,00,000

ii) Fixed assets valued at ₹ 1,25,000 on 31-12-2010

iii) 5% Debentures ` 50,000

iv) Production during the previous year was 60,000 units; it is planned that this level of activity should be maintained during the present year.

v) The expected ratios of cost to selling price are – raw materials 60%, direct wages 10%, and overheads 20%.

vi) Raw materials are expected to remain in stores for an average of two months before these are issued for production.

vii) Each unit of production is expected to be in process for one month.

viii) Finished goods will stay in warehouse for approximately three months.

ix) Creditors allow credit for 2 months from the date of delivery of raw materials.

x) Credit allowed to debtors is 3 months from the date of dispatch.

xi) Selling price per unit is ` 5.

xii) There is a regular production and sales cycle.

You are required to prepare:

a) Working Capital requirement forecast; and

b) An estimated Profit and Loss Account and Balance Sheet at the end of the year.

Hint: Current Assets ` 1,83,750, Current liabilities ` 30,000, Work in process ` 18,750, Balance Sheet Total ` 3,16,250, Debtors ` 75,000, Investment in Debtors ` 67,500

3.Q Ltd sells goods at a uniform rate of gross profit of 20% on sales including depreciation as part of cost of production. Its annual figures are as under:

	₹
Sales (at 2 months credit)	24,00,000

Materials consumed (suppliers credit 2 months)	6,00,000
Wages paid (Monthly at the beginning of the subsequent month)	4,80,000
Manufacturing expenses (cash expenses are paid – one month in arrear)	6,00,000
Administration expenses (cash expenses are paid – one month in arrear)	1,50,000
Sales promotion expenses (paid quarterly in advance)	75,000

The company keeps one month stock each of raw materials and finished goods. A minimum cash balance of ` 80,000 is always kept. The company wants to adopt a 10% safety margin in the maintenance of Working Capital.

The company has no work-in-progress

Find out the requirements of Working Capital of the company on cash cost basis.

Hint: Current Assets ₹ 6,06,250, Current liabilities ₹ 2,02,500

4. X Ltd. sells goods at a gross profit of 20%. It includes depreciation as part of cost of production. The following figures for the 12 months ending 31st Dec, 2011 are given to enable you to ascertain the requirement of working capital of the company on a cash cost basis.

In your working, you are required to assume that:

i) a safety margin of 15% will be maintained;

ii) Cash is to be held to the extent of 50% of current liabilities;

iii) There will be no work-in-progress;

iv) Tax is to be ignored.

Stocks of raw materials and finished goods are kept at one month's requirements. All working notes are to form part of your answer.

Sales at 2 months credit	₹27,00,000
Materials consumed (suppliers credit is for 2 months)	6,75,000
Total wages (paid at the beginning of the next month)	5,40,000
Manufacturing expenses outstanding at the end	60,000

of the year	
(These expenses are paid one month in arrears)	
Total administrative expenses (paid as above)	1,80,000
Sales promotion expenses paid quarterly and in advance	90,000

Hint: Current Assets ₹ 7,23,250, Current liabilities ₹ 2,32,500

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UNIT 5 - CHAPTER- 14

TECHNIQUES OF CAPITAL BUDGETING

14.0 OBJECTIVES

- **To understand capital budgeting process.**
- **To understand payback period method.**
- **To explain net present value method.**
- **To understand average rate of return.**
- **To understand Internal Rate of Return**

14.1 INTRODUCTION

Capital Budgeting is the art of finding assets that are worth more than they cost to achieve a predetermined goal i.e., 'optimizing the wealth of a business enterprise'.

Capital investment involves a cash outflow in the immediate future in anticipation of returns at a future date.

A capital investment decision involves a largely irreversible commitment of resources that is generally subject to significant degree of risk. Such decisions have for reading efforts on an enterprise's profitability and flexibility over the long-term. Acceptance of non-viable proposals acts as a drag on the resources of an enterprise and may eventually lead to bankruptcy.

For making a rational decision regarding the capital investment proposals, the decision maker needs some techniques to convert the cash outflows and cash inflows of a project into meaningful yardsticks that can measure the economic worthiness of projects.

14.2 CAPITAL BUDGETING PROCESS

A Capital Budgeting is a complex process which may be divided into the following phases:

1. Identification of potential investment opportunities:

The capital budgeting process begins with the identification of potential investment opportunities. Typically, the planning body (it may be individual or a committee organised formally or informally) develops estimates of future sales which serve as the basis for setting production targets. This information, in turn , is helpful in identifying required investments in plant and equipment in plant and equipment , research and development ,distribution , and so on.

For imaginative identification of investment ideas it is helpful to

(i) Monitor external environment regularly to scout investment opportunities.

(ii) Formulate a well- defined corporate strategy based on a through analysis of strengths ,weaknesses ,opportunities , and threats .

(iii) Share corporate strategy and perspectives with persons who are involved in the process of capital budgeting and

(iv) Motivate employees to make suggestions.

2. Assembling of Investment Proposals

Investment proposals identified by the production department and other departments are usually submitted in a standardised capital investment proposal form. Generally, most of the proposals , before they reach the capital budgeting committee or somebody which assembles them ,are routed through several persons.

The purpose of routing a proposal through several persons is primarily to ensure that the proposal is viewed from different angles. It also helps in creating a climate for bringing about co-ordination of interrelated activities.

Investment proposals are usually classified into various categories for facilitating decision – making , budgeting , and control.

i) Replacement investments

ii)Expansion investments

iii) New product investments

iv) Obligatory and welfare investments.

3. Decision Making

A system of rupee gateways usually characterises capital investment decision making. Under this system, executives are vested with the power to okay investment proposals up to certain limits.

For example, in one company the plant superintendent can okay investment outlays up to ₹200,000 , the works manager up to ₹500,000 and the managing director up to ₹ 2, 000,000.

Investments requiring higher outlays need the approval of the board of directors.

4. Preparation of Capital Budget and Appropriations

Projects involving smaller outlays and which can be decided by executives at lower levels are often covered by a blanket appropriation for expeditious action. Projects involving larger outlays are included in the capital budget after necessary approvals.

Before undertaking such projects an appropriation order is usually required. The purpose of this check is mainly to ensure that the funds position of the firm is satisfactory at the time of implementation.

Further, it provides an opportunity to review the project at the time of implementation.

5. Implementation

Translating an investment proposal into a concrete project is a complex, time- consuming, and risk- fraught task. Delays in implementation, which are common, can lead to substantial cost-overruns. For expeditious implementation at a reasonable cost , the following are helpful.

Adequate formulation of projects: - The major reason for delay is inadequate formulation of projects. Put differently, if necessary homework in terms of preliminary studies and compressive and detailed formulation of the project is not done , many surprises and shocks are likely to spring on the way. Hence, the need for adequate formulation of the project cannot be over-emphasised.

Use of the principle of responsibility accounting

Assigning specific responsibilities to project managers for completing the project within the defined time-frame and cost limits is helpful for expeditious execution and cost control.

Use of network techniques

For project planning and control several network techniques like PERT (Programme Evaluation Review Technique) and CPM (Critical Path Method) are available. With the help of these techniques, planning and, monitoring becomes easier.

6. Performance Review

Performance review, or post- completion audit, is a feedback device. It is a means for comparing actual performance with projected performance. It may be conducted, most appropriately, when the operations of the project have stabilised. It is useful in several ways :

(i) It throws light on how realistic were the assumptions underlying the project

(ii) It provides a documented log of experience that is highly valuable for future decision-making.

(iii) It helps in uncovering judgmental biases

(iv) It induces a desired caution among project sponsors.

(1) Investment screening and selection

(2) The Capital Budget proposal

(3) Budgeting Approval and Authorization

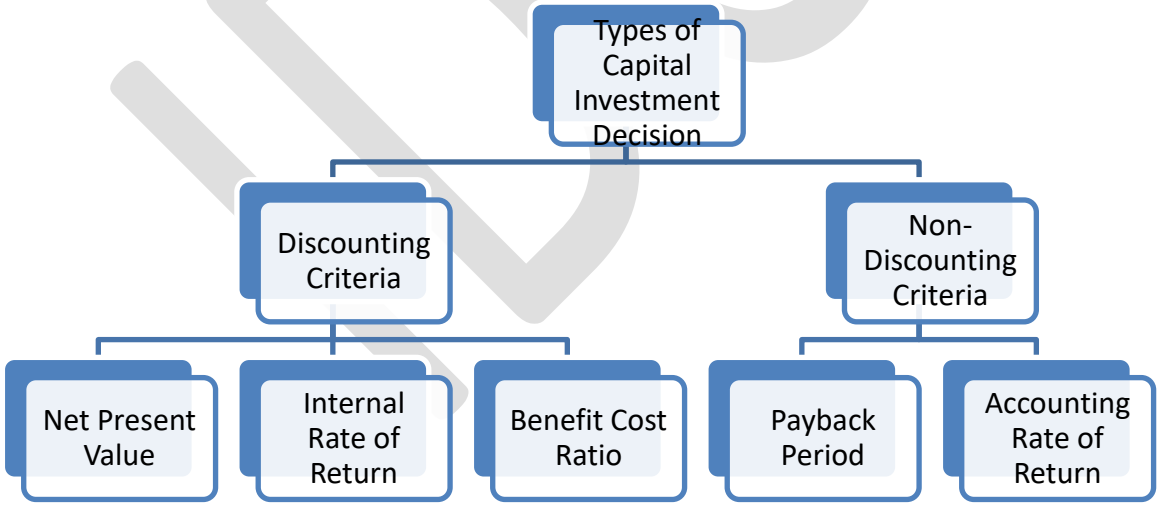
(4) Project Tracking

(5) Post-completion Auditor

14.3 TYPES OF CAPITAL INVESTMENT DECISION

A wide range of criteria has been suggested to judge the worthwhile of investment projects. The important investment criteria, classified into two broad categories –discounting criteria and non-discounting criteria are shown in figure .

The discounting criteria take into account the time value money whereas the non-discounting criteria ignore the time value of money



14.3.1 TIME VALUE OF MONEY :

Concept

We know that Rs. 100 in hand today is more valuable than ₹. 100 receivable after a year. We will not part with Rs. 100 now if the same sum is repaid after a year. But we might part with ₹. 100 now if we are assured that ₹. 110 will be paid at the end of the first year. This "additional Compensation" required for parting Rs. 100 today, is called "interest" or "the time value of money". It is expressed in terms of percentage per annum.

Why should money have time value?

Money should have time value for the following reasons:

(a) Money can be employed productively to generate real returns;

(b) In an inflationary period, a rupee today has higher purchasing power than a rupee in the future; (c) Due to uncertainties in the future, current consumption is preferred to future consumption.

(d) The three determinants combined together can be expressed to determine the rate of interest as follows:

Nominal or market interest rate = Real rate of interest or return (+) Expected rate of inflation (+) Risk premiums to compensate for uncertainty.

METHODS OF TIME VALUE OF MONEY

(1) Compounding: We find the Future Values (FV) of all the cash flows at the end of the time period at a given rate of interest.

(2) Discounting : We determine the Time Value of Money at Time "O" by comparing the initial outflow with the sum of the Present Values (PV) of the future inflows at a given rate of interest.

Time Value of Money	
Compounding	Discounting
(Future Value)	(Present Value)
(a) Single Flow	(a) Single Flow
(b) Multiple Flows	(b) Uneven Multiple Flows
(c) Annuity	(c) Annuity
	(d) Perpetuity

FUTURE VALUE OF A SINGLE FLOW

It is the process to determine the future value of a lump sum amount invested at one point of time.

$FV_n = PV (1 + i)^n$

Where, FVn = Future value of initial cash outflow after n years

PV = Initial cash outflow

i = Rate of Interest p.a.

n = Life of the Investment and

$(1+i)^n$ = Future Value of Interest Factor (FVIF)

Illustration 1: The fixed deposit scheme of Punjab National Bank offers the following interest rates:

Period of Deposit	Rate Per Annum
46 days to 179 days	5.0
180 days < 1 year	5.5
1 year and above	6.0

An amount of ₹ 15,000 invested today for 3 years will be compounded to:

$FV_n = PV (1 + i)^n$

$= PV \times FVIF (6,3)$

$= PV \times (1.06)^3$

$= 15,000 (1.191)$

= Rs. 17,865

Doubling Period "How long will it take for the amount invested to be doubled for a given rate ofinterest"?

(i) By Applying "Rule of 72"

$$\text{Doubling Period} = \frac{72}{\text{Rate of Interest}}$$

For instance, if the rate is 5%, then the doubling period is 72/5 = 14.4 years.

(ii) Rule of 69: For a better and accurate way of calculating the doubling period:

$$\text{Doubling period} = 0.35 + \frac{69}{\text{Rate of Interest}}$$

$$= 0.35 + \frac{69}{5}$$

$$= 0.35 + 13.8$$

$$= 14.15 \text{ years}$$

If compounding is done for shorter periods (i.e. other than annual compounding)

$$FV_n = PV\left(1 + \frac{i}{m}\right)^{m \times n}$$

PV = Initial Cash Outflow

i = Rate of interest p.a.

m = no. of times compounding is done per year

n = no. of years for which compounding is done.

Illustration 2: Calculate the Future value of ₹ 1000 invested in State Bank Cash Certificate Scheme for 2 years @ 5.5% p.a. compounded semi annually.

Solution:

$$FV_n = PV\left(1 + \frac{i}{m}\right)^{m \times n}$$

$$= 1000\,(1.0275)^4$$

$$= 1000\left(1 + \frac{0.55}{2}\right)^{2x2}$$

$$= 1{,}000 \times 1.11462$$

$$= 1{,}114.62$$

Future Value of Multiple Flows

Rate of Interest = 6% p.a. Total Accumulation after 3 years

Being of Year	**Investment (Rs.)**	**EVIF**	**Compounded Value (₹.)**
0	**4,000**	**1.2625**	**5,050**
1	**6,000**	**1.191**	**7,146**
2	**5,000**	**1,1236**	**5,618**
3	**5,000**	**1.06**	**5,300**
Total	**20,000**		**23,114**

The total compounded value is ₹. 23,114

Future Value of Annuity

Annuity is a term used to describe a series of periodic flows of equal amounts. These flows can be inflows or outflows.

The future value of annuity is expressed as :

$FVA_n = A(\frac{(1+i)n\ -1}{i})$

Where,

A = Amount of Annuity

i = rate of interest

n = time period

FVAn = compounded at the end of n years.

And $(\frac{(1+i)n\ -1}{i})$ is the Future Value of Interest Factor for Annuity (FVIFA)

Illustration 3 : Calculation the maturity value of a recurring deposit of ₹. 500 p.a. for 12 months @ 9% p.a. compounded quarterly.

Solution: Effective Rate of Interest per annum = $(\frac{1+0.09}{4})^4 - 1$

=1.0931-1

= 0.0931

Rate of interest per month

$= (1+i)^{1/m} - 1$

$= (1 + 0.0931)^{1/12} - 1$

$= 1.0074 - 1$

$= 0.0074$

$= 0.74\%$

Maturity Value can be calculated as follows:

$FVA_n = A\left(\frac{(1+i)n - 1}{i}\right)$

$= 500 \left\{\frac{(1+0.0074)12 - 1}{0.0074}\right\}$

$= 500 \times 12.50$

= ₹ 6,250/-

Present Value of a Single Flow:

$PV = \frac{FVn}{FVIF\ (i,n)}$

Where, PV = Present Value

FVn = Future Value receivable after n years

i = rate of interest

n = time period

And $\frac{1}{FVIF\ (i,n)}$ = PVIF [Present Value of Interest Factor]

14.4 PAYBACK PERIOD METHOD

MEANING

The basic element of this method is to calculate the recovery time, by year wise accumulation of cash inflows (inclusive of depreciation) until the cash inflows equal the amount of the original

investment. The time taken to recover such original investment is the "payback period" for the project.

"The shorter the payback period, the more desirable a project".

MERITS:

(1) No assumptions about future interest rates.

(2) In case of uncertainty in future, this method is most appropriate.

(3) A company is compelled to invest in projects with shortest payback period, if capital is a constraint.

(4) It is an indication for the prospective investors specifying the payback period of their investments.

(5) Ranking projects as per their payback period may be useful to firms undergoing liquidity constraints.

DEMERITS:

(1) Cash generation beyond payback period is ignored.

(2) The timing of returns and the cost of capital is not considered.

(3) The traditional payback method does not consider the salvage value of an investment.

(4) Percentage Return on the capital invested is not measured.

(5) Projects with long payback periods are characteristically those involved in long-term planning, which are ignored in this approach.

The terms used in this method:-

- Cash outflows : It means the original cost of proposal or investment
- Cash inflows : It means the profits before depreciation but after tax.

Procedure

1) If the cash inflows are uniform :

Pay Back Period = $\frac{\text{Cash Outflow}}{Cash\ Inflow}$

For e.g. An investment of ₹32,000 in a machine is

expected to yield ₹. 8,000 for a period of 10 years, here the

Pay Back Period = $\frac{32000}{8000}$ = 4 years

2) If the cash inflows are not uniform:

A) Prepare the column for cumulative cash inflows

B) Here the pay back period is the time when the cumulative cash inflows become equal to the original cost of proposal.

SOLVED PROBLEMS

Illustration 4:

Initial Investment = Rs. 1, 00,000 Expected future cash inflows ₹ 20,000, ₹ 40,000, ₹ 60,000, ₹ 70,000

Solution:

Calculation of Pay Back period.

Year	**Cash Inflows (₹)**	**Cumulative Cash Inflows (₹)**
1	20,000	20,000
2	40,000	60,000
3	60,000	1,20,000
4	70,000	1,90,000

The initial investment is recovered between the 2nd and the 3rd year.

Payback Period = 2 years+ ($\frac{Balance\ of\ Unrecovered\ Initial\ Investment}{Cash\ Inflows\ during\ the\ year}$) x 12

Initial Investment – Cumulative

= 2 years + $\frac{\text{cash Inflows at the end of the 2nd year}}{\text{cash inflows in the 3rd year}}$ x 12

= 2 years + ($\frac{1,00,000 - 60,000}{60,000}$) x 12

= 2 years + ($\frac{40,000}{60,000}$) x 12

= 2 years 8 months

Illustration 5: Victory Ltd. decided to purchase a machine to increase the installed capacity. The company has four machines under consideration. The relevant details including estimated yearly expenditure and sales are given below. All sales are for cash. Corporate Tax Rate @ 33.99% (inclusive of Surcharge @ 10%, Deduction cess @ 2% and Secondary & Higher Education cess @ 1%)

Particulars	M1	M2	M3	M4
Initial Investment (₹. lacs)	30.00	30.00	40.00	35.00
Estimated Annual Sales (₹. lacs)	50.00	40.00	45.00	48.00
Cost of Production (Estd) (₹. Lacs)	18.00	14.00	16.70	21.00
Economic Life (yrs)	2	3	3	4
Scrap Values (₹. Lacs)	4.00	2.50	3.00	5.00

Calculate Payback Period

Solution:

Statement Showing Payback for four machines

Particulars	M1	M2	M3	M4
(1)Initial Investment (₹ lacs)	30.00	30.00	40.00	35.00
(2)Estimated Annual Sales (₹. lacs)	50.00	40.00	45.00	48.00
(3)Cost of Production (Estd) (₹. Lacs)	18.00	14.00	16.70	21.00
(4) Depreciation (₹ lacs)	13.00	9.17	12.33	7.50

(5) Profit Before Tax (PBT) [2–3–4]	19.00	16.83	15.97	19.50
(6) Tax @ 33.99% (₹ lacs)	6.4581	5.721	5.428	6.628
(7) Profit After Tax (PAT) [5–6] (₹ lacs)	12.5419	11.109	10.542	12.872
(8) Net Cash Flow [7+4]	25.5419	20.279	22.872	20.372

	M1	M2	M3	M4
Payback Period (Years)	$=\frac{30.00}{25.5419}$	$=\frac{30.00}{20.297}$	$=\frac{30.00}{22.872}$	$=\frac{30.00}{20.372}$
$\left(\frac{Initial\ Investment}{Net\ Annual\ cash\ Flow}\right)$	=1.17	=1.48	=1.75	=1.72

Analysis: Machine 1 is more profitable, as it has the lowest payback period.

Bailout Factor

This deals with the possibility of scrapping the machine during its estimated life.

Illustration 6:

Project × costs ₹ 20 lacs and project y costs ₹ 30 lacs both have a life of 5 years. Expected cash flows ₹ 8 lacs p.a. for project × and ₹ 15 lacs p.a. for project y. Estimated scrap values of project × ₹ 5 lacs, declining at an annual rate of ₹ 1 lacs p.a. and of project y ₹ 8 lacs declining at an annual rate of ₹ 1 lac p.a.

Under Traditional payback:

Project X = $\frac{20,00,000}{8,00,000}$ = 2.5Years

Project Y = $\frac{30,00,000}{15,00,000}$ = 2 years

Under Bailout Payback:

The bailout payback time is reached if the accumulated cash inflows plus the expected salvage value at the end of a particular year equals the original/initial investment.

Project X	Cumulative Cash Receipts (₹)	Salvage Value (₹)	
End of year 1:	8,00,000	5,00,000	= 13,00,000
End of year 2:	16,00,000	4,00,000	= 20,00,000

Bailout payback period for Project X = 2 years.

Project Y	Cumulative Cash Receipts (₹)	Salvage Value (₹)	
End of year 1:	15,00,000	8,00,000	= 23,00,000
End of year 2:	30,00,000	7,00,000	= 37,00,000

Bailout is between years 1 & years 2.

Project Y is choosen having a lower bailout payback period, assuming that the major objective is to avoid loss.

PAYBACK PERIOD RECIPROCAL

Payback period may be expressed alternatively as the "payback reciprocal":

Payback period reciprocal = $\frac{1}{Payback\ Period}$ X 100

Illustration 7:

If the payback period for a project is 5 years, then the payback period reciprocal would be:

$\frac{1}{5}$ X 100 = 20%

The projects having lower payback period shall yield higher payback reciprocal, which reflects the worth of such project.

14.5 ACCOUNTING / AVERAGE RATE OF RETURN

MEANING

This method measures the increase in profit expected to result from investment.

ARR = $\frac{\text{Average Annual Profit After Tax}}{\text{Average or Initial Investment}}$ X 100

$$= \frac{\text{Average EBIT } (1 - t)}{\text{Average Investment}} \times 100$$

Where,

$$\text{Average Investment} = \frac{\text{Initial Investment + Salvage Value}}{2}$$

MERITS

(1) This method considers all the years in the life of the project.

(2) It is based upon profits and not concerned with cash flows.

(3) Quick decision can be taken when a number of capital investment proposals are being considered.

DEMERITS

(1) Time Value of Money is not considered.

(2) It is biased against short-term projects.

(3) The ARR is not an indicator of acceptance or rejection, unless the rates are compared with the arbitrary management target.

(4) It fails to measure the rate of return on a project even if there are uniform cash flows.

SOLVED PROBLEMS

Illustration 8:

A project costing ₹ 10 lacs. EBITD (Earnings before Depreciation, Interest and Taxes) during the first five years is expected to be ₹ 2,50,000; ₹ 3,00,000; ₹ 3,50,000; ₹ 4,00,000 and ₹ 5,00,000. Assume 33.99% tax and 30% depreciation on WDV Method.

Solution :

Computation of Project ARR:

Particulars	Yr 1	Yr 2 ₹	Yr 3 ₹	Yr 4 ₹	Yr 5 ₹	Average
EBITD	2,50,000	3,00,000	3,50,000	4,00,000	5,00,000	3,60,000

Less: Dep.	3,00,000	2,10,000	1,47,000	1,02,900	72,030	1,66,386
EBIT	(50,000)	90,000	2,03,000	2,97,100	4,27,970	1,93,614
Less: Tax@33.99%	--	13,596	69,000	1,00,984	1,45,467	65,809
	(50,000)	76,404	1,34,000	1,96,116	2,82,503	1,27,805

Book Value of Investment:

Beginning	10,00,000	7,00,000	4,90,000	3,43,000	2,40,100
End	7,00,000	4,90,000	3,43,000	2,40,100	1,68,070
Average	8,50,000	5,95,000	4,16,500	2,91,550	2,04,085
4,71,427					

ARR = $\frac{\text{Average EBIT } (1-t)}{\text{Average Investment}}$ X 100

= $\frac{1,27,805}{4,71,427}$ X100

= 27.11%

Note: Unabsorbed depreciation of Yr. 1 is carried forward and setoff against profits of Yr. 2. Tax is calculated on the balance of profits

= 33.99% (90,000 – 50,000)

= 13,596/-

14.6 NET PRESENT VALUE (NPV) METHOD

MEANING

Net Present Value = Present Value of Cash Inflows – Present Value of Cash Outflows

The discounting is done by the entity's weighted average cost of capital.

The discounting factors is given by :$\frac{1}{(1+i)}$n

Where

i = rate of interest per annum

n = no. of years over which discounting is made.

MERITS

(1) It recognizes the Time Value of Money.

(2) It considers total benefits during the entire life of the Project.

(3) This is applicable in case of mutually exclusive Projects.

(4) Since it is based on the assumptions of cash flows, it helps in determining Shareholders Wealth.

DEMERITS

(1) This is not an absolute measure.

(2) Desired rate of return may vary from time to time due to changes in cost of capital.

(3) This Method is not effective when there is disparity in economic life of the projects.

(4) More emphasis on net present values. Initial investment is not given due importance.

Illustration 9:

Z Ltd. has two projects under consideration A & B, each costing ₹ 60 lacs.

The projects are mutually exclusive. Life for project A is 4 years & project B is 3 years. Salvage value NIL for both the projects. Tax Rate 33.99%. Cost of Capital is 15%.

Net Cash Inflow (₹. Lakhs)

At the end of the year	Project A	Project B	P.V. @ 15%
1	60	100	0.870
2	110	130	0.756
3	120	50	0.685
4	50	—	0.572

Solution :

Computation of Net Present Value of the Projects.

Project A (₹ lakhs)

	Yr. 1	Yr. 2	Yr. 3	Yr. 4
1. Net Cash Inflow	60.00	110.00	120.00	50.00
2. Depreciation1	15.00	15.00	15.00	15.00
3. PBT (1–2)	45.00	95.00	105.00	35.00
4. Tax @ 33.99%	15.30	32.29	35.70	11.90
5. PAT (3–4)	29.70	62.71	69.30	23.10
6. Net Cash Flow (PAT+Depn)	44.70	77.71	84.30	38.10
7. Discounting Factor	0.870	0.756	0.685	0.572
8. P.V. of Net Cash Flows	38.89	58.75	57.75	21.79
9. Total P.V. of Net Cash Flow	= 177.18			
10. P.V. of Cash outflow (Initial Investment)	= 60.00			
Net Present Value	= 117.18			

Project B

	Yr. 1	Yr. 2	Yr. 3
1. Net Cash Inflow	100.00	130.00	50.00
2. Depreciation	20.00	20.00	20.00
3. PBT (1–2)	80.0	110.00	30.00
4. Tax @ 33.99%	27.19	37.39	10.20
5. PAT (3–4)	52.81	72.61	19.80
6. Next Cash Flow (PAT + Dep.)	72.81	92.61	39.80

7. Discounting Factor	0.870	0.756	0.685
8. P.V. of Next Cash Flows	63.345	70.01	27.263
9. Total P.V. of Cash Inflows	=160.621		
10. P.V. of Cash Outflows (Initial Investment)	= 60.00		
Net Present Value	= 100.621		

As Project "A" has a higher Net Present Value, it has to be taken up.

14.7 INTERNAL RATE OF RETURN (IRR)

MEANING

Internal Rate of Return is a percentage discount rate applied in capital investment designs which brings the cost of a project and its expected future cash flows into equality, i.e., NPV is zero.

MERITS:

(i) The Time Value of Money is considered.

(ii) All cash flows in the project are considered.

DEMERITS

(i) Possibility of multiple IRR, interpretation may be difficult.

(ii) If two projects with different inflow/outflow patterns are compared, IRR will lead to peculiar situations.

(iii) If mutually exclusive projects with different investments, a project with higher investment but lower IRR contributes more in terms of absolute NPV and increases the shareholders' wealth.

Illustration 10:

Project Cost	₹ 1,10,000
Cash Inflows:	
Year 1	₹ 60,000

Year 2	₹ 20,000
Year 3	₹ 10,000
Year 4	₹ 50,000

Calculate the Internal Rate of Return.

Solution:

Internal Rate of Return will be calculated by the trial and error method. The cash flow is not uniform. To have an approximate idea about such rate, we can calculate the "Factor". It represents the same relationship of investment and cash inflows in case of payback calculation:

F = I/C

Where F = Factor

I = Original investment

C = Average Cash inflow per annum

Factor for the project = $\frac{1,10,000}{35,000}$ = 3.14

The factor will be located from the table "P.V. of an Annuity of Rs. 1" representing number of years corresponding to estimated useful life of the asset.

The approximate value of 3.14 is located against 10% in 4 years.

We will now apply 10% and 12% to get (+) NPV and (–) NPV [Which means IRR lies in between]

Year	Cash Inflows (₹)	P.V. @ 10% DCFAT		P.V. @ 12% DCFAT	
			(₹)		(Rs.)
1	60,000	0.909	54,540	0.893	53,580
2	20,000	0.826	16,520	0.797	15,940
3	10,000	0.751	7,510	0.712	7,120
4	50,000	0.683	34,150	0.636	31,800

P.V. of Inflows Less : Initial Investment	1,12,720 1,10,000	1,08,440 1,10,000
NPV	**2,720**	**(1,560)**

Graphically,

For 2%, Difference = 4,280

10%	12%
NVP 2,720	(1,560)

IRR may be calculated in two ways:

Forward Method: Taking 10%, (+) NPV

$$\text{IRR} = 10\% + \frac{\text{NPV at } 10\%}{\text{Total Difference}} \times \text{Difference in Rate}$$

$$= 10\% + \frac{2720}{4280} \text{ X } 2\%$$

$$= 10\% + 1.27\% = 11.27\%$$

Backward Method:

Taking 12%, (–) NPV

$$\text{IRR} = 12\% + \frac{(1560)}{4280} \text{ X } 2\%$$

$$= 12\% - 0.73\% = 11.27\%$$

The decision rule for the internal rate of return is to invest in a project if its rate of return is greater than its cost of capital.

For independent projects and situations involving no capital rationing, then:

Situation	Signifies	Decision
IRR = Cost of Capital	The investment is expected	Indifferent between

	not to change shareholder wealth	Accepting & Rejecting
IRR > Cost of Capital	The investment is expected to increase shareholders wealth	Accept
IRR < Cost of Capital	The investment is expected to decrease shareholders wealth	Reject

SUMMARY

Investment criteria fall into two categories : discounting criteria and non-discounting criteria .

Net present value (NPV) , benefit cost ratio(BCR) and internal rate of return (IRR) , are the most popular discounting criteria.

Payback period and accounting rate of return are the major non-discounting criteria

The NPV of a project is the sum of present values of all the cash flows of the project. A project is worthwhile if its NPV > 0; otherwise not.

The IRR of a project is the discount rate which makes its NPV equal to zero. A project is worthwhile if its IRR exceeds the cost of capital; otherwise not.

The payback period is length of time required to recover the initial outlay on the project.

The accounting rate of return is the average profit after

QUESTIONS

A - Find out the correct option:

1. Long-term decisions are called as

a) Capita budgeting decisions

b) Working capital decisions

c) Future decisions

2. Capital budgeting decisions involve huge amount of risk due to

a) Time factor

b) Money factor

c) Human factor

3. Payback period is

a) The time required to recover the original investment

b) The time required to depreciate asset

c) The time required to pay to creditor

4. N.P.V method is

a) Most traditional

b) Most modern

c) Most complicated

5. P.I is the proportion between

a) PV of cash inflow and PV of cash outflow

b) PV of cash inflow and total cash outflow

c) Cash inflow and total cash outflow

6. The method which does not consider investments profitability is

a) Payback

b) ARR

c) NPV

d) IRR

7. The most reliable method for financing capital budget decision

a) NPV

b) ARR

c) Payback

d) Post audit method

8. P. Ltd is adding a new product line which requires an investment of ₹ 14,54,000. The life of the project will be 10 years and will generate cash inflow of Rs. 3,10,000 for the first year, ₹ 2,80,000 for the second year and ₹ 2,40,000 for each year thereafter for eight years. The payback period is a) 6 years

b) 5 years & 7.2 months

c) 7 years

d) 4.5 years

9. Cost of project A is as 2, 72,000 and offers eight annual net cash inflow of ₹ 60,000. The expected rate of return is 14%. The NPV will be

a) 6,340

b) 7,400

c) 8,590

d) 4,300

10. P.I is the proportion between

a) PV of cash inflow / scrap value

b) PV of cash inflow / investment

c) PV of cash inflow / life of the project

d) None of the above

11. In replacement decision market value of existing assets is considered as

a) Cash inflow

b) Cash outflow

c) Scrap value

d) Cost of capital

B - State with reasons whether the following statements are true or false:

1. Investors are required to select right securities for investment of their surplus money.

2. Liquidity is convertibility of investments into cash.

3. Investors do not expect regular income.

4. Jewellery does not give recurring income.

5. Investments in shares results in dividend.

6. An investor does not expect liquidity of investment.

7. Appreciation growth in the value of investment.

8. Capital budgeting decisions are long term investment decisions.

9. Cost of investment is a part of cash outlay.

10. Depreciation should be added back to N.P. after tax to get cash inflow.

11. Capital budgeting decisions are very easy to take.

12. The project with longer payback period should be selected.

13. N P V method considers time value.

C - Fill in blanks.

1. Capital budgeting decision are _____.

2. Cash inflow should be after _____ buy before_____.

3. Scrap value _____cash inflow in the last year.

4. In capital _____ limited funds are allocated a among the financially viable projects.

5. Capital Rationing is done when funds are_____.

6. Tax saving on loss on sale of existing value is considered as _____.

7. Training cost of employees is considered as _____ in capital budgeting.

D - Match the Column:

	Group A		Group B
1	Capital budgeting decisions	A	$\frac{\text{Average}}{\text{Average Investment}}$
2	Capital budgeting	B	Discounted cash flow

	decisions		
3	ARR	C	Considers time value of money
4	NPV	D	More risky
5	Discounted cash flow	E	Long term investment decisions

E – Answer the following Questions.

1. Write short notes on:

1. NPV

2. Pay Back Period

3. I.R.R.

PROBLEMS

Q1) When an investment of Rs. 70,000 in a machine is expected to yield earnings of ₹ 6,000, ₹ 12,000, ₹. 17,000, ₹. 20,000, ₹. 20,000 and ₹ 25,000 in 6 years are estimated calculate the payback period.

Q2)The initial outlay of the project is Rs. 50,000 and it generates cash inflows of ₹ 25,000, ₹ 20,000, ₹ 15,000 and ₹ 10,000 in the four years of its lifespan. Your are required to calculate the Net Present Value of the project assuming 10% rate of discount. The present value of Re. 1 at 10% discount rate is as follows:

Year:	1st	2nd	3rd	4th
Present Value:	0.909	0.826	0.751	0.683

You are required to calculate the Net Present Value of the project.

Answer : Net Present Value 7,340

Q3) Given below is the information regarding two machines A and B each costing Rs. 1,00,000. In comparing the profitability of the machines, a discount rate of 9% is to be used. Earnings after taxation are expected to be as follows:

Cash Inflows

YEAR	Machine A	Machine B
1	30,000	10,000
2	40,000	30,000
3	50,000	40,000
4	30,000	60,000
5	20,000	40,000

Indicate which machine would be more profitable investment

under the :

1) Pay Back Period Method

2) Net Present Value Method

Calculate the Pay Back Profitability

The Present Value of Rs. 1 at 9% discount rate is as follows :

YEAR:	1st	2nd	3rd	4th	5th
PRESENT VALUE:	0.92	0.84	0.77	0.71	0.65

You are required to calculate the Net Present Value of the project.

Answer : Pay Back Period of Machine A = 2 and 3/5 Years i.e. 2.6 Years.

Pay Back Period of Machine B = 3 and 1/3 Years i.e. 3 Years and 4 months.

The investment in Machine A is more profitable as per the Pay Back Period Method.

Net Present Value =₹ 34,000

As per the Net Present Value Method the investment in Machine A is profitable as its Net Present Value is more than Machine B.

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