

ACCOUNTING FOR HOSPITALS

MASTER OF BUSINESS ADMINISTRATION (HOSPITAL ADMINISTRATION)

FIRST YEAR, SEMESTER-II, PAPER-II

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FOREWORD

Since its establishment in 1976, Acharya Nagarjuna University has been forging ahead in the path of progress and dynamism, offering a variety of courses and research contributions. I am extremely happy that by gaining 'A+' grade from the NAAC in the year 2024, Acharya Nagarjuna University is offering educational opportunities at the UG, PG levels apart from research degrees to students from over 221 affiliated colleges spread over the two districts of Guntur and Prakasam.

The University has also started the Centre for Distance Education in 2003-04 with the aim of taking higher education to the door step of all the sectors of the society. The centre will be a great help to those who cannot join in colleges, those who cannot afford the exorbitant fees as regular students, and even to housewives desirous of pursuing higher studies. Acharya Nagarjuna University has started offering B.Sc., B.A., B.B.A., and B.Com courses at the Degree level and M.A., M.Com., M.Sc., M.B.A., and L.L.M., courses at the PG level from the academic year 2003-2004 onwards.

To facilitate easier understanding by students studying through the distance mode, these self-instruction materials have been prepared by eminent and experienced teachers. The lessons have been drafted with great care and expertise in the stipulated time by these teachers. Constructive ideas and scholarly suggestions are welcome from students and teachers involved respectively. Such ideas will be incorporated for the greater efficacy of this distance mode of education. For clarification of doubts and feedback, weekly classes and contact classes will be arranged at the UG and PG levels respectively.

It is my aim that students getting higher education through the Centre for Distance Education should improve their qualification, have better employment opportunities and in turn be part of country's progress. It is my fond desire that in the years to come, the Centre for Distance Education will go from strength to strength in the form of new courses and by catering to larger number of people. My congratulations to all the Directors, Academic Coordinators, Editors and Lesson-writers of the Centre who have helped in these endeavors.

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**MASTER OF BUSINESS ADMINISTRATION
(HOSPITAL ADMINISTRATION)**

Programme Code: 197

PROGRAMME SYLLABUS

1st YEAR – 2nd SEMESTER SYLLABUS

202HA26: ACCOUNTING FOR HOSPITALS

Unit – I: Financial Accounting: Meaning and Objectives and Functions of Accounting; Principles of Accounting – GAAP – Journals, Ledgers and Trail Balance for Hospitals; Subsidiary Books – Cash Book

Unit – II Financial Statements: Profit and Loss Account – Balance Sheet (**Problems**) – Accounts of Non-profit organizations. Depreciation Methods to be used for the Hospital Equipment

Unit – III: Costing: Fundamentals of Cost Accounting; Costing of Service Departments and Other Related Areas: Estimation of Cost-of-Service Departments – Allocation and Apportionment of costs to various departments – Service departments to be covered are: CSSD, laundry, compressors, water supply, oxygen, nitrous oxide, food & beverage, housekeeping – Activity Based Costing (ABC) in a Corporate Hospital. (Theory Only)

Unit – IV: Management Accounting: Nature and Scope; – Management Accounting Vs Financial Accounting – Management Accounting Vs Cost Accounting – Functions and Duties of Management Accountant in Hospitals.

Unit – V Marginal Costing: Definition, Marginal Costing Vs. Absorption Costing, CVP /BEP Analysis, Managerial Decision-Making Areas – Make or Buy.

Reference Books

1. Michael Nowicki “Hfma’s Introduction to Hospital Accounting”, Health Administration Press, 7th Edition, 2018
2. M N Arora “A Textbook of Cost and Management Accounting” Vikas Publishing House, II/e, 2021
3. Debra C.Jeter, Paul K.Chaney “Advanced Accounting” 7th Edition, E-Book, 2019
4. A.Murthy, T.S. Reddy “Financial Accounting” Margham Publications, 2017
5. Shukla, MC and TS Gremal, “Advanced Accounts, S-Chand.
6. Arora R.K. “Financial Accounting” Wiley India Pvt. Ltd, 2/e
7. Praveen Sharma “Advanced Accounting” by Taxmann, 3rd Edition, Aug., 2021
8. Maheswari, S.N. & SK Maheswari, “An Introduction to Accountancy”, Vikas.
9. Dr. A.K. Singhal & Dr. A.K. Ahlawat “Fundamentals of Accounts” Vayu Education of India publications
10. “Beginners Guide on Goods and Services Tax” published by The Institute of Company Secretaries of India, 2017

11. Steven A. Finkler, David M. Ward, Steve A. Finkler, Essentials of Cost Accounting for Healthcare Organizations, Aspen Publishers, Inc.; ISBN: 0834210118: 2nd edition.
12. Periasamy. P, Financial, Cost and Management Accounting, Himalaya Publishing House, 2005.
13. Jain, S.P. and Narang, Advanced Cost and Management Accounting, Kalyani Publishers Ludhiana, Revised Edition, 2019.

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LESSON – 1

ACCOUNTING - CONCEPTS

Objectives :

After reading this unit we should be able to :

- Understand the definition, Objectives, functions and branches of Accounting.
- Know the users of accounting information and the accounting information system.
- Have an understanding on the advantages and limitations of accounting in addition to the principles of accounting and accounting standards.

Structure :

- 1.1 Introduction**
- 1.2 History of Accounting**
- 1.3 Book Keeping and Accounting**
- 1.4 Functions of Accounting**
- 1.5 Users of Accounting Information**
- 1.6 Advantages of Accounting**
- 1.7 Limitations of Accounting**
- 1.8 Accounting Principles**
- 1.9 Accounting Standards**
- 1.10 Questions**
- 1.11 Suggested Readings**

1.1 INTRODUCTION

All individuals and institutions depend on one another to satisfy their needs. To serve this purpose, they engage in exchange, which materializes into financial transactions (i.e., transactions carried out in terms of money). Business entities buy and sell goods, borrow and invest money, pay salaries to employees and incur expenses on rent and electricity,

purchase land and buildings, etc. To be able to manage finances efficiently, it becomes necessary to keep track of these cash inflows and outflows.

In the past, when transactions were limited and businesses were small, everybody relied on their memory. As businesses grew in size, the entrepreneurs had to rely on something more than their memory to keep track of their business transacted during the year. They had to keep a proper and systematic account of the amount invested, the amount gained or lost in a year, how much they owed and how much others owed to them. Thus, accounting came into being as an aid to the entrepreneur.

1.1.2. Definition:

The American Institute of Certified Public Accountants defines accountancy as follows:

Accounting is the art of recording, classifying and summarizing in a significant manner and in terms of money, transactions and events which are in part at least of a financial character and interpreting the results thereof.

The above definition contains five essential characteristics of accounting. They are:

- (a) Identification of financial events
- (b) Recording of transactions
- (c) Classification of information
- (d) Summarizing the information
- (e) Communication of information.

1.2 HISTORY OF ACCOUNTING

The art of Book – keeping existed even in ancient days before the dawn of the Double Entry Book – keeping method.

Financial and numerical records are found in nearly every civilization with a commercial background. Records of commercial contracts were found in the realm of Babylon. Accounts for both farms and estates were kept in Greece and Rome.

The Greeks and Romans had well – developed record keeping systems, especially for government affairs. The Emperor Augustus is said to have instituted a Government budget in A. D. 5. Some what later, inspectors from the Central Government in Rome were sent out to examine the accounts of provincial Governors. During the Middle Ages, Accounting and most other elements of learning and trade languished. With the emergence of a Barter Economy, the financial transaction that are the life blood of accounting tended to disappear. Only the church and strong monarchs maintained the earlier systems of record keeping and control. The revival of Italian Commerce in the 13th and 14th centuries created a need for

Book – keeping. The first Double Entry systems of Book – keeping evolved during this period. There are extant sets of Double Entry records prepared in Genoa in 1340. The earliest systematic description of the Double Entry procedure was provided by Luca De Barge Piccolo in 1494. This method is known as the Italian method. It was translated into English and published in London in 1543.

Avail's treatise dealt with all the attributes of a Double Entry. It still serves as the basis for the far more complex accounting system of today. A further improvement in Book – keeping can be attributed to the industrial revolution.

1.3 BOOK – KEEPING AND ACCOUNTING

Book – keeping is the subject which is to be studied by the students of Commerce and by book – keepers and accountants. A study of this subject requires more practice and less of reading. A student of Accountancy should know the theoretical as well as the practical aspects of the subject.

First stage is called Book – Keeping and the second stage is Accounting.

1. **Book – keeping** : Book – Keeping involves the chronological recording of financial transactions in a set of books in a systematic manner.
2. **Accounting**: Accounting is concerned with the maintenance of accounts giving stress to the design of the system of records, the preparation reports based on the recorded data and the interpretation of the reports.

1.3.1 Distinction between Book – Keeping and Accounting

Point of difference	Book – Keeping	Accounting
1. Meaning	Book – keeping is the art of recording business transactions in the book of original entry and posting them into ledger.	Accounting is the recording, classifying and summarising, the business transactions which are in terms of money and interpreting the results thereof.
2. Responsible of a person	The person who does the task of Book – keeping is known as "Book – keeper".	The person who summarises and interprets the account is known as "Accountant".
3. Nature of work	Much of the work of a book – keepers is of a routine and clerical work.	The work of an accountant is comprehensive, analytical and skilful.
4. Scope	The scope of Book – keeping is limited to the entries of original records.	Its scope is wide as it includes the work of Book – keeping.
5. Dependence	Its work is independent.	Its work depends on the work of Book – keeping
6. Sequence of work	Book – keeping comes first and	Accountant's work starts where

	accounting comes next.	Book – keeping.
7. Working	In it the work of journalising, posting into ledger, totaling and balancing of accounts are done.	In it the work of checking the accuracy of the accounts.
8. Special knowledge and ability	It does not require to possess any technical special knowledge.	It requires to have a special knowledge of accounting and experience.
9. Time of recording transactions	In it transactions are recorded on the same day when they take place.	The work of accounting is done at the end of the trading period.

1.3.2 Meaning of Accounting:

Book – keeping is an art of keeping accounts in regular and systematic fashion. It is also termed as accountancy or accounting. Now-a-days the sphere of business has become very vast. Every trader wants to sell his commodities at a price higher than their cost and thus wants to earn profit. In business, all transactions are not necessarily made in cash but through credit also. So, it is said that 'Credit is the soul of business'. Every businessman has limited memory and as such he cannot remember all the transactions. To know the correct financial position of the enterprise, it becomes imperative for the businessman to record all the transactions in the book is called 'Book – keeping' or 'Accounting'.

1.3.3 Definition of Accounting:

Accounting may be defined as the science as well as the art of recording financial transactions under appropriate accounts.

According to Smith and Ashburne, "Accounting is a science of recording and classifying the business transactions and events, primarily of a financial character and the art of making significant summaries, analysis and interpretations of these transactions and events and communicating the results to persons who must make decisions or from judgements."

According to the American Institute of Certified Public Accountants, "Accounting is the art of recording, classifying and summarising in a significant manner and in terms of money transactions and events which in part, at least of a financial character, and interpreting the result thereof.

Accounting can, therefore, be defined as:

Accounting is the art of recording, classifying and summarising in a significant manner and in terms of money, transactions and events which are, in part at least, of a financial character and interpreting the results thereof.

1.3.4 Objectives of Accounting:

The objects of accounting are manifold. These are enumerated below:

- (i) **To keep systematic record:** The main object of accounting is to keep the record of day to day transactions in a systematic manner. At first the transactions are recorded in the journal in chronological order and then from the journal transactions are posted to the Ledger and from the Ledger. Trial balance and final Accounts are prepared.
- (ii) **To find out the true profit / loss:** Profit is the main provocation to keep the businessman and around the business. Hence, he is always interested to find out the true profit or loss during a given period.
- (iii) **To know the financial position on a particular date:** One can know at a glance the financial position or soundness of a business on a particular date if accounts are maintained properly.
- (iv) **To communicate the information to the interested parties:** The object of accounting is to provide information to the interested parties i.e., owner, manager, creditors, Government etc. at regular intervals through Financial statements.
- (v) **To help in planning and controlling various business activities:** Accounting supplies information to the manager at right time which helps him to plan the further course of action and to control the business resources by comparing the actual results with that of the pre – determined standards.
- (vi) **To meet Legal requirement:** Law compels the businessman to submit various statements such as sales tax return, income tax return, stock position etc. A business will be able to supply all those statements only if there is a proper accounting system.

1.3.5 Branches of Accounting:

To fulfil the various objectives, various branches of accounting have developed. The chief amongst these are the following:

- (i) **Financial Accounting:** It is one of the branch of accounting, the object of which is to ascertain the profit or loss made during a period and to state the financial position (Balance Sheet) of the business at the end of the period.
- (ii) **Cost Accounting:** It is one of the branch of accounting, the object of which is to ascertain the cost incurred for, carrying out the various activities and to enable management to exercise cost control.
- (iii) **Management Accounting:** It is also one of the branch of accounting, the object of which is to supply necessary information at appropriate time to the management to enable it to take decisions and effect control.

1.4. FUNCTIONS OF ACCOUNTING

The main functions of accounting can be given as follows:

- (i) It keeps a systematic and permanent record of all financial transactions of the business.
- (ii) It keeps a record of income and expenses in such a manner so that net results of the business can be quickly known for any period.
- (iii) It keeps a record of assets and liabilities in such a way that financial position of the business can be readily had at any point of time.
- (iv) It protects the property of the business by designing such a system of accounting which may be helpful to achieve this purpose.
- (v) It keeps a tract of all changes in the value of assets and liabilities.
- (vi) It keeps a control on expenses in order to minimise the same.
- (vii) It communicate the results of the business to the various categories of persons as owners, investors, creditors, employees, management, Government etc.
- (viii) It provides information for meeting various legal requirement as income – tax returns, returns for sales tax etc.
- (ix) It helps in making decisions concerning the acquisition use and preservation of scarce resources.
- (x) It helps in devising remedial measures for the deviation of the actual performance from the planned performance.

1.5 USERS OF ACCOUNTING INFORMATION

Accounting provides information to groups of people who are directly or indirectly interested in the performance and the financial position of a business enterprise. The accounting information helps them to understand the present position of the enterprise to compare its present and past performance as well as its performance with similar enterprises. The main sources of information for external users are annual, half – yearly and quarterly reports.

The various users of accounting information are internal and external users. External users comprise of creditors, investors, government and consumers while the internal users consist of the employees and management. The purpose for which they need accounting information is discussed below.

1. **Creditors:** Creditors may be short – term or long – term lenders. They have to be paid at some agreed date in the future for providing goods and services on credit to the enterprise. The creditors are interested in the financial stability of a business

before granting loans. This is because they have to assess whether the enterprise would be able to pay them back, and also the probability of a delay in payment.

2. **Investors:** Investors of an enterprise include the existing as well as future shareholders (owners). Since the shareholders are concerned with the dividends (income) that they would receive from their share in the enterprise, they are interested in knowing how well the company would perform in the future. The profit and loss account as well as the balance sheet contain all the accounting information that the investors need.
3. **Government:** The government's task of levying taxes and regulation of industries is facilitated if accounting information is presented in a uniform manner. The different departments of the government collect information on business activities such as levels of sales activity, profits, investment, dividend policy, and so on. This information is needed for framing various policies by the government.
4. **Consumers:** Consumers and the public at large are interested in the accounting information in order to appraise the efficiency of the enterprise. The public might also be interested in the social role that the enterprise plays in different sectors of the economy. For example, they may want to know the level of industrial pollution from a particular type of activity carried on by the business enterprise.
5. **Management:** Accounting keeps the management informed of the various activities of an enterprise. It helps the managers to plan, control and evaluate the operations of the business. They also need such information for making various decisions. However, the type of accounting information needed by managers may vary with the size of the enterprise. For example, a manufacturing unit producing a number of products in small quantities may need accounting information about the profitability of each product. On the other hand, a large company operating through a number of branches would need information about the profitability of each of its branches.
6. **Employees:** Employees of a business enterprise are interested in better salaries, bonus and other benefits, which in turn depend on the earnings of an enterprise. Hence, they need accounting information to know how safe their interests are in that organization. For example, the employees of an enterprise would be interested in knowing whether the enterprise is likely to survive and also if it is capable of paying increased salaries and benefits.

1.5.1 Types of Accounting information:

Accounting is the primary source of generating information about the day – to – day working and future planning of an organization. Most of the recording functions performed in recent times are computerized. This has been made possible due to the advancement in the field of information technology. Accounting performs the main function of communicating

financial information to various groups of users to enable them to make economic decisions. Accounting reduces the mass of data into reports and statements. To simplify this process, accounting is divided into financial, cost and management accounting.

1. **Financial Accounting:** Financial Accounting deals with recording and analysis of business transactions that take place during an accounting period. This is required to prepare financial statements, which are crucial for achieving organizational success and financial soundness. This form of accounting relates to the past period.
2. **Cost Accounting:** Cost Accounting is concerned with the ascertainment of the cost of various products and services as well as cost control. This includes collecting, processing and presenting financial and quantitative data to ascertain the cost.

However, for decision – making purposes, management accounting is more useful. It provides the necessary information (qualitative and quantitative) to the management for discharging their functions. This information is required to assist the management in taking decision about the operations of a business. Management accounting draws all information from financial accounting. It also develops information that is futuristic in character and relevant for decision making.

1.5.2 Accounting as an information system:

In the earlier times, the accounting work was totally manual and the accounting department used to take a long time in processing transactions and producing accounting reports. The modern system of computers has eliminated the redundancy and reduced the number of people involved in the processing of accounting information. There is automatic processing of transactions from electronic vouchers to the ledger. The accounting information system is divided into the following sub – systems:

- a. **Cash system:** This system is concerned with the actual receipt and payment of cash as well as electronic fund transfer. Electronic fund transfer is made possible by using credit cards or e – banking.
- b. **Sales and accounts receivable system:** This system deals with maintaining the 'Sales' ledger for credit sales and the 'receivables' ledger. This generates reports about collections made from debtors and the amount due from them.
- c. **Accounts payable system:** This system deals with the 'credit purchase' any 'payments' ledger. It generates reports about the performance of suppliers and payments due to creditors.
- d. **Inventory system:** This system is concerned with the recording of various items purchased and issued specifying the details of price, quantity and date. It provides the inventory position of the organization.

- e. **Payroll accounting system:** This system deals with payment of wages and salaries to employees. It provides information about basic pay, dearness allowance and deductions made from salary and wages on account of provident funds, loans, taxes, etc. It also provides information on wage bills, overtime payment and payment on account of leave encashment, etc.
- f. **Fixed assets accounting system:** This system includes information about purchase and sale of fixed assets. It is generated in the form of reports about the cost of depreciation and book value of different assets.
- g. **Costing system:** this system is concerned with the ascertainment of cost of goods manufactured. The necessary information for the ascertainment of cost of raw material, labour, etc. is obtained from other systems.
- h. **Budget system:** This system is concerned with the preparation of budget for the financial year and comparison of the current budget with the actual performance.

1.6. ADVANTAGES OF ACCOUNTING

Following are the advantages of accounting:

1. **Facilitates preparation of final accounts:** Accounting helps in maintaining systematic records. This helps to establish the net result of a transaction during a period and state the financial position of a business at a particular date. All this enables the accountant to prepare the trading and profit and loss account for a particular accounting period.
2. **Used as evidence in courts:** There are certain claims that are made against the firm and for the firm, in relation to outsiders. These claims can be confirmed by producing the systematic records as evidence in courts.
3. **Facilitates comparison:** Accounting enables the comparison of a business during a particular year with those of earlier years, and with similar other businesses. It also helps in taking corrective measures to improve the performance of a business.
4. **Replaces memory:** It is not possible to remember all the transactions that take place during a period. They are, therefore, recorded promptly in the books so that information is available when required.
5. **Helpful to management:** Accounting provides information to the management, which can be useful for making rational decisions such as being able to identify reasons for the profits earned or losses suffered. This helps in taking necessary steps to increase profits further or to prevent losses. The recording of various assets enables the management to exercise proper control over them in terms of the position of bank balance, inventories, money owed by customers, etc.

- 6. Helpful in tax settlement:** Properly maintained accounts provide necessary information to the tax authorities, which levy customs duty, excise duty, sales and income taxes on the business. The tax authorities could be convinced about the taxable income or actual sales, as the case may be, with the help of written records. Hence, it helps in settling the tax liability of the business since the accounts reveal the profits earned or losses suffered.

1.7 LIMITATIONS OF ACCOUNTING

In spite of various advantages, accounting has the following limitations:

- 1. Ignores qualitative aspect:** In accounting, only those transactions and events are recorded that are financial in nature or expressed in terms of a monetary unit. Non – monetary items that may be significant are not recorded. Hence, accounting does not give information on qualitative matters such as usefulness or efficiency of a particular transaction.
- 2. Ignores price level changes:** Accounting information is expressed in monetary terms and it is assumed that the value of money remains stable over time. However, this does not happen. The change in prices, in many cases, is not accounted for and hence the accounting information does not show the true financial results. For example, assets like land and building remain undervalued in such cases.
- 3. Personal judgement:** Financial statements are influenced by the personal judgement of the accountant. The financial statements may no longer be objective due to this reason.
- 4. Inexact information:** Financial statements may not reflect the realistic position of an enterprise as some of the information is based on estimates, which may not be accurate at all times. For instance, a company may value its stocks at a higher price than the actual market price.

1.8. ACCOUNTING PRINCIPLES

The dictionary meaning of the term 'Principle' is a "fundamental truth implying uniformity of acceptance everywhere." However, when applied to accounting, it gives different meanings in different contexts. It is rarely used a fundamental accounting truth. Accounting principle is a guiding influence or an accepted rule of action or conduct. In other words accounting principles are those rules of action or conduct which are adopted by the accountants universally in recording accounting transactions. Different professional bodies like Australian Society of Accountants, The Institute of Chartered Accountants in Australia, The Institute of Chartered Accountants in England and Wales, The American Institute of

Certified Public Accountants etc. have made recommendations on accounting principles in the recent years.

Accounting principles have been developed over the years from experience, reason, usage and necessity. They are judged on their general acceptability rather than universal acceptability to the users of financial statements. Hence, they are called as generally accepted accounting principles. Accounting principles can be broadly classified into two categories:

- A. Accounting Concepts
- B. Accounting Conventions.

1.8.1 Accounting Concepts:

Concepts refer to the assumptions upon which accounting is based. The widely accepted and used concepts are discussed below:

- (i) **Money measurement concept:** According to this concept, accounting records only those facts and events which can be expressed in monetary terms. Accounting does not record the facts which can not be expressed in terms of money so non – monetary business transactions like efficiency of the worker, bad working conditions for the workers, lack of canteen facilities etc., are not recorded in the books of accounts.
- (ii) **Business entity concept:** According to this concept the accountant should assume that business is a person and its owner is another person. He should consider the business separate from its owner. If such distinction is not maintained the private affairs of the owner will be mixed with the affairs of the business and true profit or loss of the business can not be determined. Though in the eyes of law sole – trading and partnership business has no legal entity and only the company type of business has legal entity, the accountant should assume all types of business separate from its owner while doing accounting work.
- (iii) **Cost concept:** This concept says that the value of assets should be recorded at the price at which they are acquired. The market value of the assets is not taken into consideration. The market price of assets may fluctuate from time to time. This is not considered while assets are recorded in the financial statements. However, in the Balance Sheet assets are recorded at cost price less usual depreciation. This concept is not applicable to record the value of closing stock in the Balance Sheet. The cost price or market price of closing stock whichever is less is taken into consideration.

(iv) **Going concern concept:** This concept is connected with the cost concept. Unless the going concern concept is taken into mind the cost concept bears little meaning. According to this concept the accountant should assume that the business will continue for ever and there is no end to it. Keeping this assumption in mind he will record the transactions in the books of account. The central idea of going concern concept is that as the business will not be liquidated in near future the account should not bother to know the sale – value of assets. The real worth of the assets can be known only when the business will be sold. For this reason all the assets except closing stock are recorded at their cost price and not at the market price. As closing stock of a year is to be sold in the next year its market price is taken into consideration.

(v) **Dual aspect concept:** A business collects funds from the proprietor and also from outside parties. It invests those funds by purchasing various assets such as land, building, machinery etc. Thus, the fund it collects must be equal to its investment.

This can be put in the form of a formula:

Owned fund + Borrowed fund = Total investment

Or

Capital + Liabilities = Assets

This concept says that at anytime capital plus liabilities must be equal to the total assets of the firm.

(vi) **Accrual concept or matching concept:** According to this concept the profit or loss of a business is found out by matching the expenses and losses of the business during a period with the incomes and gains earned in that period. Here expenses means expenses incurred and paid in cash + expenses incurred but due. Similarly income means incomes earned and received + incomes earned but accrued.

(vii) **Accounting period concept:** The period at the end of which the profitability of business is determined, called 'Accounting Period'. Generally twelve months is taken to measure the profit or loss of a business. This twelve months may be a calendar year, or a financial year or any year like Ramnabmi to Ramnabmi, Kalipuja to Kalipuja etc.

Twelve months is taken to measure the profitability of a business as any twelve months cover all the seasons of a year. Further, for income tax purposes it is necessary to know the annual business income of the assessee.

(viii) **Verifiable objective concept:** This concept says that only those transactions are recorded in the books of account which have documentary evidences. Without

documentary proof a transaction cannot be placed in the books of account. The examples of such documentary evidences are, invoices, salary register, wage bill, mustard roll, vouchers etc. On the basis of these documents the books of accounts is audited by auditors.

1.8.2 Accounting Conventions:

Conventions mean customs or traditions which are useful as a guide to the preparation and presentation of accounts. This include:

- (a) Convention of conservatism.
- (b) Convention of materiality.
- (c) Convention of consistency.
- (d) Convention of disclosure.

(a) Convention of conservatism: This is the policy of playing safe. It takes into consideration all prospective losses but leaves all prospective profits. Valuation of stock is done at market price or cost price whichever is less. Making the provision for doubtful debts and discount on or debtors in anticipation of actual bad debts and discount is an example of this conversion. The main aim of published accounts is to convey and to conceal the information.

(b) Convention of materiality: This convention says that while recording transactions, a distinction should be made between material and immaterial matters. Insignificant and minor items may be merged with some other items, For example there is no point in having separate accounts for all expenses (e.g., various items of stationery) of a business, small expenses of like nature may be combined under one general heading.

(c) Convention of consistency: The usefulness of accounting data increases manifold when it is comparable – within the business over a number of years, and outside the business with other organisations carrying on a similar business. This requires that accounting practices and methods should remain consistent over time.

(d) Convention of disclosure: Accounting records are meant for use. They must be prepared honestly, and scrupulously and no material which should be disclosed, most be withheld, otherwise, they will be incomplete and unreliable and there will be a credibility gap, full disclosure of all material facts has become particularly important in case of joint stock company in which there is separation between management and ownership. The companies Act, 1956 has taken sufficient precautions in this regard. This is in keeping with the latest trend of treating financial statements as a means of conveying and not canceling information.

1.9. ACCOUNTING STANDARDS

Accountancy is considered to be the language of business. There are certain norms in accounting that have to be observed by the accountants. These norms become accounting standards when a professional body makes them mandatory for recording and reporting purposes.

According to Kohler, accounting standards can be defined as : 'Accounting standards are codes of conduct imposed by customs, law or professional bodies for the benefit of public accountants and accountants generally'.

Accounting standards provide a structured framework for the preparation of financial statements. They help in standardizing the diverse accounting practices followed for many aspects of accounting.

In view of the growth of international trade and multinational corporations, the need for standardization at the international level was felt. With a view to harmonizing varying accounting policies and practices, an International Accounting Standards Committee (IASC) was formed and entrusted with the responsibility of formulating international standards. Since 1973, IASC has issued twenty – seven international accounting standards to date. Another professional body, the International Federation of Accountants of India' (a professional accountancy body of India) established an Accounting Standards Board (ASB). Its main function was to formulate accounting standards to be issued under the authority or council of the institute. ASB gives adequate representation to all interested parties, and consists of the members of council and representatives of Banks, Company Law Board, Central Board of Direct Taxes and Controller and Auditor General of India. The main function of ASB is to formulate accounting standards. It gives due consideration to the international accounting standards issued by IASC, and tries to integrate the conditions and practices in India. It also reviews the accounting standards at periodic intervals.

1.9.1 Objectives:

Accounting standards play an important role in the field of accounting. Accounting reports prepared in accordance with the accounting standards are more reliable, uniform and consistent. The objectives of accounting standards are listed as follows.

- 1. To provide direction:** Accounting standards are required to enable correct decision making for maintaining accounting records. In addition, standards provide guidance for action.
- 2. To provide uniformity:** Another objective of accounting standards is to provide universality to accounting procedures.

- 3. To improve comparability and understandability:** Accounting standards increase comparability, creditability and understandability of financial statements.

1.9.2 International Accounting Standards (IAS) :

Keeping in view the importance of uniform accounting standards, policies and procedures 16 accounting bodies from nine nations formed the International Accounting Standard Committee (IASC) on June 29, 1973 with its headquarters at London. Since 1983, IASC 's members have included all the professional accounting bodies that are members of the International Federation of Accountant (IFAC). As of January, 1996 there were 118 member bodies in 85 countries. Both the Institute of chartered Accountants of India (ICAI) and the Institute of Cost and Works Accountants of India (ICWAI) are the members of IASC.

The responsibility of IASC is to improve the quality and soundness of financial reporting in member countries all over the world. Its other responsibility is to keep the member bodies informed of the latest developments and standards by issuing exposure drafts from time to time. Looking to the objectives and aims of IASC, accountancy bodies from different countries have joined IASC to enable them to have up to date information on international accounting matters and to take guidance from these in laying down their own standards.

Objectives of IASC :

- (a) Formulate and publish accounting standards to be observed in the presentation of financial statements and to promote their world wide acceptance and observance; and
- (b) Work for the improvement and harmonisation of regulations accounting standards and procedures relating to the presentation of financial statements.

Standards framed by Committee so far :

The committee has so far laid down standards regarding the following matters.

IAS – 1	Disclosure of accounting policies
IAS – 2	Valuation and presentation of inventories
IAS - 3	consolidated financial statements
IAS – 4	Depreciation Accounting
IAS – 5	Information to be disclosed in financial statements
IAS – 6	Accounting responses to changing prices
IAS – 7	Statement of changes in financial position
IAS – 8	Unusual and prior period items and changes in accounting

policies.

IAS – 9	Accounting for research and developmental activities
IAS – 10	Contingencies and events occurring after balance sheet date
IAS – 11	Accounting for construction contracts
IAS – 12	Accounting for taxes on income
IAS – 13	Presentation of current assets and current liabilities
IAS – 14	Reporting of financial information by segments
IAS – 15	Information reflecting the effects of changing prices
IAS – 16	Accounting for property, plant and equipment
IAS – 17	Accounting for lease
IAS – 18	Revenue recognition
IAS – 19	Accounting for retirement benefits in the financial statements of Employees
IAS – 20	Accounting for government grants and disclosure of government assistance
IAS – 21	Accounting for effects of changes in foreign exchange rates
IAS – 22	Accounting for business combinations
IAS – 23	Capitalisation of borrowing costs
IAS – 24	Related party disclosures
IAS – 25	Accounting for investments
IAS – 26	Accounting and reporting of retirement benefit plans
IAS – 27	Consolidated financial statements and accounting for investment in subsidiaries
IAS – 28	Accounting for investment in associates
IAS – 29	Financial reporting in hyper – inflationary economies
IAS – 30	Disclosure in the financial statement of banks and similar financial institution
IAS – 31	Financial reporting of interest in joint ventures
IAS – 32	Financial instruments : disclosure and presentation
IAS – 33	Earnings per share
IAS – 34	Interim financial reporting
IAS – 35	Discontinuing operations
IAS – 36	Impairment of assets
IAS – 37	Provisions, contingent liabilities and contingent assets
IAS – 38	Intangible assets
IAS – 39	Financial instruments; recognition and measurement
IAS – 40	Investment property

1.9.3 Accounting Standards Board :

Accounting Standards Board (ASB) has been set up in India by the Council of the Institute of Chartered Accountants of India with a view to form Indian Accounting Standards. The Council was set up in April, 1977. While formulating the standards, the board attempts to harmonise the diverse accounting policies and practices in India and also takes into account the applicable laws, customs, usages and business environment in the country. While formulating the Accounting standards, ASB will give due consideration to Standards issued by IASC (International Accounting Standard Committee) and try to integrate them to the extent possible in the light of the conditions and practices prevailing in India.

To issue accounting standards authority lies with the Council, ASB has also been entrusted with the responsibility of propagating the Accounting Standards and of persuading the concerned parties to adopt them in the preparation and presentation of financial statements. ASB will issue guidance notes on Accounting Standards and give classification on issue arising therefrom ASB will also review the Accounting Standards at periodical intervals.

So far, the Accounting Standards Board (ASB) has issued the following 18 accounting standards.

No.	Title	Applicability on or after
AS – 1	Disclosure of Accounting Policies	1-4-1991
AS – 2	Valuation of inventories	1-4-1999
AS – 3	Changes in Financial Position	Recommendatory
AS – 4	Contingencies and Events occurring after the Balance Sheet date	1-4-1995
AS – 5	Prior period and Extraordinary Items and Changes in Accounting Policies	1-4-1996
AS – 6	Depreciation Accounting	1-4-1995
AS – 7	Accounting for Construction Contracts	1-4-1991
AS – 8	Accounting for Research and Development	1-4-1991
AS – 9	Revenue Recognition	1-4-1991
AS – 10	Accounting for Fixed Assets	1-4-1991
AS – 11	Accounting for the Effects of changes in Foreign Exchange Rates	1-4-1995

AS – 12	Accounting for Government Grants	1-4-1994
AS – 13	Accounting for Investments	1-4-1995
AS – 14	Accounting for Amalgamations	1-4-1994
AS – 15	Accounting for Retirement Benefits in the Financial Statements of Employers	1-4-1995
AS – 16	Borrowing Costs	1-4-2000
AS – 17	Segment Reporting	1-4-2001
AS – 18	Related Party Disclosures	1-4-2001

1.10.1 QUESTIONS

A. Short Answer Questions

1. Define Accounting.
2. What are various branches of Accounting?
3. What are accounting concepts?
4. What are accounting conventions?
5. What are accounting standards?
6. Explain the significance of the following accounting concepts.
 - (a) Dual Aspect Concept
 - (b) Business entity concept
 - (c) Going concern concept
 - (d) Cost Concept
 - (e) Accrual Concept.

B. Essay Questions

1. What is Book-keeping? Distinguish between Book-keeping and Accounting.
2. Explain the functions of Accounting.
3. Explain how accounting is useful to various users.
4. Explain the advantages and limitations of Accounting.
5. What do you mean by Accounting Principles? Explain the features of Accounting Principles.
6. What are the main Accounting Concepts? Narrate them briefly.
7. What are the Accounting Conventions? Explain them in brief
8. 'Materiality is a Relative Term' Comment
9. 'Business has Indefinite Life' Explain this in the light of Going Concern Concept.

1.11.1 SUGGESTED BOOKS

1. Basu & Das, **Practical in Accountancy, Volume – one**, Rabindra Library, Calcutta
2. Maheswari, S.N., Maheswari, S.K., **Advanced Accountancy (Vol.I)**, Vikas Publishing House Pvt. Ltd., New Delhi, 2005
3. Pillai, R.S.N., Bagavathi, Uma, S., **Fundamentals of Advanced Accounting (Vol.I)** S. Chand & Company Ltd., New Delhi, 2006
4. Shukla, M.C., Grewal, T.S., Gupta, S.C., **Advanced Accounts (Volume I)** S. Chand & Company Limited, New Delhi, 2005
5. Tulsian, P.c., **Accountancy** Tata McGraw-Hill Publishing Company Limited, New Delhi.

LESSON - 2

JOURNAL – LEDGER

Objectives :

After studying this unit we may be able to :

- Understand the meaning of Journal, Ledger and Trial balance
- Pass Journal entries and post them into ledger.
- Prepare the Trial balance

Structure :

2.1 Introduction

2.2 Journal

2.3 Ledger

2.4 Ledger Posting

2.5 Trial Balance

2.6 Questions

2.7 Exercises

2.8 Suggested Readings

2.1 INTRODUCTION

The Double Entry system of Book – keeping provides a basic framework for analysis of business transactions. If the accounting process is to generate valuable information, the transactions which have taken place during the accounting period must be recorded in a systematic manner. The business transactions are recorded in financial books or books of accounts.

2.1.1 Accounting Cycle and Books of Accounts:

The process of accounting cycle consists of the following steps:

- (i) Analysis of transactions from source documents
- (ii) Journalising the transactions.
- (iii) Ledger Posting
- (iv) Balancing of each ledger account.
- (v) Preparation of a Trial Balance.
- (vi) Recording of adjustment entries.

- (vii) Posting of adjustment entries.
- (viii) Recording of closing entries.
- (ix) Preparation of financial statements.

2.2 JOURNAL

'Journal' is derived from the French work, "Jour" which means a day. Journal therefore, means a 'daily record'.

According to a Dictionary For Accountant written by Eric L. Kohler "A 'Journal' is the book of original entry in which are recorded transactions not provided for in specialised journals".

A Journal is a book of "Original entry" or "Primary entry". It is a book of daily record. First of all the business transactions are recorded in the "Journal" and subsequently they are posted in the ledger. In modern times, a journal is divided into various books known as "Subsidiary Books". To study "Book – Keeping" one must learn first how to journalise the transactions. To journalise the transactions means to record the two – fold effects of a transaction in terms of debit and credit. This has to be done by observing the rules of debit and credit.

2.2.1 Features of a Journal:

1. It is a book of prime, original or first entry.
2. It records transactions in a systematic manner.
3. It analyses the transactions into their debits and credits.
4. It is a gateway to the ledger.

2.2.2 Utility of Journal:

A Journal is needed for the following reasons:

1. It contains a record of various transactions that take place every day.
2. It provides a complete record of transactions as both the aspects of transactions are recorded at one place.
3. Since narration of a transaction is written in the journal, there is no need to give an explanation in the ledger.
4. It facilities cross checking of transactions.
5. Since transactions are recorded in the Journal, there is no need to post the transactions to the ledger immediately.

6. From the legal point of view also a Journal becomes necessary. Courts recognise the journal as an evidence in approving or disapproving claims.
7. It helps to locate and prevent errors.

2.2.3 Ruling of Journal:

1. **Date Column:** In this column, the date of the transaction is written. The year is also written in the beginning of the page. Therefore, it is not necessary to write the year for each transaction as it is common for all the transactions. Generally, this column is divided into two parts namely for writing the month and the date of the transaction.
2. **Particulars of Column:** The 'Particulars Column' is the most important column. Before the details are written in this column, the book-keeper decides as to what accounts are affected and which account is to be debited and which account is to be credited. The account to be debited is written on the first line just near the date column. On the same line, the word "Dr" is written against the account to be debited. After that, on the second line the account to be credited is written. The name of this account should be preceded by the word "To" and while writing on the second line a little space should be left from the date column. It must be noted that the work "Cr" need not be written against the account to be credited as it is clear that if the account on the first line is shown debited the corresponding account on the next line stands credited.
3. On the third line, a brief description of the transaction is written which is known as "narration".
4. **Voucher Number:** In this column, serial number of the source document is written.
5. **Ledger Folio:** While recording the transactions nothing has to be written in this column. The journal entries are required to be posted to the debit and credit of accounts in the ledger. At that time, the page number of the ledger on which the two accounts appear are entered in this column. Usually, these page numbers are written in red ink in order to distinguish them from the amounts entered in amount columns.
6. **Debit Amount Column:** In this column, the amount of transaction is written against the work "Dr" in particulars column on that line.
7. **Credit Amount Column:** In this column, the amount of transaction is written against the name of the account credited on that line.
8. In the particulars column an explanation or narration is to be given below the credit item. Such a narration should be written in between the date line and the folio line. It should not cross these two lines on either side.
9. A thin line should be drawn between each transaction across the page from the date column to the folio column immediately below the journal entry. Some space should be left after each such line so as to distinguish one entry from another.

- 10.** At the end of each page of a journal the debit and credit amount columns are totaled up and the total of the debit and credit amount columns must be equal, as the amount debited and amount credited are equal for every transaction. These totals are carried forward to the next page.

Notes:

In case the journal runs over several pages, the first page is totaled and the totals are carried over to the next page at the top as "Totals brought forward". This is repeated for subsequent pages. The amount of debit column must agree with the amount of credit column. Totals of amount column are never posted in the ledger.

2.2.4 Points to be remembered while passing Journal entries:

1. While writing the name of a person or real account or nominal account, the word "Account" should be added after the name of the account.
2. After journalising the transaction, the two columns should be totaled. The total of the debit column should be equal to the total of the credit column. The purpose is to check arithmetical accuracy.
3. When two or more transactions of the same nature occur, a combined entry may be passed.
4. The term, 'Purchase Account' should be used when goods are purchased. The term 'Sales Account' should be used when goods are sold out. Goods returned to suppliers are called Returns outwards or Purchase Returns. Goods returned by customers are called returns Inward or Sales Returns.
5. When it is not clearly stated in the problem whether the transaction is on a cash basis, it should be considered on a cash basis when the name of the party is not given. When the name of the party is given, and there is no mention of cash paid / received, it should be considered as a credit transaction.
6. Whenever expenses are paid in cash, the Expense Account concerned should be debited and the Cash Account credited, the Person's Account should not be debited.
7. Whenever income is received in cash, the Income Account concerned should be credited and a Cash Account debited. The Person's Account should not be credited.
8. When goods are purchased for cash from a party, the accounts affected will be:
 - (i) Purchase Account,
 - (ii) Cash Account.
9. When goods are sold for cash to a party, the accounts affected will be:
 - (i) Cash Account and

(ii) Sales Account.

10. When goods are purchased on credit, the accounts affected will be:

(i) Purchase Account and

(ii) Party's Account.

11. When goods are sold on credit, the accounts affected will be:

(i) Sales Account and

(ii) Party's Account.

12. When assets are purchased from a party on credit, the Asset Account should be debited. The Purchase Account should not be debited.

13. When assets are sold to a party, the Sales Account is not affected. The Asset Account concerned is affected.

14. Whenever any amount is paid for repairing any asset, the Asset Account is not affected. The account affected will be the Repairs Account and the Cash Account.

15. For the purpose of recording transactions it should be assumed that a proprietor is different from the business. A proprietor has a separate status. Therefore, if anything is given by the proprietor to the business, the proprietor becomes a creditor of the business, and if anything is taken by the proprietor from the business, the proprietor becomes a debtor of the business.

16. The payment of any personal expenses of the proprietor, such as an insurance premium, a medical bill, income tax, a club bill, amounts to drawings. The entry is made in the Drawings Account.

17. Any expenses incurred on the purchase of an asset affect the Asset Account and Cash Account.

Illu.1 : Journalise the following transactions:

2006

Jan 1 Commenced business with a capital of Rs.4,50,000
4 Opened current account with SBI Rs.1,50,000
7 Purchased furniture for Rs.50,000 through cheque.
10 Cash purchases Rs.15,000
12 Goods distributed by way of Free Samples Rs.5,000
15 Goods purchased from X Rs.20,000
20 Paid to X in full settlement Rs.19,000
24 Commission received Rs.2,500

Solution :**Journal Entries**

Date	Particulars		L.F.	Debit Rs.	Credit Rs.
2006 Jan 1	Cash a/c To Capital a/c (For business started with cash)	Dr.		4,50,000	4,50,000
4	SBI Current a/c To Cash a/c (For opening Current Account with SBI)	Dr.		1,50,000	1,50,000
7	Furniture a/c To Bank a/c (Furniture purchased by cheque)	Dr.		50,000	50,000
10	Purchases a/c To Cash a/c (Goods purchased for cash)	Dr.		15,000	15,000
12	Free Samples a/c To Purchases a/c (Being goods given for free samples)	Dr.		5,000	5,000
15	Purchases a/c To X a/c (Goods purchased from X on credit basis)	Dr.		20,000	20,000
20	X a/c To Cash a/c To Discount a/c (Cash paid to X in full settlement)	Dr.		20,000	19,000 1,000
24.	Cash a/c To Commission Received a/c (For commission received)	Dr.		2,500	2,500

Illu.2 Journalise the following transaction in the books of Mr. Rahul:

2006		Rs.
March 1	Started business with cash	10,000
2	Purchased furniture and payment by cheque	2,000
3	Withdrew from bank for private use	500
4	Cash paid to Lal in full settlement of his account (6,000)	5,940
5	Paid for stationery Rs.200 and salaries Rs.2,000	

Solution :**Journal Entries in the books of Rahul**

Date	Particulars		L.F.	Debit	Credit
2006				Rs.	Rs.
Mar.1	Cash a/c To Capital a/c (Being business started)	Dr.		10,000	10,000
2	Furniture a/c To Bank a/c (Being the purchase of furniture)	Dr.		2,000	2,000
3	Drawings a/c To Bank a/c (Being withdrew from bank)	Dr.		500	500
4	Lal's a/c To Cash a/c To Discount a/c (Being full settlement of account)	Dr.		6,000	5,940 60
5.	Stationery a/c Salaries a/c To cash a/c (Being expenses paid)	Dr. Dr.		200 2,000	2,200

Illu.3 : Journalise the following transactions:**2006****April 1st Bought machinery for Rs.2,40,000 for cash from Ram.****April 2nd Installed the above machine, charges paid being Rs.3,100.****April 3rd Withdrew cash from bank Rs.5,000 for office use.****April 5th Paid salaries to staff Rs.1,700****April 7th Sold goods to Shyam Rs.7,500.****April 8th Shyam paid cash Rs.3,000 for partial settlement.****Solution :****Journal Entries**

Date	Particulars		L.F	Debit	Credit
2006				Rs.	Rs.
Ap.1	Machinery a/c To Cash a/c (Being the purchase of machinery)	Dr.		2,40,000	2,40,000
Ap.2	Machinery a/c To Cash a/c (Being the installation charges paid)	Dr.		3,100	3,100
Ap.3	Cash a/c To Bank a/c	Dr.		5,000	5,000

	(Being the cash withdrawn from Bank)				
Ap.5	Salaries a/c To Cash a/c (Being the salaries paid)	Dr.		1,700	1,700
Ap.7	Syam a/c To Sales a/c (Being the goods sold on credit)	Dr.		7,500	7,500
Ap.8	Cash a/c To Syam a/c (Being the partial amount received)	Dr.		3,000	3,000

Illu.4 : Journalise the following transactions in the books of Kapil:

2006		Rs.
June 1	Started business with cash	45,000
2	Cash paid into bank	25,000
3	Purchase of furniture and payments by cheque	5,000
4	Goods purchased for cash	15,000
5	Sold goods for cash	8,500
8	Sold goods on credit to Arvind	4,000
10	Goods purchased on credit from Amritlal	7,000
12	Goods returned to Amritlal	1,000
15	Goods returned by Arvind	200
18	Cash received from Arvind	3,760
	Discount allowed to Arvind	40
21	Withdrew from bank for private use	1,000
22	Withdrew from bank for use in the business	5,000
25	Paid telephone bill	400
28	Cash paid to Amritlal in full settlement of his account	5,940
29	Stationery purchased	200
30	Rent paid	1,000
30	Salaries paid	2,500

Solution :**Journal**

2006 June				Rs.	Rs.
(1)	Cash a/c To Capital a/c (Being business started)	Dr.		45,000	45,000
(2)	Bank a/c To Cash a/c (Being cash deposited into Bank)	Dr.		25,000	25,000
(3)	Furniture a/c To Bank a/c (Being furniture purchased by cheque)	Dr.		5,000	5,000
(4)	Purchases a/c To Cash a/c (Being goods purchased for cash)	Dr.		15,000	15,000
(5)	Cash a/c To Sales a/c (Being goods sold for cash)	Dr.		8,500	8,500
(8)	Aravind a/c To Sales a/c (Being goods sold on credit to Aravind)	Dr.		4,000	4,000
(10)	Purchases a/c To Amritlal a/c (Being goods purchased on credit from Amritlal)	Dr.		7,000	7,000
(12)	Amritlal a/c To Purchases return a/c (Being goods returned to Amritlal)	Dr.		1,000	1,000
(15)	Sales Returns a/c To Aravind a/c (Being goods returned by Aravind)	Dr.		200	200
(18)	Cash a/c Discount a/c To Arvind a/c (Being cash received from Aravind)	Dr.		3,760 40	3,800
(21)	Drawings a/c To Bank a/c (Being amount drawn from banks for private use)	Dr.		1,000	1,000
(22)	Cash a/c To Bank a/c (Being cash withdrawn from Bank a/c)	Dr.		5,000	5,000
(25)	Telephone a/c To Cash a/c (Being telephone bill paid)	Dr.		400	400
(28)	Amritlal a/c To Cash a/c To Discount a/c (Being cash paid to Amritlal)	Dr.		6,000	5,940 60

(29)	Stationery a/c To Cash a/c (Being stationery purchased)	Dr.		200	200
(30)	Rent a/c Salaries a/c To Cash a/c (Being Rent and Salaries Paid)	Dr.		1,000 2,500	3,500

Illu.5 : Journalise the following transactions in the books of a Trader:

1-4-2004:

- a) Cash in hand: Rs.8,000; Cash at Bank : Rs.25,600; Stock of goods : Rs.20,000; Buildings: Rs.14,000; Debtors : Rs.8,100; Creditors :Rs.18,300; Mrs. Loan : Rs.10,000.
- b) Purchased goods worth Rs.5,000 less 20% trade discount and 5% cash discount.
- c) Rs.2,646 received from Vijay and allowed him discount Rs.54.
- d) Rs.5,292 paid to Anand and discount allowed by him Rs.108.
- e) Paid for: Charity Rs.100; postage Rs.200; Stationery Rs.250.

Solution :

Books of Trader

Date	Particulars		L.F.	Debit Rs.	Credit Rs.
1-4-04					
a)	Cash in hand a/c Cash at bank a/c Stock of goods a/c Buildings a/c Debtors a/c To Creditors a/c To Mrs. Loan a/c To Capital a/c (Being assets and liabilities of previous year bought into books)	Dr. Dr. Dr. Dr. Dr.		8,000 25,600 20,000 14,000 8,100	18,300 10,000 47,400
b)	Purchases a/c To Cash a/c To Discount Received a/c (Being goods purchased in cash and discount received)	Dr.		4,000	3,800 200
c)	Cash a/c Discount allowed a/c To Vijay a/c (Being cash received from Vijay and discount allowed to him)	Dr. Dr.		2,646 54	2,700

d)	Anand a/c To Cash a/c To Discount received a/c (Being paid cash and discount received)	Dr.		5,400	5,292 108
e)	Charity a/c Postage a/c Stationery a/c To Cash a/c (Being expenses paid in cash)	Dr. Dr. Dr.		100 200 250	550

Illu.6 : Journalise the following transactions:**2006**

January 1	Purchased goods for cash	5,000
3	Sold goods for cash	8,000
4	Purchased goods from Bose	2,000
6	Sold goods to Kavitha	3,000
9	Cash paid to Bose	1,600
11	Received cash from Kavitha	2,500
13	Sold goods to Bose for cash	1,800
14	Purchased goods from Kavitha for cash	1,800
19	Paid rent	400
20	Received interest	200
22	Received Commission	100
24	Goods returned to Bose	200
25	Goods returned by Kavitha	150
29	Purchased furniture from Mr. Ramu and Co.	1,500
31	Paid Salary	1,800

Solution :**Journal Entries**

Date	Particulars		L.F.	Debit	Credit
2006				Rs.	Rs.
Jan.1	Purchases a/c To Cash a/c (Being goods purchased on cash)	Dr.		5,000	5,000
3	Cash a/c To Sales a/c (Being goods sold for cash)	Dr.		8,000	8,000
4	Purchases a/c To Bose a/c	Dr.		2,000	2,000

	(Being goods purchased from Bose)				
6	Kavita a/c To Sales a/c (Being goods sold on credit to Kavita)	Dr.		3,000	3,000
9	Bose a/c To Cash a/c (Being cash paid to Bose)	Dr.		1,600	1,600
11	Cash a/c To Kavitha a/c (Being cash received from Kavita)	Dr.		2,500	2,500
13	Cash a/c To Sales a/c (Being goods sold for cash)	Dr.		1,800	1,800
14	Purchases a/c To Cash a/c (Being goods purchased for cash)	Dr,		1,200	1,200
19	Rent a/c To Cash a/c (Being rent paid)	Dr.		400	400
20	Cash a/c To Interest a/c (Being Interest received)	Dr.		200	200
22	Cash a/c To Commission a/c (Being commission received)	Dr.		100	100
24	Bose a/c To Purchase returns a/c (Being goods returned to Bose)	Dr.		200	200
25	Sales returns a/c To Kavita a/c (Being goods returned by Kavita)	Dr.		150	150
29	Furniture a/c To Ramu & Co. a/c (Being furniture purchased)	Dr.		1,500	1,500
31	Salary a/c To cash a/c (Being salary paid)	Dr.		1,800	1,800

Composite Entries:

Sometimes two or more transactions of the same nature may take place on the same date. Instead of making a separate entry for each such transaction it is proper to combine them and give a combined entry. Such entry of recording a number of transactions is termed as **Compound Journal Entry**. In case of compound entry the total of all debits should be equal to the total of all credits. The compound entry may be recorded in any of the following three ways.

- i. One account may be **debited**, while several other accounts may be **credited**.
- ii. One account may be **credited**, while several other accounts may be **debited**.

- iii. Several accounts may be **debited** and several accounts may also be **credited**.

Illu .7: Journalise the following transactions.

- a. Rao starts business with Rs.10,000 cash and a building worth Rs.50,000
- b. Purchased goods worth Rs.20,000 out of which goods worth Rs.12,000 was on credit from Shyam.
- c. Sold goods on credit worth Rs.16,000 to Ram.
- d. Received Rs.15,600 from Ram in full settlement of his account.
- e. Paid Rs.11,800 to Shyam in full settlement of Rs.12,000 due to him.
- f. Paid wages Rs.500 and salaries Rs.2,000

Solution :

Journal Entries

S.No.	Particulars		L F	Debit (Rs.)	Credit (Rs.)
a.	Cash a/c Building a/c To Capital a/c (Being business started with cash and building)	Dr.		10,000 50,000	60,000
b.	Purchases a/c To Cash a/c To Shyam a/c (Being goods bought for cash and on credit)	Dr.		20,000	8,000 12,000
c.	Ram a/c To sales a/c (Being goods sold on credit)	Dr.		16,000	16,000
d.	Cash a/c Discount allowed a/c To Ram a/c (Being cash received and discount allowed)	Dr. Dr.		15,600 400	16,000
e.	Shyam a/c To Cash a/c To Discount received a/c (Being cash paid and discount received)	Dr.		12,000	11,800 200
f.	Wages a/c Salaries a/c To Cash a/c (Being expenses paid in cash)	Dr. Dr.		500 2,000	2,500

2.3 LEDGER

2.3.1 Meaning of a Ledger:

A Ledger is the principal book of accounts. A Journal is meant for passing the entries of business transactions. It facilitates posting of transactions to respective ledger accounts. All the entries made in the journal must be posted into the Ledger. The Ledger is a book containing many ledger accounts. The term 'Ledger' is derived from the Dutch work 'Legger' which means to lie. Ledger therefore, means a book where the various accounts lie. The definition of 'ledger' as given in the Encyclo – paedia is as under:

“A group of accounts is known as a Ledger. The general Ledger is the main book of accounts; it contains an account for each asset, liability, proprietorship, revenue and expense account. The Ledger contains the same information as the journal. However, in the journal each transaction is completely recorded as a unit. The entire effect of a transaction is completely recorded in one place in the Journal. Periodically the same information is posted to the Ledger where it is accumulated according to individual items. The Ledger where it is accumulated includes all the basic accounts needed for the preparation of the financial statements”. The number of ledger accounts depends upon the number of transactions.

A businessman cannot get information about the business transactions from the Journal. For example, the amount receivable from debtors, the amount payable to creditors, total payments on any head of expenditure etc. In order to get information about the above, a ledger has to be maintained. While transferring the transactions from the Journal to the Ledger, the transactions are classified. For each person, head of income, head of expenditure, asset, etc. separate accounts are opened in the Ledger book.

In conclusion, the ledger helps to achieve the following results:

- a) All personal accounts would show how much money is payable to creditors and receivable from debtors.
- b) The real accounts would show the value of assets and properties.
- c) The nominal accounts would show the sources of income and the amount spent on various heads of expenses.

Features of a Ledger.

1. It is a derived or secondary record
2. It is a book of final entry
3. It is a king of books of accounts.

Nature of a Ledger:

A Ledger is a bound book. It contains many pages which are called folios. These pages are consecutively numbered. For each account a separate page is kept. Every ledger has an index. It is generally an alphabetic index. One page is allotted for each alphabet. All the accounts commencing with that particular alphabet are indicated on that particular page only. The page number on which that particular account appears is shown against the account in the Index. This facilitates immediate reference.

2.3.2 Standard Form of Ledger Account:

Each ledger account is divided into two sides, having columns of varying sizes. The left hand side is known as "Dr" side and the right hand side is known as "Cr" side of a Ledger account. The columns "Date", "Particulars", "J. F.", "Amount" appear on both the sides of a ledger account. A specimen "T" form of a ledger account is as follows:

Date	Particulars	J. F.	Amt. Rs.	Date	Particulars	J. F.	Amt. Rs.
Year Month	To Name of Account credited			Year Month	By Name of Account Debited		

Running Balance form of Ledger Account:

An alternative form of a ledger which is generally adopted by commercial banks and some other business houses, is the running balance form. The entire ledger is divided into six columns viz.

1. Date;
2. Particulars;
3. Folio;
4. Dr. Amount;
5. Cr. Amount; and
6. Balance.

The specimen form is as under:

Name of Account

Dr.		Name of Account			Cr.
Date	Particulars	Folio	Dr. Amount Rs.	Cr. Amount Rs.	Balance Rs.

Explanation:

1. Date column is used to show the date of the transaction.
2. Particulars column is used to write the names of the accounts debited or credited.

3. Folio column is used to show the page number of the journal on which the transaction is recorded.
4. Dr. Amount column shows the amount of the account debited.
5. Cr. Amount shows the amount of the account credited.
6. Balance column shows the new balance each time.

2.4 LEDGER POSTING

After the transaction has been analysed into its debit and credit elements in a journal, each such debit or credit element must be transferred to the respective ledger accounts. The process of transfer of entries from Journal to Ledger account is called "Posting" or "Ledger Posting".

Posting may be made immediately after the entry has been passed or any convenient time.

2,4.1. Importance of Posting:

Posting is very important as it furnishes the results of all the transactions relating to a particular person or service. After posting one can understand the position of an account at a glance.

The Posting Process:

1. **Date Column:** Write date of the transaction as recorded in the journal.
2. **Particulars Column:**
 - On Debit Side : Write Name of the Credited Account in the Journal entry after the Word "To".
 - On Credit Side : Write name of the 'Debited Account in the Journal entry after the Word "By".
3. **J. F. Column:** Write page number of the journal from where the entry is posted.
4. **Amount Column:** Write the amount in the debit column of the journal on the debit side and the amount in the credit column of the journal, on the credit side.

2,4.2 Points to be noted while preparing ledger accounts:

1. A separate account is opened in the ledger for every account entered in the journal.
2. All the transactions relating to a particular account should be recorded in the account already opened. No new account of the same name should be opened in the ledger.

3. The name of the account should be recorded in bold letters at the centre of each account.
4. The word “Dr” should be written at the left hand top corner of each account. The word “Cr” should be written at the right hand top corner of each account.
5. Journal entries should be posted to the ledger in order of dates.
6. Every entry on the debit side of an account should begin with the word, “To”. Every entry on the credit side of an account should begin with the word “by”.
7. The account which is debited in the Journal should be posted on the debit side of the respective account. The account which is credited in the journal should be posted to the credit side of the respective account.
8. While posting on the debit side of a ledger account, the account credited in the journal should be written on the debit side in the particulars column and while posting on the credit side of a ledger account, the account debited in the Journal should be written on the credit side of a ledger account in the particulars column.
9. The page number of the Journal from where posting is made should be entered in the J. F. column against the entry.
10. Every ledger account should be balanced periodically as required by the business concern.

2.4.3 Balancing an Account:

At the end of a certain period, the accounts are balanced. The following steps should be taken in balancing an account:

1. Make a total of both the sides of a ledger account. This may be done on a rough sheet.
2. Compute the difference between the totals of both the sides.
3. Put the difference on the lighter side of an account, by writing against it in “Particular” column as “By Balance c/d” or “To Balance c/d” as the case may be. If the debit side is heavier the difference will appear on the credit side as “By Balance c/d” and if the credit side is heavier, the difference will appear on the debit side of an account as, “To Balance c/d”.
4. Make the total of both sides. The total of the debit side will now agree with the total of the credit side of an account. While making the totals, it should be remembered that totals of both the sides should appear against each other on the same line.
5. Draw a single line before making the totals.
6. Draw a double line across the amount column after the totals are made.
7. Bring down the balance on the opposite side of the account. That means, “To Balance c/d” is brought down on the credit side below the totals in the particular columns as “By

Balance b/d" and "By Balance c/d", is brought down on the debit side of the account in the "particulars" column below the total as, "To Balance b/d".

2.4.4 Process of Balancing Ledger Accounts:

After balancing, some of the ledger accounts show debit balances and some of them show credit balances. If the total of the debit side of an account is heavier than the total of the credit side of that account, it is said to have a debit balance. And if the total of the debit side of that account is less than the total of the credit side, such an account is said to have a credit balance. A debit balance of a personal account means a debtor. A debit balance of a real account means an asset or property and a debit balance of a nominal account means an asset or property and a debit balance of a nominal account means expense or loss. A credit balance of a personal account or real account means a liability. A credit balance of a nominal account represents income or gain.

Nominal accounts are balanced at the end of the year. Their balances are not carried down to next year / next period. They are directly transferred to the Profit and Loss Account.

2.4.5 Balancing of Goods Account:

If all the goods purchased are sold out, that means no stock remained unsold, the balance of the Goods Account will show either a profit or loss. A debit balance on Goods Account means a loss and credit balance on Goods Account means a profit.

If all the goods purchased are not sold out fully, that means there is a stock of goods remaining unsold at the end of the year, the amount of such stock should be placed on the credit side of a Goods Account and it should then be balanced. A credit balance on a Goods Account represents a profit.

2.4.6 Why Balancing of Ledger Accounts?

The purpose of balancing ledger accounts vary according to the types of accounts.

- 1. Personal Accounts:** These accounts are balanced for finding out whether a person is a debtor or a creditor. A debit balance on a personal account indicates that the person is our debtor. A credit balance on a personal account indicates that the person is our creditor. A zero balance on personal account indicates that the account has been closed. It means the person is neither debtor nor creditor of the firm. At the end of the year the total debtors and total creditors are ascertained by balancing personal accounts.

2. Real Accounts:

- a) **Cash Account:** The purpose is to find out cash at hand. Cash Account will always have a debit balance or no balance. It can never have a credit balance. But Bank Account may have a credit balance.
- b) **Goods Account:** The purpose is to be find out total sales, total purchases, total returns etc. In the case of Goods Account like Sales Account, Purchase Returns Account, there is a credit balance. Purchase Account and Sales Returns Account will have a debit balance.
- c) **Other Real Accounts:** The purpose is to find out the value of each property on a particular date.

Real Accounts will generally have a debit balance. The debit balance shows the value of property in possession, a credit balance shows profit on disposal of property.

3. **Nominal Accounts:** The purpose is to find out the total amount spent on each type of expenditure, and the total amount of income earned from various sources.

A debit balance in a Nominal Account signifies a loss or an expense. A credit balance in a Nominal Account signifies an income or a gain. A zero balance in the account shows that income or gain is equal to expense or loss.

2.4.7 Distinction between Books of Journal and Ledger:

Books of Journal and Ledger can be distinguished as follows:

Basis of Distinction	Books of Journal	Ledger
1. State of Recording	Recording of entries in these books is the first stage.	Recording of entries in the ledger is the second stage.
2. Net effect of various transactions	These books do not help to know the net effect of the various transactions affecting a particular account.	A ledger helps to know the net effect of the various transactions affecting a particular account.
3. Format	In the journal, there is one column for particulars and two columns for amounts – one for debit and an other for credit. Special journals	In the ledger, there are two equally divided sides having identical columns. The left side is known as debit and the right side is known as

	(except Cash Book) have only one column of amount.	credit.
4. Balancing	In the books of Journal (except Cash Book) balancing is not done.	In the ledger, all the accounts (except nominal accounts) are balanced.
5. Next stage of accounting process	From the books of Journal, entries are transferred to the ledger.	From the ledger, first the trial balance is drawn and then financial statements are prepared.
6. Name of the process of recording entries	The process of recording entries in these books is called "Journalising".	The process of recording entries in the ledger is called 'posting'.

Illu 8: Enter the following transactions of Krishna's a/c and bring down the balance.

		Rs.
2005		
Jan 1	Sold goods to Krishna	1,000
3	Purchased goods from Krishna	1,400
10	Paid cash to Krishna	1,200
15	Sold goods to Krishna	400
25	Received cash from Krishna	2,400

Solution :

Krishna 's A/c

Dr.

Cr.

Date	Particulars	L.F	Amount Rs.	Date	Particulars	L. F	Amount Rs.
2005 Jan 1	To Sales		1,000	200 Jan 3	By Purchases		1,400
10	To Cash		1,200	25	By Cash		2,400
15	To Sales		400				
31	To Balance c/d		1,200				
			3,800				3,800
				Feb 1	By Balance b/d		1,200

2.5 TRIAL BALANCE

After posting the transactions to respective ledger accounts they are balanced and then a Trial Balance is drawn. A Trial Balance is a statement which shows the list of accounts showing debit balances and list of accounts showing credit balances. If double entry

principles are strictly followed the total of all the debit balances must agree with the total of all the credit balance. The Trial Balance is prepared as under:

Trial Balance as on.....

Debit balance	Amount Rs.	Credit balance	Amount Rs.
All real accounts	XX	All accounts of incomes & gains	XX
All accounts of expenses & losses	XX	All personal accounts showing credit balances	XX
All personal accounts showing debit balances	XX		
Total Rs.	XX	Total Rs.	XX

Illu.9 : Journalise the following transactions in a journal, post them to the ledger accounts and prepare trail balance.

2005		Rs.
June 1	Sailaja invested in the business Rs.6,000 cash goods worth Rs.3,000 and a building worth Rs.12,000	
2	Borrowed from Bank	8,000
3	Purchased goods for cash	5,000
4	Sold goods on credit to Ramya	3,000
5	Cash received from Ramya	1,000
6	Purchased goods on credit basis from Jalaja	6,000
9	Sold goods on credit to Jalaja	3,000
10	Paid Salaries	1,500
16	Paid Office rent	350
17	Received Commission	175
19	Paid salary to salesmen	110
20	Paid Commission	50
25	Paid on account of Jalaja	2,200
26	Received from Ramya	690
27	Repaid loan to Bank	3,400
28	Sold buildings for cash	3,900
29	Received on account from Ramya	1,400
30	Paid Carriage for Jalaja	220

Solution :**Journal Entries**

Date	Particulars		L.F.	Debit	Credit
2005				Rs.	Rs.
June 1	Cash a/c Goods a/c Buildings a/c To Capital a/c (Being cash, goods and buildings brought in the business)	Dr. Dr. Dr.		6,000 3,000 12,000	21,000
2	Cash a/c To Bank's loan a/c (Being loan taken from bank)	Dr.		8,000	8,000
3	Goods a/c To Cash a/c (Being goods purchased for cash)	Dr.		5,000	5,000
4	Ramya a/c To Goods a/c (Being goods sold on credit)	Dr.		3,000	3,000
5	Cash a/c To Ramya a/c (Being cash received from Ramya)	Dr.		1,000	1,000
6	Goods a/c To Jalaja a/c (Being goods bought on credit)	Dr.		6,000	6,000
9	Jalaja's a/c To Goods a/c (Being goods sold on credit)	Dr.		3,000	3,000
10	Salaries a/c To cash a/c (Being the payment of salaries)	Dr.		1,500	1,500
16	Office rent a/c To Cash a/c (Being Office rent paid)	Dr.		350	350
17	Cash a/c To Commission a/c (Being commission received)	Dr.		175	175
19	Salaries a/c To Cash a/c (Being salaries paid)	Dr.		110	110
20	Commission a/c To Cash a/c (Being commission paid)	Dr.		50	50
25	Jalaja's a/c To Cash a/c (Being cash paid on account of Jalaja)	Dr.		2,200	2,200
26	Cash a/c To Ramya a/c (Being cash received on account	Dr.		690	690

	from Ramya)				
27	Bank loan a/c To Cash a/c (Being the repayment of loan)	Dr.		3,400	3,400
28	Cash a/c To Buildings a/c (Being buildings sold for cash)	Dr.		3,900	3,900
29	Cash a/c To Ramya a/c (Being cash received on account from Ramya)	Dr.		1,400	1,400
30	Jalaja's a/c To Cash a/c (Being carriage paid for Jalaja)	Dr.		220	220

Ledger Accounts

Cash account

Dr.			Cr.		
Date	Particulars	Rs.	Date	Particulars	Rs.
2005			2005		
June 1	To Capital a/c	6,000	June 3	By Purchases a/c	5,000
2	To Bank loan a/c	8,000	15	By Salaries	1,500
5	To Ramya's a/c	1,000	16	By Office rent a/c	350
17	To Commission	175	19	By Salaries a/c	110
26	To Ramya a/c	690	20	By Commission a/c	50
28	To Buildings a/c	3,900	27	By Jalaja's a/c	2,200
29	To Ramya's a/c	1,400	27	By Bank loan's a/c	3,400
			30	By Jalaja a/c	220
			30	By Balance c/d	8,335
		21,165			21,165
July 1	To Balance b/d	8,335			

Purchases account

Dr.			Cr.		
Date	Particulars	Rs.	Date	Particulars	Rs.
2005			2005		
1	To Capital a/c	3,000	June 4	By Ramya a/c	3,000
3	To Cash a/c	5,000	9	By Jalaja's a/c	3,000
5	To Jalaja a/c	6,000		By Balance c/d	8,000
		14,000			14,000
July 1	To Balance b/d	8,000			

Sales account

Dr.			Cr.		
Date	Particulars	Rs.	Date	Particulars	Rs.
2005			2005		

	To Balance c/d	6,000	June 4	By Ramya a/c	3,000
			9	By Jalaja	3,000
		6,000			6,000
			July 1	By Balance b/d	6,000

Office rent account

Dr.

Cr.

Date	Particulars	Rs.	Date	Particulars	Rs.
2005			2005		
June 16	To Cash a/c	350	June 30	By Balance c/d	350
		350			350

Commission account

Dr.

Cr.

Date	Particulars	Rs.	Date	Particulars	Rs.
2005			2005		
June 20	To Cash a/c	50	June 17	By Cash	175
30	To Balance c/d	125			
		175			175
			July 1	By Balance b/d	125

Ramya's account

Dr.

Cr.

Date	Particulars	Rs.	Date	Particulars	Rs.
2005			2005		
June 4	To purchases a/c	3,000	June 5	By Cash a/c	1,000
30	To Balance c/d	90	26	By Cash a/c	690
			29	By Cash a/c	1,400
		3,090			3,090
			July 1	By Balance b/d	90

Jalaja's account

Dr.

Cr.

Date	Particulars	Rs.	Date	Particulars	Rs.
2005			2005		
June 9	To Purchases a/c	3,000	6	By goods a/c	6000
25	To Cash a/c	2,200			
30	To Cash a/c	220			
30	To Balance c/d	580			
		6,000			6,000
			July 1	By Balance b/d	580

Salaries account

Dr.			Cr.		
Date	Particulars	Rs.	Date	Particulars	Rs.
2005			2005		
June 15	To Cash a/c	1,500	June 30	By Balance c/d	1,610
19	To Cash a/c	110			
		1,610			1,610
July 1	To Balance b/d	1,610			

Capital account

Dr.			Cr.		
Date	Particulars	Rs.	Date	Particulars	Rs.
2005			2005		
June 30	To Balance c/d	21,000	June 1	By Cash a/c	6,000
				By Goods a/c	3,000
				By Buildings a/c	12,000
		21,000			21,000
			July 1	By Balance b/d	21,000

Buildings account

Dr.			Cr.		
Date	Particulars	Rs.	Date	Particulars	Rs.
2005			2005		
June 1	To Capital a/c	12,000		By Cash a/c	3,900
			June 30	By Balance c/d	8,100
		12,000			12,000
July 1	To balance b/d	8,100			

Bank Loan account

Dr.			Cr.		
Date	Particulars	Rs.	Date	Particulars	Rs.
2005			2005		
June 27	To Cash a/c	3,400	June 2	By Cash a/c	8,000
June 30	To Balance c/d	4,600			
		8,000			8,000
				By Balance b/d	4,600

Trial balance as on 30th June, 2005

Debit Balances	Rs.	Credit Balances	Rs.
Cash a/c	8,335	Sales a/c	6,000
Purchases a/c	8,000	Commission a/c	125
Office Rent a/c	350	Sundry Creditors a/c	
		Ramyra	580
		Jalaja	90
Salaries a/c	1,610	Capital a/c	21,000
Buildings a/c	8,100	Bank loan a/c	4,600
Sundry Debtors :			
Ramyra	3,000		
Jalaja	3,000		
	32,395		32,395

2.6 QUESTIONS**A. Short Answer Questions :**

1. What is Journal
2. What is a compound entry?
3. What is a Ledger?
4. What is a Trial Balance?
5. Give a format of a journal and briefly explain its contents
6. Enumerate any five utilities of ledger

B. Eassy Type Questions :

1. Explain the procedure of posting
2. Explain the procedure for balancing a ledger account
3. Explain the methods of preparing a trial balance.
4. Distinguish between Journal and Ledger.

2.7 EXERCISES

1. Journalise the following transactions.

2006		Rs.
August 1	Shri Rajan invested to business	20,000

2	Opened an account with the bank of India by depositing cash	10,000
3	Purchased goods for cash	500
4	Purchased machinery for cash	800
5	Cash purchases of goods	300
6	Cash sales	900
15	Withdraw cash for personal use	200
16	Purchased goods from Preetam & Sons on credit	600
25	Received cash on account from Ramanand	350
26	Paid cash to Minakshi Bros	250
29	Paid rent	125
30	Received Commission	175
30	M/s Ram & Sons returned goods	100

2. Journalise the following transactions in the books of Sudhir Kumar

2006		Rs.
Jan. 1	Sudhir commenced business with cash	40,000
3	Purchased goods for cash	500
5	Sold goods for cash	300
6	Purchased one motor car for cash	15,000
9	Sold machinery for cash	9,000
11	Purchased a building on credit from Narendra	20,000
15	Sold furniture on credit to Randhir Kapoor	9,500
17	Paid Cartage	110
22	Received Commission	50
27	Cash Sales	1,200
29	Cash Purchases	600
30	Received on account from Ahmed	350
31	Paid cash to Sunit kumar on account	190

3. Pass Journal entries of the following transactions in the books of Rajesh.

2006		Rs.
July 1	Rajesh commenced business with cash	16,000
3	He bought goods as his capital in beginning	4,000

7	Sold goods to Dinesh on credit	6,500
8	Purchased a horse for cash	3,100
17	Ramesh's a/c which is over due is closed as the amount is not recoverable	700
20	Goods burnt by fire	390
21	Received cash on account from Dinesh	3,300
25	Goods distributed as free samples	325

4. Journalise the following transactions in the books of Ram. Post them in the ledger and balance the various accounts opened in the ledger.

2006		Rs.
April 2	Ram started his business with cash	70,000
3	Deposited into bank	50,000
4	Purchased goods for cash from Mr. X	5,000
5	Bought goods on credit from Mr. Y	6,000
6	Returned goods to Y	1,000
10	Sold goods for cash for to Mr .A.	6,000
15	Sold goods to Mr. B	6,000
16	Mr. B Returned goods	1,000
17	Drew from bank for personal use	5,000
25	Paid to Mr. Y in full settlement by cheque	4,800
26	Received a cheque from Mr. B in full settlement	4,900
27	Drew cash from bank for office use	10,000
30	Drew cash for personal purposes	5,000
30	Paid salaries to staff	5,000
30	Issued a cheque for Rs.3,000 in favour of Sri Devi a landlady towards rent for April	
30	Withdrew goods for private use	1,000

5. Journalise the following transactions in the books of Mr. X Post them in the ledger and balance the various accounts opened in the ledger also prepare Trial balance.

2006		Rs.
April 1	Mr. X Commenced business with cash	80,000
4	Purchased furniture	22,000

5	Bought goods for cash from Mr. Y	24,000
8	Purchased goods from Mr. Z	40,000
12	Sold goods on credit to Mr.A	10,400
16	Received from Mr.A on account	4,800
20	Sold goods for cash to Mr. B	5,200
21	Paid to Mr. Z on account	12,000
27	Withdrew cash for personal use	500
28	Brought in further capital	10,000
29	Paid to Mr. Z on account	16,000
30	Paid to General expenses	250
30	Paid Rent	520
30	Paid Salaries to employees	12,000

2.8 SUGGESTED BOOKS

1. Basu & Das, **Practical in Accountancy, Volume – one**, Rabindra Library, Calcutta
2. Maheswari, S.N., Maheswari, S.K., **Advanced Accountancy (Vol.I)**, Vikas Publishing House Pvt. Ltd., New Delhi, 2005
3. Pillai, R.S.N., Bagavathi, Uma, S., **Fundamentals of Advanced Accounting (Vol.I)** S. Chand & Company Ltd., New Delhi, 2006
4. Shukla, M.C., Grewal, T.S., Gupta, S.C., **Advanced Accounts (Volume I)** S. Chand & Company Limited, New Delhi, 2005
5. Tulsian, P.c., **Accountancy** Tata McGraw-Hill Publishing Company Limited, New Delhi.

LESSON - 3

SUBSIDIARY BOOKS

Objectives :

After going to this unit we should be able to

- Know about various types of subsidiary books
- Prepare various types of subsidiary books

Structure :

3.1 Introduction

3.2 Advantages of Subsidiary Books

3.3 Purchases Book

3.4 Sales Book

3.5 Journal Proper

3.6 Questions

3.7 Exercises

3.8 Suggested Readings

3.1. INTRODUCTION

In earlier times, businessmen used only one Journal for recording all the business transactions. Since the volume of business was small, and the number of transactions very few, "Journal" as a book of accounts was convenient. But with the growth of business, the number of transactions increased manifold and the need was felt to have a better method of recording business transactions. If all these business transactions were recorded in one and the same Journal, the journal would be bulky and cumbersome. It would be very difficult to make a ready reference to such a Journal. Moreover, it is impossible for many clerks to work on the same Journal at one and the same time. Under such circumstances, it becomes necessary to divide the whole Journal into several subsidiary Journals so that work can be assigned to many at one and the same time. In each separate journal, one particular class of business transactions is recorded. That means the purchase Journal may be maintained to record credit purchases of goods and a Cash Book for recording cash transactions. Instead

of recording all the transactions in one and the same journal, they are recorded in separate journals meant for the purpose.

Therefore, in order to meet the requirements of modern business, the original journal is divided into the following:

1. Purchase Book
2. Sales Book
3. Purchase Return Book (Return Outward Book)
4. Sales Return Book (Return Inward Book)
5. Cash Book
6. Bills Receivable Book
7. Bills Payable Book
8. Journal Proper

The chart given below indicates the different types of subsidiary books or journals and the category of business transactions recorded in them:

Subsidiary Books (Sub- Division of Journal)

Subsidiary Book / Subsidiary Journal	Category of Business Transactions Recorded
1. Purchase Book	Credit Purchases of goods only.
2. Sales Book	Credit Sales of goods only.
3. Purchase Return Book (Return Outward Book)	All return of goods purchased by us from suppliers i.e. Return Outwards.
4. Sales Return Book (Return Inward Book)	All return of goods sold by us to customers i.e. Return Inwards.
5. Cash Book	All cash and Bank transactions.
6. Bills Receivable Book	All Bills received by us.
7. Bills Payable Books	All bills accepted by us.
8. Journal Proper	All such transactions which cannot be entered in the above seven books. (Recorded in the form of journal entries)

3.3 ADVANTAGES OF SUBSIDIARY BOOKS

The advantages of using Special Journals are as under:

- (a) Facilitates division of work:** The accounting work can be divided among many persons.
- (b) Permits the installation of internal check system:** The accounting work can be divided in such a manner that the work of one person is automatically checked by another person. With the use of internal check, the possibility of occurrence of error/ fraud may be avoided.
- (c) Permits the use of specialised skill:** The accounting work requiring specialised skill may be assigned to a person possessing the required skill. With the use of a specialised skill, prompt, economical and more accurate supply of accounting information may be obtained.
- (d) Time and labour saving in journalising and posting:** For instance, when Sales Book is kept, the name of Sales Account will not be required to be written down in the journal as many times as the sales transactions and at the same time, Sales Account will not be required to be posted again and again since only a periodic total of Sales Book is posted to the Sales Account.

3.4 PURCHASE BOOK

This book is maintained mainly to record purchase in business. But here care must be exercised before entering the purchase transactions in this book. Only credit purchases are to be recorded in this book. Credit purchases means the purchase of goods without making payment on the spot. Such purchases are known as credit purchases. Purchases of goods on credit in which the trader deals is recorded in this journal. For example, if a Cloth Merchant has purchased cloth on a credit basis, that will be recorded in the Purchase Book. But if he has purchased furniture on credit, it will not appear in the Purchase Book since it is a purchase of an asset.

The entries in the purchases book are made on the basis of invoices received from the suppliers with the amounts net of trade discount / quantity discount. Trade discount is a reduction granted by a supplier from the list price of goods or services on business considerations (such as quantity bought, trade practice, etc.) other than for prompt payment.

Formate of Purchase Book:

Date	Particulars	L.F.	Inward Invoice No,	Details	Amount Rs.	Amount Rs.

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3.4.1 Explanation of Columns:

1. **Date:** Date of purchases is written in this column.
2. **Particulars:** In this column, the names of the suppliers are entered. There is no need to write the address of the supplier since it appears, on the Invoice itself.
3. **L. F.:** Page number of the "Ledger", on which the account of the supplier appears, is entered in this column.
4. **Inward Invoice No:** All inward invoices are filed properly, and the consecutive number of the Invoice is shown in this column.
5. **Details:** The value of goods purchased and amount of trade discount are written.
6. **Amount:** The net amount of purchases is entered in this column. Only the amount after deducting trade discount is recorded here.

3.4.2 INVOICE:

Specimen of an Inward Invoice

INVOICE					
Reliance Co. Ltd. 40, Jawaharlal Nehru Road Mumbai – 700016.			No.786 / 90 Date: 19 th Feb, 2006		
			Customer Name Ram & Sons R.P. Road Hyderabad		
Date	Description	Rate	Amount	Total (Rs)	Remarks
E & O. E.					

The invoice is the basis of writing a Purchase Book. Transactions are recorded in the Purchase Book from the Invoices received from the suppliers. Hence it is necessary to know about Invoices.

An invoice is a statement sent by the Seller to the buyer giving a full description of the goods supplied.

All the invoices received are property arranged and consecutively numbered. They are filed in a proper file and then the purchase transactions are recorded in the Purchase Book.

When the trader receives such an invoice, he has to verify whether the goods are received as per the details given in the invoice in regard to quantity, quality etc. He also checks whether the calculations are made correctly. If the invoice is found to be correct in all respects it is given a serial number and after an entry is made in the purchase book, it is filed. All such invoices received are called Inward invoices.

3.4.3 Trade Discount:

Trade Discount is a reduction made in the catalogue price of an article to enable the retailer to earn a profit. Generally, it is recorded in the Purchase Book and Sales Book but it does not enter in the ledger accounts. In the ledger, only net amount of purchase and sale are entered.

Illu 1: Enter the following in the Purchase Book also post them into ledger.

2006		Rs.
Aug 10	Bought goods from Murali Mohan	5,000
Aug 15	Bought goods from Ranga Rao	4,000
Aug 20	Purchased goods from Gopal	8,000
Aug 25	Purchased goods from Harikrishna for cash	10,000
Aug 31	Purchased goods from Kavitha	6,000

Solution :

Purchases Book

Date	Particulars	Invoice No.	L. F.	Amount Rs.
2006				
Aug 10	Murali Mohan			5,000
15	Rama Rao			4,000
20	Gopal			8,000
31	Kavitha			6,000
Aug 31	Purchases a/c Dr.			23,000

Note:

1. Purchases Book deals only with credit purchases. As such purchase of goods from Hari Krishna for cash is not entered in this book.

3.4 SALES BOOK

A separate book is maintained to record all credit sales. The manner of recording sales in this Book is the same as in the case of the Purchase Book. The book is also known as the Sales Day Book or Sales Journal. The rulings of this book and other principles are almost identical with those of the Purchase Book.

Before entering the transactions in the Sales Book, it should be seen that the transaction satisfies the below mentioned two conditions:

1. It is a sale of articles on credit basis.
2. It is a sale of articles in which a businessman deals.

Sales of goods on a cash basis or the sale of an asset on a Cash / Credit basis cannot be entered in the Sales Book. Supposing a merchant dealing in radios, sells radios on credit, that will be entered in the sales book. But if he sells a Typewriter that being the sale of an asset on credit, will not be entered in the Sales Book:

3.4.1 Procedure for Writing – up the Sales Day Book

When goods are sold on credit, an outward invoice is prepared for every credit sale and are checked as to quality, quantity and price of the goods before they are dispatched to the customers. The duplicate copy of the invoice remains with the firm and the original copy is sent to the customer. Sales Day Book is written – up on the basis of duplicate outward invoice.

Qty.	Description	Rate	Amount	Total (Rs)	Remarks
<p>INVOICE</p> <p style="text-align: right;">No. P. 29 Date: 9th June 1991</p> <p>Jeenath Co. Ltd. 31, Jawaharlal Nehru Road Hyderabad.</p> <p style="text-align: right;">Customer' Name Allwin Co. Ltd. Hyderabad</p>					
E & O. E.					

The invoice contains the following details:

- (i) The names and addresses of both the parties to the contract.
- (ii) An exact description of the goods, including the quantity, rate and total value of the goods sold.
- (iii) The terms and conditions of sales (on the overleaf).

E & O. E. means Errors and Omissions Excepted. The market reserves the right to correct any error in the invoice.

The ruling of the Sales Day Book is given below:

Sales Day Book

Date	Particulars	Outward Invoice No.	L. F.	Debit Rs.	Credit Rs.

- (i) In the "Date" column, the date on which invoice is prepared is entered.
- (ii) In the "Particulars" column, the names of the customers are recorded. A brief description of each of article sold are also written in this column.
- (iii) In the "Outward Invoice No." column, the serial no. of Outward Invoice is written.
- (iv) In the "L. F." column, the page no. of the Debtors' account in the Debtors' Ledger is written.
- (v) In the "Details" column, the value of the goods sold and amount of trade discount is written.
- (vi) In the "Total" column the actual amount receivable from debtors is written.

Illu.2 : Enter the following transactions in Sales Books of Narayana

2006 February

		Rs.
2.	Credit sales to Sravan	8,000
7.	Goods sold to Hari on credit	9,000
12.	Sold goods to Rajesh	6,000
16.	Goods returned by Rajesh	800
20.	Credit sales to Kishore	7,000
24.	Credit Sales to Siva	12,000
27.	Sold goods to Sankar	13,000

Solution :**Sales Book**

Date	Customer Name	L.F.	Invoice No.	Amount
Feb 2	Sravan			8,000
7	Hari			9,000
12	Rajesh			6,000
20	Kishore			7,000
24	Siva			12,000
27	Sankar			13,000
Sales Book Total				55,000

3.4.2 Sales book with Sales Tax Column:

It is the duty of the seller to realise sales tax from customers and deposit it to the Government. Sales tax is calculated at a fixed percentage on the net price of the goods, i.e., after trade discount. Generally a separate column is provided in the Sales Day Book for Sales tax. Periodically, the total of sales tax column is credited to Sales Tax Account. When actual payment is made to the Government, the Sales Tax Account is debited and Cash / Bank Account is credited and any Balance of Sales Tax Account at the end of the year is shown in the Balance Sheet as a liability.

3.4.3 Purchases Returns Book:

It may be necessary to return some goods that the firm has bought on credit for a variety of reasons such as defective or excess quantity of goods supplied, etc. All return of goods are recorded primarily in the Purchases Returns Book.

When a firm returns some goods to its supplier, it prepares a "Debit Note" and sends it along with the goods returned. The supplier, in turn, will prepare a "Credit Note". The original copy of the credit note will be sent tot the firm. Entries in the Purchases Returns Book are made on the basis of original "Credit Note" received from the supplier. On receipt, all credit notes should be numbered consecutively and should be filed properly for future reference.

The specimen of the Purchase Returns Book is given below:

Purchases Returns Book

Date	Particulars	Credit Note No.	L. F.	Rs.	Remarks

Illu.3 : M/s Naval Handicrafts Emporium, Madras returned the following goods to different parties. Prepare purchase returns book.

2006	
June 10	Kalanjali, Hyderabad (Debit Note No. 6) 30 Wooden Toy Elephants at Rs.15 per toy Trade discount 20%
22	Bharathi Arts works, Madhurai (Debit Note No. 7) 40 toys each toy at Rs.12, Trade discount 10%
29	Modern Cultural Palace, Tanjavoor (Debit Note No. 8) 10 Tanjavoor plates at Rs.80. Trade discount 20%.

Solution :

Purchases Returns Book

Date	Particulars	Invoice No.	L. F.	Debit Note	Amount Rs.
2006					
Nov 10	Kalanjali, Hyderabad			6	360
Nov 22	Bharati Arts Works, Madhurai			7	432
Nov 29	Modern cultural Palace, Tanjavur			8	640
Nov 30	Total				1,432

3.4.4 Sales Returns Book:

Goods may be returned by the customers for a variety of reasons such as wrong quantity and/ or quality. All goods returned by the customers are primarily recorded in this book.

When goods are returned by the customer, a "Credit Note" is made out in his name. A Credit Note is prepared in duplicate. The original being sent to the customer for his information and record. The duplicate is preserved in the file for future reference. Duplicate credit Note provides information for recording in the Sales Returns Book.

The specimen ruling of the Sales Returns Book is given below:

Sales Returns Book

Date	Particulars	Credit Note No.	L. F.	Rs.	Remarks

Illu.4 :: M/s Utility Garments Corporation, Tirupathi received the returns goods from various customers. Prepare sales returns account.

2006	
Feb 10	Return of goods from Nityanandam & Sons 25 Tea shirts at Rs. 100 per each shirt. Trade discount 10%, Credit Note No. 8
19	Return of goods from M/s. Nataraj & Co. 20 Pants at Rs.250 per pant. Trade discount 10% Credit Note No. 10

Solution :

Sales Returns Book

Date	Particulars	L. F.	Credit Note No.	Amount Rs.
1998				
Feb 10	M/s Nityanandam & Sons		8	2,250-00
Feb 19	M/s Sumitra & Sons		9	5,400-00
Feb 24	M/s Nataraj & Company		10	4,500-00
Feb 28	Total			12,150-00

Illu.5 : Enter the following transactions in suitable subsidiary books:

Jan		Rs.
1	Purchased goods from Rekaha	7,500
4	Sold goods to Midhun	8,000
5	Returned goods to Rekha	500
6	Sridevi bought goods from us	4,000
8	Received goods returned by Midhun	400
10	Rajesh sold goods to us	4,000
15	Sold goods to Kishore	3,000
16	Returned goods to Rajesh	600
20	Kishore returns goods	500

(Andhra University, March 2005)

Solution :**Purchase Book**

<i>Date</i>	<i>Particulars</i>	<i>L.F. No.</i>	<i>Invoice No.</i>	<i>Amount Rs.</i>
Jan 1	Rekha			7,500
10	Rajesh			4,000
	Total			11,500

Sales Book

<i>Date</i>	<i>Particulars</i>	<i>L.F. No.</i>	<i>Invoice No.</i>	<i>Amount Rs.</i>
Jan 4	Midhun			8,000
6	Sridevi			4,000
15	Kishore			3,000
	Total			15,000

Purchase Returns Book

<i>Date</i>	<i>Particulars</i>	<i>L.F. No.</i>	<i>Invoice No.</i>	<i>Amount Rs.</i>
Jan 5	Rekha			500
16	Rajesh			600
	Total			1,100

Sales Returns Book

<i>Date</i>	<i>Particulars</i>	<i>L.F. No.</i>	<i>Invoice No.</i>	<i>Amount Rs.</i>
Jan 8	Midhun			400
20	Kishore			500
	Total			900

3.4.5 Bills Receivable Book:

For large organisations, where numerous bills of exchanges are drawn on debtors, it is advantageous to enter them primarily in the Bills Receivable Book.

Bills Receivable Book

Bill No.	Date Recd.	From whom Recd.	Drawer	Acceptor	Date of Bill	Term	Due Date	L. F.	Rs.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)

- (1) Bill No. – In this column, the serial number of the bill is entered.
- (2) Date Received – This column is used for entering actual date on which the bill is received.
- (3) From Whom Received – This column records the name of the debtor from whom the bill is received.
- (4) Drawer – This column records the name of the drawer of the bill.
- (5) Acceptor – This column records the name of the acceptor.

- (6) Date of the bill – This column records the actual date of drawing of the bill.
- (7) Term – This column is used for entering the period of the bill, e.g., 60 days, 3 months, etc.
- (8) Due Date – This column records the date on which the bill is payable.
- (9) L. F. – The page no. of Debtors' Ledger is entered here.
- (10) Amount – This records the value of the bill.

3.4.6 Bills Payable Book:

Where numerous bills payable are accepted, drawn by the creditors, it is advantageous to enter them primarily in the Bills Payable Book.

Bills Payable Book

Bill No.	Date Accepted	To whom given	Drawer	Date of Bill	Term	Due Date	L. F.	Rs.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)

- (1) Bill No. – This column, records the serial no. of bills accepted.
- (2) Date Accepted – This column records the actual date of acceptance of the bill.
- (3) To Whom given – This column records the name of the person to whom the bill is given.
- (4) Drawer – This column records the name of the drawer of the bill.
- (5) Date of Bill – This column records the actual date of drawing of the bill.
- (6) Term – This column is used for entering the period of the bill, e.g., 60 days, 3 months, etc.
- (7) Due Date – This column records the date on which the bill is payable
- (8) L. F. – Page no. of Creditors' Ledger is entered here.
- (9) Amount – This records the value of the bills payable.

3.5 JOURNAL PROPER

Journal Proper is used for making the original record of those transactions which do not find a place in any of the aforesaid books of original entry.

Entries recorded in the Journal Proper may be classified as follows:

- (1) Opening entries; (2) Closing entries; (3) Transfer entries; (4) rectification of Errors entries; (5) Adjustment entries; (6) Credit Purchase of assets; (7) Credit sale of worn – out or

obsolete assets, (8) Credit purchase of Stationery etc. The specimen ruling of the Journal Proper is given below:

Journal Proper

Date	Particulars	L. F.	Rs.	Rs.
(1)	(2)	(3)	(4)	(5)

(1) Date – This column records the date of transaction.

(2) Particulars – This column records the name of the accounts debited or credited. The account debited is written first, adjacent to the line of date and the account credited is written below with the prefix “To”. In this column, the narration is also recorded.

(3) L. F. – This column records the page no. of ledger in which this account has been posted.

(4) Dr. Column – It records the debit amount.

(5) Cr. Column – it records the Credit amount.

(1) Opening Entries:

Opening entries are used at the beginning of the financial year to open the books by recording the assets, liabilities and capital, appearing in the Balance Sheet of the previous year. The rule to be applied is:

Assets Account	Dr.
To Liabilities Account	
To Capital Account.	

(2) Closing Entries:

Closing entries are used at the end of accounting year for closing off accounts relating to expenses and revenues. These accounts are closed off by transferring their balances to the Trading and Profit and loss Accounts. Since records must not be made in the ledger without journal entries, closing entries are passed in the Journal Proper first and then posted to the ledger.

(3) Transfer Entries:

Transfer entries are passed in the Journal Proper for transferring an item, entered in one account, to another account.

(4) Rectification of Errors:

Mistake which has been made in passing an entry should be corrected by passing another entry in the Journal Proper and the practice of erasures should not be tolerated.

(5) Adjustment Entries:

Before preparation of Final Accounts, certain adjustment is required in respect of outstanding expenses, prepaid expenses, provision for doubtful debts, etc. Entries made for such adjustment is called Adjustment Entries and is done in the Journal Proper.

Illu.6 : Pass adjustment entries for the following:

- i) Wages outstanding Rs.500.
- ii) Interest on Capital Rs.720.
- iii) Goods destroyed by fire accident Rs.7,000 out of which insurance company admits the claim for Rs.5,200.

Solution :

Journal Entries

Date	Particulars		L.F	Debit Rs.	Credit Rs.
1	Wages a/c To Outstanding Wages a/c (Being the adjustment of outstanding wages)	Dr.		500	500
2.	Interest on Capital a/c To Capital a/c (Being the interest on capital calculated)	Dr.		720	720
3.	Insurance claim a/c Profit and Loss a/c To Abnormal loss a/c (Being the insurance claim admitted and the balance transfer to P & L account)	Dr.		5,200 1,800	7,000

3.6 QUESTIONS

A. Short Answer Questions

1. What are the advantages of subsidiary books of accounts?
2. What is a purchase book? What conditions are to be satisfied before a transaction is recorded in the book?
3. Explain the nature and use of a sales book.
4. What is Invoice?

5. What is a Debit note? What is the use of a Debit Note?
6. What is a Credit Note? What is the use of a Credit Note?
7. Differences between debit note and credit note.
8. What is journal proper?
9. What kind of entries are passed in a journal proper?

B. Essay Questions

1. Explain various types of subsidiary books.
2. What is a subsidiary book? Why are they to be maintained?
3. Prepare purchases book and sales book with hypothetical figures.
4. Explain sales returns book and purchase returns book with proforma

3.7 EXERCISES

1. Record the following transactions in the purchases book and post them in the ledger.

2006		Rs.
July 1	Bought goods from Arvind & Co. for	500
3	Sunder & Co. invoiced goods to us	700
4	Purchased one typewriter for office use from Godrej Ltd.	1,100
6	Dinanath sold goods to us (Rs.500 less 5% trade discount)	475
7	Cash purchases	300

[Ans.: Purchases Book Total Rs.1,675]

2. Enter the following transactions in the sales book and post them to ledger accounts.

2006		Rs.
July 1	Sold two sarees to Hemamalini @ Rs.150 Less 5/% Trade Discount	
2	Supplied one saree to Sharmila	175
3	Babita purchased one saree from us	200
4	Cash sales	100
8	Invoiced 4 Sarees to Jayasree	500
9	Sold old Typewriter	375

10	Sold blouse pieces to Pramila	125
----	-------------------------------	-----

[Ans.: Sales Book Total Rs.1,285.00]

3. Enter the following transactions in proper subsidiary books.

2006	
April 1	Purchased goods from Anand for Rs.800 less 20% Trade Discount
2	Purchased goods from Baskar for Rs.700 less 20% Trade Discount
4	Returned Anand goods worth Rs.100
5	Returned Baskar goods worth Rs.80
8	Sold goods to Chandar for Rs.500 less 10% Trade Discount
11	Chandar returned us goods worth Rs.100
16	Sold goods to David for Rs.300 less 10% Trade Discount
19	David returned us goods worth Rs.50
21	Bought goods from Easwar for Rs.300
22	Sold goods to Farook for Rs.150
25	Bought goods from Gopal for Rs.150 less 20% Trade Discount
28	Returned goods worth Rs.50 to Gopal

[Ans.: Purchases Book Total Rs.1,620; Sales Book total Rs.870; Purchases returns Book Rs.184.00 Sales Returns Book Rs.135.50]

4. Enter the following transactions in the Sales day book and post them into the ledger.

2006	
March 1	Sold to Zankar Stores 5 T.V. sets @ Rs.8,000 each, less 10% Trade discount
10	Sold to S.K. Electronics 2 T.V. sets @ Rs.900 each, less 10% Trade Discount
23	Sold to Ameeta Kelkar and Co. 1 colour T.V. set for Rs.15,000 less 10% Trade Discount
	All sales are subject to 10% sales tax.

[Ans.: Sales Day Book Total Rs.72,270]

5. Record the following transactions in Journal Proper.

2006		Rs.
Jan.1	Purchase of typewriter on credit from Kantha Rao & Company	6,500
Jan.8	Sale of building to Kumar & Sons on credit	2,75,000
Jan.12	Bad debts due from Suresh who became insolvent	300
Jan.19	Purchase of furniture on credit from Gangadhar for personal use	2,500
Jan.28	Purchase of goods from Achari for cash for household purpose	300
Jan.30	Receipt of cash Rs.1,000 from Ramesh was posted to the account of Suresh	

3.8 SUGGESTED BOOKS

1. Basu & Das, **Practical in Accountancy, Volume – one**, Rabindra Library, Calcutta
2. Maheswari, S.N., Maheswari, S.K., **Advanced Accountancy (Vol.I)**, Vikas Publishing House Pvt. Ltd., New Delhi, 2005
3. Pillai, R.S.N., Bagavathi, Uma, S., **Fundamentals of Advanced Accounting (Vol.I)** S. Chand & Company Ltd., New Delhi, 2006
4. Shukla, M.C., Grewal, T.S., Gupta, S.C., **Advanced Accounts (Volume I)** S. Chand & Company Limited, New Delhi, 2005
5. Tulsian, P.c., **Accountancy** Tata McGraw-Hill Publishing Company Limited, New Delhi.

LESSON - 4

CASH BOOK

Objectives :

After studying this unit we should be able to

- Features of cash book and the advantages in the preparation of cash book
- Know the types of cash book
- Prepare different types of cash books
- Understand the meaning and need for petty cash book and how to prepare it.

Structure :

4.1 Introduction

4.2 Types of Cash book

4.3 Simple Cash book

4.4 Two Column Cash Book

4.5 Three column cash book

4.6 Petty Cash book

4.7 Questions

4.8 Exercises

4.9 Suggested Readings

4.1 Introduction

The Cash Book is a sub – division of the book of original entry recording transactions involving receipts or payments of Cash.

All Cash transactions are first entered in the Cash Book and then posted from Cash Book into the ledger. Cash Book is maintained in the form of a ledger with narration. Practically, the Cash Book is a substitute for Cash Account in the ledger.

Cash Book is not only a book of original entry but also a ledger account for cash transactions. Therefore, cash account is not maintained in ledger book and for preparing trial balance (which records balances of ledger accounts) balance of cash account is recorded from cash book. Therefore, it is said that cash book is a subsidiary as well as a principal book. Cash book represents in effect cash account in ledger books; therefore, rules discussed in last chapter for preparing cash account shall be applicable. To recapitulate, cash account records all cash receipts on debit side and all cash payments on credit side of the account.

4.1.1 Features:

1. Only Cash transactions are recorded in the Cash Book.
2. It performs the functions of both journal and the ledger at the same time.
3. All cash receipts are recorded in the debit side and all cash payments are recorded in the credit side.
4. It records only one aspect of a transaction, i.e., Cash.
5. All cash transactions are recorded chronologically in the Cash Book.
6. The Cash Book, recording only cash transactions, can never show a credit balance.

4.1.2 Necessity of Maintaining Cash Book:

The necessity of maintaining cash book are discussed below:

- (i) If every cash transactions are recorded in the journal, a tremendous amount of work will be involved in debiting or crediting cash account every time cash received or paid. If the cash book is maintained, the botheration of posting every item or receipt or payment of cash individually to cash account in the Ledger is avoided.
- (ii) Cash Book is maintained because it gives the balance of cash – in – hand.

4.2. Types of Cash Book

The various types of Cash Book from the point of view of uses may be as follows:

Cash Book can be of several kinds:

- (i) **Single Column Cash Book** – For recording cash transactions only.
- (ii) **Cash Book with Cash and Bank Columns** – For recording cash and bank transactions.
- (iii) **Cash Book with Cash, Bank and Discount Columns** – For recording cash and bank transactions involving loss or gain on account of discount.

4.3 Single Column Cash Book

Single column Cash Book or Simple Cash Book is a such a Cash Book appears like an ordinary account, with one amounts column on each side. The left – hand side records receipts of cash and the right – hand side the payments. The difference between the left hand side or debit side and right hand side or credit side represents the balance i.e., amount of cash in hand and the balance must be a debit one. This cash book records only cash transactions and for bank transactions, a separate Bank Account is opened in the ledger where all transactions relating to “Cheques” are recorded.

Specimen of Single Column Cash Book

Dr.				Cr.			
Receipts				Payments			
Date	Particulars	L. F.	Amount Rs.	Date	Particulars	L. F.	Amount Rs.

1. **Date:** The date column in the Cash Book enables a chronological record of each transaction. In this column year, month and actual date of transaction is recorded.
2. **Particulars:** The column for particulars is left for writing the heads of account to be credited and debited and also for providing the appropriate narration or explanation of the transaction recorded.
3. **Voucher No.:** The document in support of a transaction is called voucher. There are two types of Vouchers: (1) Receipts Voucher, and (2) Payments Voucher. Generally, voucher has a serial number and this number is written in this column.
4. **Ledger folio (L. F.) :** The column for ledger folio is for indexing. A folio is a page mark. The folio in which the accounts, named in the Cash Book, are maintained in the ledger are marked in this column. This enables to locate the respective page or pages in the ledger easily.
5. **Amount:** The money value of the transaction is written in this column.

4.3.1 Balancing of the Single – Column Cash Book:

The cash book is balanced just like any other ledger account. As mentioned earlier, the cash book always shows debit balance since the cash payments can never exceed the amount of cash receipts. After closing the cash book, the balance is shown on the debit side. The difference is written on the credit side as 'By Balance c/d', and, then, on the debit side the balance is written as 'To balance b/d'. This becomes the opening balance for the next period.

Table.1 : Prepare a cash book from the following information.

2006		Rs.
Jan.1	Balance of cash	7,000
Jan.10	Bought goods for cash	2,500
Jan.11	Bought goods on credit from Z	3,000
Jan.15	Sold goods for cash	4,700
Jan.17	Paid salary	1,000
Jan.18	Withdrew for personal use	500

4.4.1 Cash Book with Cash and Discount Column:

In order to record cash discount allowed or received, one additional column for “discount” is provided on both the sides of the Cash Book.

1. **Cash Discount :** It is a discount allowed to customers as an inducement to make the payment immediately. Cash discount is closely related to cash receipt and cash payment. When cash is received, discount is allowed and when it is paid discount is received. Cash discount allowed is a loss to a businessman while cash discount received is a gain to him.
2. **Trade Discount :** It is an allowance made by a wholesaler to a retailer in order to enable the retailer to sell the articles at list prices and earn a reasonable margin of profit. The amount of trade discount is deducted from the invoice, therefore, it has no connection as to the receipt and payment of cash. Hence, trade discount does not appear in the books of accounts.

4.4.2 Difference between Cash Discount and Trade Discount:

1. A trade discount is offered by the trader to a buyer as a reduction in the catalogue or invoice price of the goods sold. However, a cash discount is a reduction in the amount due from a debtor.
2. While a trade discount is offered by the manufacturer or wholesaler to a retailer, a Cash discount is offered by a creditor to a debtor.
3. The purpose of offering the trade discount by the manufacturer or a wholesaler to a retailer is to enable him to sell the goods at the invoice price and to have a margin of profit. The purpose of offering a cash discount is to induce the debtor to make an early payment.
4. A Trade discount is offered unconditionally whereas a cash discount is offered only on payment of the amount.
5. A Trade discount does not figure in the books of both the parties whereas a cash discount is accounted for either as a gain or as a loss.
6. The rate at which a trade discount is offered varies from trade to trade and one commodity to another. However, a cash discount is offered almost at the same rate in all kinds of trade, but the cash discount rate may vary depending on the period of credit.
7. A trade discount is usually predetermined whereas a cash discount is not predetermined.

Table.2: Prepare two column cash book of Sri Raj for the following transactions.

2006		Rs.
Mar 1	Cash in hand	3,000
Mar 6	Cash purchases	2,000
10	Wages paid	40
11	Cash sales	6,000
12	Cash received from Suresh	1,980
	Discount allowed	20
19	Cash paid to Munna	2,470
	Discount received	30
27	Cash paid to Radha	400
28	Bought goods for cash	2,070

Solution:

Date	Particulars	LF	Disco unt	Amo unt Rs.	Date	Particulars	LF	Disco unt	Amo unt Rs.
2006					2006				
Mar 1	To Balance b/d			3,000	Mar 6	By Purchases			2,000
Mar 11	To Sales			6,000	Mar 10	By Wages			40
Mar 12	To Suresh		20	1,980	Mar 19	By Munnu		30	2,470
					Mar 27	By Radha			400
					Mar 28	By Purchases			2,070
					Mar 31	By Balance c/d			1,000
			20	10,98				30	10,98 0
Apr 1	To Balance b/d			4,000					

Table.3 : Prepare a Cash book with Bank and Discount columns from the following transactions.

2006		Rs.
June 1	Balance at bank	8,820
1	Cash in hand	510
2	Cash Sales	5,500
3	Paid in to Bank	5,000
4	Stationery purchased	200
10	Paid Ramesh by cheque	180
	Discount received	20

4.5.1 Balancing the Three – column Cash Book :

The cash and bank columns are balanced separately like other columns. Cash account always shows a debit balance. The bank account may show a debit or a credit balance. A credit balance shows a bank overdraft i.e., an excess amount drawn from the bank. The discount columns are not totaled in this cash book.

4.5.2 Special Points of a Three - column Cash book :

Following are some of the special points to be kept in mind while preparing a three – column cash book.

- 1. Opening Balance:** The cash column of a cash book always shows a debit balance. It is written as ‘balance brought down’ on the debit side. But the opening balance of a bank column may be a debit or credit. If it is a debit balance, it will be shown on the debit side of the bank account while if a credit balance is given, it implies an overdraft and is shown on the credit side as ‘By Balance b/d’.
- 2. Contra Entries:** Contra entries mean such entries that are made on both the sides of the cash book. When cash or a cheque is paid into the bank, the cash balance in the office will be reduced and the bank balance will be increased. In such a case, the Bank account is to be debited and the cash account is to be credited. Since in three column cash book, both cash and Bank accounts are included the amount will be written in a bank column on the receipt side and also in the cash column on the payment side of the cash book.

The transactions affecting the Cash Account and Bank Account (either Cash Account or Bank Account debited or credited) are recorded on both the sides of the Cash Book. As the Triple Column Cash Book consists of Cash Account and Bank Account. Ledger posting of such transactions is completed by recording them on both the sides of the Cash Book. Entries passed to record such transactions in the Triple Column Cash Book are regarded as contra entries. Letter “C” is written in the “L. F.” column of the Cash Book in order to identify such entries.

- 3. Treatment of cheques received:** Cheques received may be treated in the following two ways.
 - (i)** A cheque received by a business may be sent to the bank on the same day for collection. In such a case it will be shown on the debit side of the bank column as soon as it is received.

- (ii) A cheque received by the business may be sent to the bank at a later date. In such a case, it is shown on the debit side of the cash account when it is received. When the cheque is sent for collection to the bank, it is shown on both sides of the cash book.
4. **Endorsement of cheques received:** A cheque received by a business may not be sent for collection to the bank but may be endorsed and transferred in favour of a creditor of the business. The cheque received will be taken as a receipt of cash. The cheque endorsed will be taken as payment of cash.
 5. **Dishonour of cheques :** The term ‘dishonour of a cheque’ refers to non – payment of a cheque while being presented for collection. The party from whom the cheque received is debited while the account of the bank is credited.
 6. **Bank Charges :** A bank usually charges some amount for the services provided to its customers. Such a charge will be recorded on the credit side of the cash book under the bank column.
 7. **Interest allowed bank :** Interest allowed by the bank increases the bank balance. The amount is recorded on the debit side of the cash book in the bank column.
 8. **Amount withdrawn for person use :** Amount withdrawn from the bank for personal use is shown on the credit side of bank column in the cash book.

4.5.3 Posting from Cash Book:

The posting of the debit and credit sides of cash books is done as follows:

1. **Posting of debit side of cash book :** All the receipts appearing on the debit side are posted to the credit side of the respective ledger accounts. All entries relating to discounts are posted to the credit side of the respective personal accounts in the ledger. The total of discounts allowed on the debit side is posted to the debit of the discount allowed account in the ledger.
2. **Posting of credit side of cash book :** All the payments appearing on the credit side are posted to the debit side of the respective ledger accounts. All entries relating to the discount received column are posted to the debit side of the respective personal accounts. The total of discount received is posted to the credit of the discount
3. received account in the ledger.

Table.4 : Enter the following transactions in three columns Cash Book.

1995 March

1. **Cash at Office Rs.600 and Bank balance Rs.3,000**

2. Received a cheque for Rs.500 from Balu in full settlement of Rs.525

4. Drawn from Bank for office use Rs.800

7. Balu's cheque returned dishonored

Solution :

Cash book with Cash, Bank and Discount columns

Date	Particulars	L.F	D.A.	Cash	Bank	Date	Particulars	L.F	D.R	Cash	Bank
2006			Rs.	Rs.	Rs.	2006			Rs.	Rs.	Rs.
Ma.1	To Balance b/d			600	3,000	Ma.4	By Cash				800
2	To Balu		25		500	Ma.7	By Balu		25		500
4	To Bank	C		800		31	By Balance c/d			1,400	2,200
			25	1,400	3,500				25	1,400	3,500
Ap.1	To Balance b/d			1,400	2,200						

Table.5 : Prepare a triple column cash book with bank, cash and discount columns from the following transactions:

2006		Rs.
June 1	Cash balance Rs.5,000 and bank balance Rs.2,000	10,000
5	Cash received from sale of goods	2,000
6	Paid into bank	1,000
7	Paid Anil by cheque	800

Solution :

Three Column Cash Book

Date	Particulars	L.F	Disco unt	Cash	Bank	Date	Particulars	L.F	Disc ount	Cash	Bank
2006			Rs.	Rs.	Rs.	2006			Rs.	Rs.	Rs.
June 1	To Balance b/d			5,000	2,000	June 6	By Bank			1,000	
5	To Sales			2,000		7	By Anil				800
6	To Cash	(c)			1,000	7	By Balance c/d			6,000	2,200
				7,000	3,000					7,000	3,000
8	To Balance b/d			6,000	2,200						

Table.6 : Prepare a Three column cash book from the following:

2006		Rs.
Jan.1.	Cash balance	15,000

	Bank balance	50,000
2.	Cash sales	40,000
5.	Furniture purchased and issued cheque	8,000
6.	Rent paid by the cheque	5,000
7.	Cash deposited on the bank	40,000
8.	Received interest on Investments	4,000
9.	Paid Salaries	5,000
10.	Received from Vishnu discount allowed	500
12.	Received cheque from Anjaneyulu and deposited in the bank	8,000
13.	Anjaneyulu cheque dishonored	8,000
14.	Goods purchased from Gopi for cash	6,000
18.	For office use cash withdrawn from Bank	12,000
20.	Cheque issued to Raja	5,800
	Discount Received	200
24.	Cash withdrawn for personal use	4,000

Solution :

Dr.		Cash Book						Cr.			
Date	Receipts	L.F.	Dis. Allowed	Cash	Bank	Date	Payments	L.F.	Dis Allowed	Cash	Bank
2006 Jan.1	To Balance b/d			15,000	50,000	2006	By Furniture				8,000
Jan.2	To Sales			40,000		Jan. 6	By Rent				5,000
Jan.7	To Cash	C			40,000	Jan. 7	By Bank	C		40,000	
Jan.8	To Interest on Investments				4,000	Jan.9	By Salaries			5,000	
Jan.10	To Vishnu		500	15,000		Jan.13	By Anjaneyulu				8,000
Jan.12	To Anjaneyulu				8,000	Jan.14	By Purchased			6,000	
Jan.18	To Bank			12,000		Jan.18	By Cash	C			12,000
						Jan.20	By Raja		200		5,800
						Jan.24	By Drawings				4,000
						Jan.31	By Balance c/d			31,000	59,200
			500	82,000	1,02,000				200	82,000	1,02,000
2006 February	To Balance b/d			31,000	59,200						

Table.7 : Enter the following transactions in three columnar cash book:

2006		Rs.
Dec 1	Cash in hand	14,000
	Balance at bank	10,000
3	Cash sales	6,000
5	Paid into bank	7,000
7	Received a cheque from Suresh	2,000
9	Paid into bank Suresh 's cheque	2,000
10	Paid to Amar by cheque Rs.980 in full settlement of his account	1,000
	Withdrew from bank for office use	5,000
12	Goods purchased from Naveen	3,000
13	Purchase of furniture	3,000
14	Received a cheque from John for Rs.10,000 and paid into the bank on the same day	
17	Paid commission to Ram	500
18	John 's cheque was dishonoured	
20	Drew a cheque for Rs.800 for personal use	
24	Paid salaries	2,000

Solution :**Triple Column Cash book**

Date	Particulars	L. F.	Cash Rs.	Bank Rs.	Discount allowed Rs.	Date	Particulars	L.F.	Cash Rs.	Bank Rs.	Discount Received Rs.
2006						2006					
Dec 1	To Balance b/d		14,000	10,000		Dec 5	By Bank a/c	(C)	7,000		
Dec 3	To Sales a/c		6,000			9	By Bank a/c	(C)	2,000		
5	To Cash a/c	(C)		7,000		10	By Amar a/c			980	20
7	To Suresh a/c		2,000			11	By Cash a/c	(C)		5,000	
9	To Cash a/c	(C)		2,000		13	By Furnish a/c			2,500	
11	To Bank a/c	(C)	5,000			17	By Commission a/c		500		
14	To John a/c			10,000		18	By John a/c			10,000	
						20	By Drawings a/c			800	
						24	By Salaries a/c		2,000		

						31	By Balance c/d		15,500	9,720	
			27,000	29,000					27,000	29,000	20
									0	0	
2007	Jan 1	To Balance b/d	15,500	9,720							

Table.8 : Enter the following transactions in the three column cash book of Raghunath.

2006	
March 1	Cash at Office Rs.600
	Bank balance (Cr.) Rs.3,000
2	Cash Sales Rs.2,000
3	Deposited into bank Rs.2,000
5	Narayana settled his account of Rs.530 by giving a cheque for Rs.500
8	Purchased from Narendra goods worth rs.1,000 at 5% trade discount and paid half the amount by cheque and the balance by cash
15	Narayana's cheque returned dishonoured
20	Drew from bank Rs.300 for office use and Rs.200 as drawings
25	Paid Office rent Rs.200
27	Bank charges as per pass book Rs.10
29	Paid salaries by cheque Rs.500
30	Received from Satyam cash Rs.500, Cheque Rs.1,000 and allowed him a discount of Rs.50
31	Paid to Ramachandra Rs.475 in full settlement of his account Rs.500

Solution :

Three Column Cash book of Raghunath

Date	Particulars	L.F.	Dis cou nt	Cash	Bank	Date	Particulars	L.F.	Disc ount	Cash	Bank
2006			Rs.	Rs.	Rs.	2006			Rs.	Rs.	Rs.
Mar.1	To Balance b/d			600		Mar.1	By Balance b/d				3,000
Mar.2	To Sales			2,000		Mar.3	By Bank ©			2,000	
Mar.3	To Cash ©				2,000	Mar.8	By Purchases			475	475
Mar.5	To Narayana		30		500	Mar.15	By Narayana		30		500
Mar.20	To Bank C			300		Mar.20	By Cash C				300
Mar.30	To Satyam		50	500	1,000	Mar.25	By Office rent			200	
Mar.31	To Balance				1,485	Mar.27	By Bank				10

	c/d						charges				
						Mar.29	By Salaries				500
						Mar.31	By Ramachandra		25	475	
						Mar.31	By balance c/d			250	
			80	3,400	4,985				55	3,400	4,985
Ap.1	To Balance b/d			250		Ap.1	By Balance b/d				1,485

4.6 Petty Cash Book

Petty cash is the amount of cash an organization keeps in notes or coins on its premises to pay small items of expenses. In every business there are a number of small payments in cash such as conveyance, cartage, entertainment of the customers, etc. These are generally repetitive in nature. If all these petty expenses are recorded in the cash book along with other payments, the cashier will be over burdened and the cash book overloaded. To avoid this, a separate book called a 'petty cash book' is maintained to record all such payments. A person called the 'petty cashier' is appointed to record all such small payments. The sum of money given to the petty cashier for making small payments is called 'Petty cash'. It is usually kept in an imprest account.

4.6.1 Types of Petty Cash Books:

Following are the two types of petty cash books:

- a) Simple Petty Cash Book,
- b) Columnar Petty Cash Book.

a) Simple Petty Cash Book: A Simple Petty Cash Book is identical with a Cash Book. It has two sides viz., a receipt side and a payment side like a Cash Book. This type of Petty Cash Book is less useful. Therefore, many traders do not use this type of Petty Cash Book.

A simple Petty Cash Book is written on the lines of a Cash Book. There is only one amount column for recording all petty cash payments. There is no separate column for recording all classes of petty cash payments.

1. The "Amount Received" column is used for recording the amount received from the Cashier by the petty cashier.
2. The "Cash Book Folio" column is used for recording the page number of the cash book where the payment of the petty cashier is made by the cashier.

3. The “Date” column which is common to both the “Receipt” and “payment” side is used for writing the date of the receipt of an amount by the petty cashier on the “receipt” side and the date of payment on the “Payment” side.
4. Similarly, the “Particulars” column which is common to both the sides is used for recording the particulars of Receipts and Payments.
5. The “Voucher Number” column is used for recording the Number of the Voucher obtained by the petty cashier while making the payment.
6. The “Ledger Folio” column is used for writing the page number of the ledger on which the particular ledger account is maintained.
7. The “Amount Paid” column is used for recording the amount paid for a particular class of expenditure.

b) The Columnar petty Cash Book (Analytical Petty Cash Book) : This type of Cash Book has two sides. The left hand side is used for recording receipts of Cash or Cheque from the Chief Cashier. This part is very small as compared to the right hand side of the petty cash book. The right hand side is meant for recording payment. The payment side is ruled in suitable columns. A separate column is provided for recording a particular item of expenditure, i.e., Postage, Stationery, Travelling, Advertisement etc. In addition to it, a separate column for ledger is also provided for recording payment made on account of personal accounts or impersonal accounts. Payment made on a personal or impersonal account is entered in the Ledger Column and posted item wise in the respective ledger account.

When the amount is received from Chief Cashier, it is entered on the receipt side of the Petty Cash Book and when payments are made, they are first entered in the total column of the Petty Cash Book and then transferred in the respective column of expenditure. At the end of a certain period, the expenditure columns are totaled. The Petty cashier prepares a statement stating the summary of expenses paid and submits it to the Chief Cashier for incorporation in the main Cash Book.

4.6.2 Maintenance of Petty Cash Book :

The money which is received by the Petty cashier from the chief cashier is recorded on the left hand side under the column “Receipts”. Payments are recorded on the right hand side. For each type of expenses separate column is opened. Each cash payment is recorded under the appropriate head of expenses. As payments are analysed and recorded under appropriate

columns, Petty Cash Book with separate heads for each expense is known as “Analytical Petty Cash Book”.

4.6.3 Important Advantages of Petty Cash Book :

The important advantages of a petty cash book are given below:

- (i) It relieves the main cash book of numerous transactions involving petty sums.
- (ii) Posting involves lesser labour and time.
- (iii) Reduces work load of chief cashier.
- (iv) Effective control can be exercised over small payments because each payment has to be supported by vouchers.

4.6.4 Imprest System of Petty Cash Book :

The most popular system of Petty Cash Book is the Imprest System. Under this system, the chief cashier advances a certain amount to the Petty Cashier at the beginning of a fixed period e.g. a month or a fortnight or a week. This advance given to the petty cashier for meeting small expenses is called “Float”. The amount of float is fixed in such a way that the amount is enough to meet the petty expenses for a certain period. At the end of a certain period, the petty cashier submits the account to the Chief Cashier. On receiving the account from the petty cashier, the chief cashier scrutinises it, and sends an amount equal to the actual amount spent for meeting petty expenses of the next period. As such the petty cashier begins the next period with the fixed amount of float.

4.6.5 Advantages of the Imprest System :

The Imprest System has got many advantages over the other system. The Advantages are given below:

1. The record of Petty Cash is checked periodically. Therefore, mistakes, if any, in recording the transactions can be rectified immediately.
2. The Petty Cashier is not allowed to have idle cash in hand. If it is found that the float is more than adequate, it will be immediately reduced.
3. Chances of cash being misused by the petty cashier are reduced.
4. The regular check of the petty cash book creates a sense of responsibility in the petty cashier.
5. The main cashier is relieved from the botheration of petty disbursements. Owing to the above three advantages, the Imprest System has become very popular in modern business houses.

Table.9 :Enter the following transactions in Analytical petty cash book and balance the same:

2006		Rs.
June 1	Received for petty cash payments	1,000
2	Paid for postage	80
5	Paid for stationery	50
8	Paid for advertisement	100
12	Paid for wages	40
16	Paid for carriage	30
20	Paid for conveyance	44
25	Paid for travelling expenses	160
27	Paid for postage	100
28	Wages paid	20
29	Paid for telegrams	40
30	Paid for postage	6

Solution:

Petty Cash Book

Receipts	Date	Particulars	V. No	L.F	Total payments	Analysis of Payments				Advertisement	Conveyance & Travelling Expenses
						Postage & Telegram	Carriage & Cartage	Stationery	Wages		
	2006 Jan										
1,000	1	To Cash Received									
	2	By Postage			80	80					
	5	By Stationery			50			50			
	8	By Advertisement			100				100		
	12	By Wages			40				40		
	16	By Carriage			30		30				
	20	By Conveyance			44						44
	25	By Travelling Expenses			160						160
	27	By Postage			100	100					
	28	By Wages			20				20		
	30	By Telegrams			40	40					
	30	By Postage			6	6					
		Total			670	226	30	50	60	100	204

			notice to landlord		6	6					
					670	226	50	204	30	100	60
		30	By Balance c/d		330						
1,000					1,000						
330		July 1	To Balance b/d								
670		July 1	To Cash received								

4.7 QUESTIONS

I. Short Answer Questions

1. What is cash book?
2. What are the types of cash book?
3. What is contra entry?
4. What is a petty cash book? Explain its nature.

II. Easy type Questions

1. Define Cash Book. Is it a subsidiary book or principal book of accounts? Give reasons
2. What is Three column cash book? How do you prepare it?
3. What purpose does an analytical petty cash book serve?
4. Explain the 'Imprest System of Petty Cash Book?

4.8 EXERCISES

1. Enter the following transactions in a simple cash book.

2006		Rs.
Jan.1	Cash in hand	5,000
3	Received from Teji	500
6	Received from Nandu	370
8	Paid to Mahesh on account	750
10	Made cash purchases	1,500
17	Sold goods to Sathe for cash	350
20	Paid into Bank	1,000
22	Purchased furniture for office use	300
25	Received for interest on debentures	75
27	Paid electricity charges	25
29	Paid rent	150

31	Paid salaries to staff	570
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[Ans.: Cash balance Rs.2,000]

2. Prepare two column cash book (with cash and discount column) of Bharvanji

2006		Rs.
Feb.1	Opening cash balance	2,700
2	Received Rs.980 from Raghav and cash discount allowed to him	20
3	Paid Rs.880 to Ambedkar in settlement of his account for Rs.900	
4	Cash sales	1,700
5	Cash purchases	2,250
6	Paid Rs.675 to Raj and discount allowed by him Rs.25	
10	Deposited Rs.400 in Janatha Bank	
14	Received Rs.1,560 through cheque from Samant after allowing him cash discount of Rs.40. The cheque was deposited in Bank on the same day	
18	Issued a cheque of Rs.135 towards advertisement expenses	
22	Received Rs.1,150 through cheque from Ramesh after allowing him discount of Rs.50. The cheque was immediately deposited in the bank.	
25	Bhavanji withdrew Rs.1,000 for personal expenses through cheque	
29	Cash sales Rs.1,800	
29	Deposited cash in Bank in excess of Rs.500	

[Ans.: Cash Balance Rs.500; Discount (Dr.) Rs.110; (Cr.) Rs.45]

3. Enter the following transactions of the Premier Trading Company's cash book with three columns discount, cash and bank and balance the accounts as on 31st December, 2005.

Dec. 2005	
1	Cash in hand Rs.4, 000.
1	Bank Rs.1, 000 (Cr.)
3	Receives a cheque from A Rs.290 and allowed him discount of Rs.40.
7	A's cheque deposited in to bank.
10	Withdrew from bank for office use Rs.800.
12	Paid B/p by cheque Rs.600.

15	B/R from Ram Rs.2, 500; discounted it, crediting with bank Rs.2, 400.
20	Issued a cheque for petty cash Rs.100.
25	Paid to Gupta by Cheque Rs.920; discount received Rs.30.
28	Made cash sales Rs.900

[Ans.: Cash Balance Rs.5,700; Bank Balance Rs.730; Discount (Dr.) Rs.140; (Cr.) Rs.30

4. Prepare a three column cash book for the month of March 2006 from the following transactions:

March 2006

- 1 Cash in hand Rs.55,000 and cash at bank Rs.35,000
- 2 Bought goods by cheque Rs.10,000
- 3 Paid trade expenses Rs.1,000
- 4 Received a cheque from Naresh for Rs.30,000 and deposited into bank on the same day.
- 5 Paid Rs.2,000 to kumar by cheque in full settlement of Rs.2,100
- 6 Sold goods to Vijay Rs.5,000
- 10 Naresh 's cheque dishonoured.
- 12 Received cheque from Vijay for Rs.5,000.
- 14 Withdrew from bank for personal use Rs.5,000
- 20 Withdrew from bank for office use Rs.6,000
- 24 Cash sales Rs.10,000
- 25 Paid into bank Rs.15,000
- 26 Received a cheque from Rakesh for Rs.5,900 in full settlement of an amount of Rs.6,000.
- 31 An insolvent debtors pays 50% of Rs.8,000 due from him.

[Ans.: Cash Balance Rs.59,000; Bank Balance Rs.37,900; Discount (Dr.) Rs.100; (Cr.) Rs.100]

5. Write out an analytical petty cash book maintained on imprest system from the following transactions:

2004

January 1 Issued a Cheque of Rs.200 to the Petty Cashier

- | | | |
|---|---------------------------|------|
| 2 | Paid electricity expenses | 6.50 |
| 3 | Paid Trunk call charges | 5.00 |

4	Paid for refreshments	10.00
6	Paid for Cartage	2.50
8	Paid for Printing	7.50
10	Purchased typing papers and ribbon	9.00
14	Paid for stationery	12.00
17	Paid railway freight	11.00
19	Postal charges	6.00
24	Paid for Auto charges	24.00
26	Paid taxi hire to the Sales Manager	40.00
28	Tea and Tip to peon	3.00
31	Paid krishna against his account	30.00

[Ans.: Cash Balance Rs.33.50]

6. Enter the following transactions in petty cash book.

2006		Rs. Ps.
March 1	Amount received from Cashier	100.00
2	Purchased typing paper	4.00
8	Office cleaning	3.00
10	Postage	10.00
14	Cartage	12.00
18	Postage	8.00
22	Stationery	9.00
25	Ink	4.00
31	Telegram	10.00

[Ans.: Cash balance Rs.40]

4.9 SUGGESTED BOOKS

1. Agarwala, A.N., Amitabha Mukherjee, Mohammed Hanif, **Principles and Practice of Accountancy**, Kitab Mahal Agencies, New Delhi.
2. Basu & Das, **Practical in Accountancy, Volume – one**, Rabindra Library, Calcutta
3. Chopde, L.N., & Choudhari, D.H., **Accountancy**, Sheth Publishers, Pune
4. Maheswari, S.N., Maheswari, S.K., **Advanced Accountancy (Vol.I)**, Vikas Publishing House Pvt. Ltd., New Delhi, 2005

5. Pillai, R.S.N., Bagavathi, Uma, S., **Fundamentals of Advaned Accounting (Vol.I)** S. Chand & Company Ltd., New Delhi, 2006
6. Shukla, M.C., Grewal, T.S., Gupta, S.C., **Advanced Accounts (Volume I)** S. Chand & Company Limited, New Delhi, 2005
7. Tulsian, P.c., **Accountancy** Tata McGraw-Hill Publishing Company Limited, New Delhi.

LESSON – 5

Trial Balance

Objectives :

After thorough study of this chapter, we should be able to

- Meaning and objectives of trial balance
- Understand the methods in the preparation of trial balance.

Structure :

- 5.1 Introduction
- 5.2 Preparation of Trial balance
- 5.3 Methods are used the Preparation of Trial balance
- 5.4 Questions
- 5.5 Exercises
- 5.6 Suggested Readings

5.1 INTRODUCTION

An important aspect of the double entry accounting system is that for each transaction there is an equal amount of debit and credit in two or more accounts. Therefore, the total of all the entries on the debit side of the account must be equal to the total of all the entries on the credit side of the accounts. For this purpose, a statement known as a trial balance showing the balances of various accounts is prepared. The trial balance is usually prepared just before the preparation of final accounts (profit and loss account and balance sheet) in order to check the arithmetical accuracy of the transaction recorded into the ledger accounts.

According to J.R. Batliboi ``Trial balance is a statement prepared with the debit and credit balances of accounts to test the arithmetical accuracy of books.’’

5.1.1 Objectives

The following are the objectives of preparing a trial balance.

1. **To ascertain the arithmetical accuracy of ledger accounts** : Trial balance helps in ascertaining the arithmetical accuracy of the accounting entries. It indicates that equal debit and credit amounts have been recorded in the ledger accounts and the balances have been calculated correctly.
2. **To help in locating errors** : When the total of trial balance does not tally, it indicates that some errors have been committed. On the basis steps can be taken to locate the errors committed in the preparation of trial balance.
3. **To help in the preparation of final accounts** : Trial balance contains the list of all the ledger accounts. This helps in the preparation of final accounts. All revenue and expenses accounts appear in the trial balance, which are transferred to the trading and profit and loss accounts. All assets, liabilities, and capital accounts are transferred to the balance sheet. Together, they constitute the final accounts.

5.2 PREPARATION OF TRIAL BALANCE

The final accounts are prepared with the help of trial balance, which shows all the ledger balances at the end of accounting period. Generally, the trial balance is given and there is no difficulty in identifying the items of income expenses, assets and liabilities. However, sometimes the trial balance is not correctly given. In such a case, it has to be prepared. It can be easily ascertained whether a particular account has a debit balance or a credit balance. The problem arises when a list of balances is given but it is not indicated whether the account has a debit or a credit balance. Under these circumstances, the nature of each balance has to be ascertained before the preparation of trial balance. The rules of debit and credit help in the preparation of trial balance. A few guidelines, which help in the preparation of trial balance are as follows.

- (i) All accounts of expenses and losses have debit balance.
- (ii) All accounts of income and gains have a credit balance.
- (iii) All accounts of liabilities have a credit balance
- (iv) The capital account usually has a credit balance.

The format of a trial balance is as shown.

Trial Balance

S.No.	Name of the Account	Debit balances Rs.	Credit Balances Rs.

The first column is the serial number, the second column is the title or the name of the account and the third and fourth columns are the debit and credit columns respectively, representing the balance of each account.

5.3 ETHODS ARE USED IN THE PREPARATION OF TRIAL BALANCE :

The following two methods are used in the preparation of trial balance.

1. Balance Method
2. Total Amounts Method

5.3.1 Balance Method :

Under this method, all the accounts showing debit balances in the ledger accounts are put on the debit side of the trial balance and the accounts showing credit balances are put on the credit side of the trial balance. After this, the debit and credit columns of the trial balance are totalled. The total of two the sides must be equal.

5.3.2 Total amounts method :

Under this method, the total of debits and credits, instead of the balances of each account, are shown in the trial balance. A trial balance by this method, can be prepared immediately after the completion of posting from the books of original entry to the ledger.

Illu.1 : Prepare the Trial Balance from the following:

	Rs.
Purchases	82,800
Buildings	30,000
Wages	68,000
Fuel	2,000
Creditors	18,000
Bills payable	700
Discount received	100
Sales	1,93,000
Insurance	1,300
Income Tax	3,700
Opening stock	18,000
Commission paid	300

Debtors	19,000
Bad debts	800
Salaries	25,000
Printing and stationary	7,600
Postage and Telegrams	3,400
Bills receivable	6,900
Cash at bank	13,000
Capital	70,000

Solution :

Trial Balance

Debit Balances	Rs.	Credit Balances	Rs.
Purchases	82,800	Creditors	18,000
Buildings	30,000	Bills payable	700
Wages	68,000	Discount received	100
Fuel	2,000	Sales	1,93,000
Insurance	1,300	Capital	70,000
Income tax	3,700		
Opening stock	18,000		
Commission paid	300		
Debtors	19,000		
Bad debts	800		
Salaries	25,000		
Printing and Stationery	7,600		
Postage and Telegrams	3,400		
Bills Receivable	6,900		
Cash at Bank	13,000		
	2,81,800		2,81,800

Illu.2 : From the following particulars prepare Trial Balance:

	Rs.		Rs.
Capital	60,000	Repairs	500
Drawings	6,000	Bad debts	1,000
Purchases	25,000	Discount allowed	1,000
Debtors	4,000	Commission received	4,000
Creditors	3,000	Insurance	1,000
Bills payable	2,000	General expenses	2,000
Sales	50,000	Depreciation	3,000
Carriage inwards	1,000	Furniture	10,000
Carriage outwards	2,000	Land and buildings	32,000
Wages	5,000	Bills receivable	3,000

Salaries	10,000	Fixed deposit with SBI	6,000
Advertisement	1,000	Opening stock	4,000
Power	1,000		
Postage	500		

Solution :**Trial Balance as on....**

Particulars	Rs.	Rs.
Capital		60,000
Drawings	6,000	
Purchases	25,000	
Debtors	4,000	
Creditors		3,000
Bills payable		2,000
Sales		50,000
Carriage inwards	1,000	
Carriage outwards	2,000	
Wages	5,000	
Salaries	10,000	
Advertisement	1,000	
Power	1,000	
Postage	500	
Repairs	500	
Bad debtors	1,000	
Discount allowed	1,000	
Commission received		4,000
Insurance	1,000	
General expenses	2,000	
Depreciation	3,000	
Furniture	10,000	
Land and buildings	32,000	
Bills Receivable	3,000	
Fixed deposit with SBI	6,000	
Opening stock	4,000	
	1,19,000	1,19,000

Illu.3 : The following are the balances extracted from the books of Ramu on 31-12-2006. Prepare Trial Balance.

	Rs.
Capital	30,000
Drawings	5,000
Furniture	2,600
Bank Overdraft	4,200

Creditors	11,000
Premises	20,000
Stock	22,000
Debtors	18,000
Rent (Cr.)	1,000
Discount (Dr.)	1,600
Discount (Cr.)	2,000
Purchases	1,10,000
Sales	1,50,000
Returns inwards	2,000
Wages	2,000
Salaries	9,000
General expenses	4,000
Commission	2,200
Carriage	1,800
Reserve for bad and doubtful debts	2,000

Solution :**Trial Balance as on 31-12-2006**

Debit balances	Rs.	Credit balances	Rs.
Drawings	5,000	Capital	30,000
Furniture	2,600	Bank Overdraft	4,200
Premises	20,000	Creditors	11,000
Stock	22,000	Rent	1,000
Debtors	18,000	Discount	2,000
Purchases	1,10,000	Sales	1,50,000
Return inwards	2,000	Reserve for bad and doubtful debts	2,000
Wages	2,000		
Salaries	9,000		
General expenses	4,000		
Commission	2,200		
Carriage	1,800		
Discount	1,600		
	2,00,200		2,00,200

5.4 QUESTIONS

1. What is Trial balance?
2. What are the advantages in the preparation of Trial Balance?
3. What are various methods in the preparation of trial balance?
4. "Trial balance is a statement prepared with the debit and credit balances of accounts to test the arithmetical accuracy of books." Discuss

5.4 EXERCISES

1. From the information given below, prepare a Gross Trial Balance as on 31st December, 2006

Account	Debit Rs.	Credit Rs.
Capital a/c		25,000
Drawings a/c of Proprietor	5,000	
Purchases a/c	85,000	
Sales a/c		1,80,000
Purchase Returns a/c		2,000
Sales returns a/c	1,500	
Commission a/c	700	200
Interest a/c	300	
Office Expenses a/c	7,500	
Sundry debtors a/c	1,35,000	1,12,700
Sundry Creditors a/c	50,000	1,25,000
Cash a/c	2,00,000	25,000
Bank a/c	85,000	1,00,000

[Ans.: Trial balance Total Rs.5,70,000]

2. Prepare Trial balance from the following balances extracted from the books of accounts of Jayashree Traders as on 31st March, 2006

	Rs.		Rs.
Capital	1,50,000	Goodwill	1,00,000
Sundry Debtors	35,000	Office Expenses	10,000
Sundry Creditors	42,000	Outstanding expenses	15,000
Machinery	21,000	Interest received	3,200
Furniture	19,000	Cash balance	1,800
Sales	2,00,000		

Purchases	1,16,000		
Opening stock (1-4-2005)	1,07,400		

[Ans.: Trail balance Total Rs.4,10,200]

3. From the following balances given below extracted from the books of Randhir, prepare a Trial balance as on 31st December, 2006

	Rs.		Rs.
Cash in hand	200	Rent and Rates	2,000
Cash at Bank	2,500	Purchase returns	200
Capital account	50,000	Sales returns	300
Drawings	5,000	Plant and Machinery	15,000
Sales	35,000	Loan (taken)	20,000
Purchases	30,000	Furniture	5,000
Sundry Debtors	32,000	Opening stock	7,500
Sundry Creditors	15,000	Travelling expenses	7,000
Discount allowed	500	Carriage outward	10,000
Commission received	1,000		
Wages	3,000		
Salaries	1,200		

[Ans.: Trial balance Total Rs.1,21,200]

5.6. SUGGESTED BOOKS

1. Agarwala, A.N., Amitabha Mukherjee, Mohammed Hanif, **Principles and Practice of Accountancy**, Kitab Mahal Agencies, New Delhi.
2. Basu & Das, **Practical in Accountancy, Volume – one**, Rabindra Library, Calcutta
3. Chopde, L.N., & Choudhari, D.H., **Accountancy**, Sheth Publishers, Pune
4. Jain, S.P., Narang, K.L., **Accountancy, Part - I**, Kalyani Publishers
5. Maheswari, S.N., Maheswari, S.K., **Advanced Accountancy (Vol.I)**, Vikas Publishing House Pvt. Ltd., New Delhi, 2005
6. Pillai, R.S.N., Bagavathi, Uma, S., **Fundamentals of Advanced Accounting (Vol.I)** S. Chand & Company Ltd., New Delhi, 2006
7. Shukla, M.C., Grewal, T.S., Gupta, S.C., **Advanced Accounts (Volume I)** S. Chand & Company Limited, New Delhi, 2005
8. Tulsian, P.c., **Accountancy** Tata McGraw-Hill Publishing Company Limited, New Delhi.

LESSON – 6

Trading, Profit & Loss Account

Objectives :

After study of this unit we should be able to

- Understand the meaning of financial statements
- Know how to prepare trading and profit and loss account

Structure :

- 6.1 Introduction
- 6.2 Trading Account
- 6.3 Profit and Loss account
- 6.4 Questions
- 6.5 Exercises
- 6.6 Suggested Readings

6.1 INTRODUCTION

It has been explained in a preceding Chapter that the accuracy of the books of accounts is determined by means of preparing a Trial balance. Having determined the accuracy of the books of accounts every businessman is interested in knowing about two more facts. They are : (I) Whether he has earned a profit or suffered a loss during the period covered by the Trial balance? (ii) Where does he stand now? In other words, what is his financial position?

The determination of the Profit or Loss is done by Preparing a Trading and Profit and Loss Account (or an Income Statement). While the financial position is judged by means of preparing a balance sheet of the business. The two financial statements together (i.e., Incomes Statement and the Balance sheet) are termed as Final Accounts. As term indicates, Final Accounts means accounts which are prepared at the final stage to give the financial position of the business.

Trading and Profit and Loss Account :

The Trading and Profit and Loss Account is a final summary of such accounts which affect the profit or loss position of the business. In other words, the accounts contain the items of Income and Expenses relating to a particular period. The account is prepared in two parts (I) Trading Account, and (ii) Profit and Loss account.

6.2 TRADING ACCOUNT

Trading Account gives the overall result of trading i.e., purchasing and selling of goods. In other words, it explains whether purchasing of goods and selling them has proved to be profitable for the business or not. It takes into account on the one hand the cost of goods sold and on the other the value for which they have been sold away. In case the sales value is higher than the cost of goods sold, there will be a profit, while in a reverse case, there will be a loss. The profit disclosed by the Trading Account is termed as gross Profit. Similarly the loss disclosed by the Trading Account is termed as Gross Loss.

6.2.1 Opening and Closing Stocks :

All goods purchased have been sold away by the trader. However, it does not normally happen. At the end of the accounting year, a trader may be left with certain unsold goods. Such stock of goods with a trader unsold at the end of the accounting period is termed as closing stock. Such a stock will become the opening stock for the next period. While calculating the amount of profit or loss on account of trading, a trader will have to take such Opening and closing Stocks into consideration.

6.2.2. Expenses on Purchases etc.

We have presumed that the trader has not incurred any expenses for purchase of goods and bringing them to his shop for sale. However, a trader has to incur various types of expenses for purchasing of goods as well as for bringing them to his shop for sale. Such expenses may include brokerage or commission paid to agents for purchase of goods, cartage or carriage charges for bringing the goods to the trader's shop, wages paid to coolies for transportation of goods etc. All such expenses increase the cost of the goods sold and hence they have also to be included in the cost of purchasing the goods. In other words, cost of goods sold will be calculated as follows.

$$\text{Cost of Goods sold} = \text{Opening Stock} + \text{Net purchases} + \text{Expenses on Purchasing} \\ \text{Of goods} - \text{Closing stock}$$

Cost of goods sold calculated above will then be compared with the net sales to find out the amount of profit or loss made by the business.

6.2.3 Equation for Preparing Trading Account :

The following equation can be derived for preparing Trading Account.

Gross Profit	Sales – Cost of goods sold
Cost of goods sold	Opening stock + Purchases + Direct expenses – Closing Stock
Therefore Gross Profit =	Sales – (Opening stock + Purchases + Direct expenses – closing stock)
Gross Profit	(Sales + Closing stock) – (Opening stock + Purchases + Direct expenses)

The term 'Direct expenses' include those expenses which have been incurred in purchasing the goods, bringing them to the business premises and making them fit for sale. Examples of such expenses are carriage charges, octroi, import duty, expenses for seasoning the goods etc.

The Trading Account can be prepared in the following form on the basis of equation given above.

Trading Account For the year ending

Dr.

Cr.

Particulars	Rs.	Particulars	Rs.
To Opening Stock	X x x	By Sales Less Returns	X x x
To Purchases less returns	X x x	By Closing stock	X x x
To Direct expenses	X x x	By Gross Loss *	X x x
To Gross Profit *	X x x		
	X x x		X x x

- Only one figure will be appear

6.2.4 Important points regarding Trading Account

1. **Stock** : The term 'stock' includes goods lying unsold on a particular date. The stock may be of two types. (I) Opening stock (ii) Closing stock.

The term 'Opening stock' means goods lying unsold with the businessman in the beginning of the accounting year. This is shown on the debit side of the Trading account.

The term 'Closing stock' includes goods lying unsold with the business at the end of the accounting year. It should be noted that stock at the end of the accounting year is taken after the books of accounts have been closed. The amount of closing stock is shown on the credit side of the Trading Account as an asset in the Balance Sheet. This has been explained later. The closing stock at the end of the accounting period will become the Opening stock the next year. The opening stock is therefore shown on the debit side of the Trial balance.

Valuation of Closing Stock : The closing stock is valued on the basis of 'cost or market price whichever is less' principle. It is therefore, very necessary that the cost of the goods lying unsold should be carefully determined. The market value of such goods will also be found out on the Balance Sheet date. The closing stock will be valued at the lower of the two values. This valuation is done because of the accounting convention of 'conservatism' according to which expected losses are to be taken into account while not expected profits.

2. Purchases : The term 'Purchases' includes both cash and credit purchase of goods.

The term 'goods' as already explained in an earlier chapter means items purchased for resale. Assets purchased for permanent use in the business such as purpose of plant, furniture etc., are not included in the purchases of goods. Similarly, purchase of article such as stationery meant for using in the business will also not be included in the item of purchases. In case, a proprietor has himself used certain goods for his personal purposes, the value of such goods at cost will be deducted from the purchases and included in the drawings of the proprietor. Similarly, in case certain goods are given by way of free samples etc., the value of such goods should be charged to advertisement account and deducted from purchases. The amount of purchases will be the net purchases made by the proprietor. The term 'net purchases' means total purchases of goods made by the businessman less the goods that he has returned back to the suppliers. In other words, purchases will be taken to the Trading Account after deducting purchases returns and goods as drawing from the gross purchases made during the accounting period.

3. Sales : The term 'Sales' includes both cash and credit sales. Gross sales will be shown in the inner column of the Trading account out of which sales returns will be deducted. The net sales will then be shown in the outer column of the Trading Account. Proper care should be taken in records sale of those goods which have been sold at the end of the financial year but have not yet been delivered. The sale value of such goods should be included in the sales, but care should be taken that they are not included in the closing stock at the end of the accounting period. Sales of assets like plant and machinery, land and buildings or similar other articles which were purchased for using in

the business, and not for sale, should not be included in the figure of 'sales' to be taken to the Trading Account.

- 4. Wages :** The amount of wages is taken as a direct expenses and, therefore, is debited to the Trading Account. Difficulty arises in those cases when the Trial balance includes a single amount for wages and salaries. In such a case, the amount is taken to the Trading Account.. However, if the Trial balance shows salaries and wages, the amount is taken to the Profit and Loss Account. In actual practice such difficulties do not arise because the businessman knows for which purpose he has incurred the expenditure by way of wages or salaries. However, in an examination problem, it will be useful for the students to follow the principle given above i.e., 'Wages ad salaries' to be charged to trading account while 'salaries and wages' to be charged to the profit and loss account. Wages paid for purchases of an asset for long term use in the business e.g., wages paid for plant and machinery or wages paid for construction of a building should not be charged to the Wages Account. They should be charged to the concerned Asset account.
- 5. Customs and Import Duty :** In case the goods have been imported from outside the country, customs and import duty may have to be paid. The amount of such duty should be charged to the Trading Account.
- 6. Freight, Carriage and Cartage :** Freight, carriage and Cartage are taken as direct expenses incurred on purchasing of the goods. They are, therefore, taken to the debit side of the Trading Account. The terms "Freight in" "Cartage in" and "Cartage in" have also the same meaning. However, "Cartage out.", "Freight Out" and "Carriage out" are taken to be the expenses incurred on selling the goods. They are, therefore, charged to the Profit and Loss account. The term "inward" is also used for the term "IN". Similarly the term "outward" is also used for the term "out". In other words "Carriage" or "Carriage inward" or "Carriage in" are used as synonymous terms. Similarly carriage out or "Carriage outward" are also the synonymous terms. The same is true for other expenses like Freight or Cartage.
- 7. Royalty :** Royalty is the amount paid to the owner for using his rights. For example, the royalty is paid by a 'Lessee', of a coal mine to its owner for taking out the coal from the coal mine. Similarly, royalty is paid to the owner of a patent for using his right. It is generally taken as a direct expenses and, therefore, is charged to the Trading Account. However, where royalty is based on sales, for example in case of the book publishing trade, it may be charged to profit and loss account.
- 8. Gas, Electricity, Water, Fuel etc. :** All these expenses are direct expenses and, therefore, they are charged to the Trading Account.
- 9. Packing Materials :** Packing Materials used for packing the goods purchased for bringing them to the shop or convert them into a saleable state are direct expenses and,

therefore, they are charged to the Trading Account. However, packing expenses incurred for making the product look attractive or packing expenses incurred after the product has been sold away are charged to the Profit and Loss account.

6.2.5 Closing Entries :

Closing entries are entries passed at the end of the accounting year to close different accounts. These entries are passed to close the accounts relating to incomes, expenses, gains and losses. In other words, these entries are passed to close the different accounts which pertain to Trading and Profit and Loss account. The accounts relating to assets and liabilities are not closed but they are carried forward to the next year. Hence, no closing entries are to be passed regarding these accounts which relate to the Balance sheet.

The principle of passing a closing entry is very simple. In case an account shows a debit balance, it has to be credited in order to close it. For example, if the purchases account is to be closed, the purchases account will have to be credited so that it may be closed because it has a debt balance. The Trading Account will have to be debited.

The closing entries are passed in the Journal Proper. The different closing entries to be passed by the Accountant for preparing a Trading Account are being explained below.

6.2.6 Importance of the Trading Account :

Trading Account provides the following information to a businessman regarding business.

1. Gross profit disclosed by the Trading Account tells him the upper limit within which he should keep the operating expenses of the business besides saving something for himself. The cost of purchasing and the price at which he can sell the goods are governed largely by market factors over which he has no control. He can control only his operating expenses.
2. He can calculate his Gross profit ratio and compare his performance year after year. A fall in the Gross Profit Ratio means increase in the cost of purchasing the goods or decrease in the selling price of the goods or both. In order to maintain at least same figure of gross profit in absolute terms, he will have to push up the sales or make all out efforts to obtain goods at cheaper prices. Thus, he can prevent at least fall in the figure of his gross profit if can not bring any increase in it.
3. Comparison of stock figures of one period from another will help him in preventing unnecessary lock up of funds in inventories.
4. In case of new products, the businessman can easily fix up the selling price of the products by adding to the cost of purchases, the percentage gross profit that he would like to maintain.

Illu.1 : From the following information take the appropriate items relating to trading account and prepare trading account for the year ending 31-12-2002.

	Rs.
Stock 1-1- 2002	2,000
Purchases	7,000
Productive wages	1,500
Freight	750
Marine Insurance	250
Customs duty	400
Salaries	1,500
Power	120
Carriage inwards	75
Carriage outwards	100
Sales	15,000
Packing material	200
Sales returns	400
Purchase returns	300
Office lighting	250
Office rent	1,200
Stock 31-12-2002	3,000

Solution :

Trading a/c for the year ended 31-12-2002

	Rs.	Rs.		Rs.	Rs.
To Opening stock		2,000	By Sales	15,000	
To Purchases	7,000		Less : Returns	500	14,600
Less : Returns	300	6,700	By Closing stock		3,000
To Freight		750			
To Marine insurance		250			
To Customs duty		400			
To Carriage inwards		75			
To Power		120			
To Productive wages		1,500			
To Packing materials		200			

To Gross profit c/d		5,605			
		17,600			17,600
			To Gross profit b/d		5,605

Illu.2 :The following information is taken from in the books of Srinivas. Prepare Trading account for the year ended 31-12-2003 and write closing entries.

	Rs.		Rs.
Opening stock	5,000	Sales returns	400
Sales a/c	20,000	Manufacturing expenses	100
Purchase returns	200	Octroi	500
Carriage inwards	300	Fuel	700
Wages a/c	4,000	Purchases a/c	8,000
Closing stock (31-3-2003)	2,000		

Solution :

Journal Entries

Date	Particulars		L.F.	Debit	Credit
2003				Rs.	Rs.
Mar.1	Trading a/c To Opening stock a/c To Purchases a/c To Wages a/c To Carriage inwards a/c To Manufacturing expenses a/c To Octroi a/c To Fuel a/c (Being the transfer of accounts to trading account)	Dr.		18,600	5,000 8,000 4,000 300 100 500 700
	Purchase returns a/c To Purchases a/c (Being the transfer of returns to purchases a/c)	Dr.		200	200
	Sales a/c Closing stock a/c To Trading a/c (Being the transfer of accounts to trading account)	Dr. Dr.		20,000 2,000	22,000
	Sales a/c To Sales returns a/c (Being the transfer of returns to sales a/c)	Dr.		400	400

Trading a/c of Srinivas for the year ended 31-3-2003

	Rs.	Rs.		Rs.	Rs.
To Opening stock		5,000	By Sales	20,000	
To Purchases	8,000		Less : Returns	400	19,600
Less : Returns	200	7,800	By Closing stock		2,000
To Wages		4,000			
To Carriage inwards		300			
To Manufacturing expenses		100			
To Octroi		500			
To Fuel		700			
To Gross profit c/d		3,200			
		21,600			21,600
			By Gross profit b/d		3,200

Illu.3 : From the following information prepare the trading account of Sankar for the year ended 31-12-2002.

2002		Rs.
Jan 1	Raw material	24,000
	Work – in – progress	10,000
	Finished goods	2,42,000
Dec 31	Purchases	3,56,000
	Purchase returns	12,500
	Manufacturing wages	1,82,000
	Factory rent	16,500
	Coal, water	8,500
	Sales	6,57,000
	Carriage	24,000
	Customs duty	15,000
	Raw materials	32,000
	Work – in – progress	12,000
	Finished goods	3,08,000

Solution :**Trading a/c of Sankar for the year ended 31-12-2002**

	Rs.	Rs.		Rs.	Rs.
To Opening stock			By Sales		6,57,000
Raw materials	24,000		By Closing stock		
Work-in-progress	10,000		Raw materials	32,000	
Finished goods	2,42,000	2,76,000	Work-in-progress	12,000	
To Purchases	3,56,000		Finished goods	3,08,000	3,52,000
Less : Returns	12,500	3,43,500			
To Wages		1,82,000			
To Factory rent		16,500			
To Coal water		8,500			
To Carriage		24,000			
To Customs duty		15,000			
To Gross profit c/d		1,43,500			
		10,09,000			10,09,000
			By Gross profit b/d		1,43,500

Illu.4 : Following are the balances extracted from the books of M/s Hero Motors Company as on 31st March 2003. You are required to prepare the Manufacturing Account and Trading Account for the year ended on that date:

	Rs.		Rs.
Raw Materials (Opening stock)	50,000	Repairs to Machinery	3,750
Work – in – progress (opening stock)	37,500	Royalty	2,500
Finished goods (opening stock)	45,000	Purchases returns	1,250
Raw material purchases	1,25,000	Sales returns	2,500
Finished goods purchases	50,000	Factory insurance	3,750
Productive wages	75,000	Factory rent	46,250
Coal and fuel	12,500	Stock on 31st March	

		2003	
Sales	3,95,000	Raw materials	37,500
Carriage inwards	2,500	Work – in – progress	45,000
Railway freight	1,250	Finished goods	25,000

Solution :**Manufacturing a/c of Hero Motors Co. for the year ended 31-3-2003**

	Rs.	Rs.		Rs.	Rs.
To Opening stock		2,000	By Closing stock		
Raw materials	50,000		Raw materials	37,500	
Work-in-progress	37,500	87,500	Work-in-progress	45,000	82,500
To Purchases	1,25,000		By Manufacturing cost transferred to trading a/c		2,76,250
Less : returns	1,250	1,23,750			
To Productive wages		75,000			
To Coal & fuel		12,500			
To Carriage inwards		2,500			
To Railway freight		1,250			
To Repairs to machinery		3,750			
To Royalty		2,500			
To Factory insurance		3,750			
To Factory rent		46,250			
		3,58,750			3,58,750

Trading a/c for the year ended 31-3-2003

	Rs.		Rs.	Rs.
To Opening stock of finished goods	45,000	By Sales	3,95,000	
To Manufacturing cost transferred from	2,76,250	Less : Returns	2,500	3,92,500

Manufacturing a/c				
To Purchase of finished goods	50,000	By Closing stock of finished goods		25,000
To Gross profit transferred to profit & Loss a/c	46,250			
	4,17,500			4,17,500

6.3 PROFIT AND LOSS ACCOUNT

The Trading Account simply tells about the gross profit or loss made by a businessman on purchasing and selling of goods. It does not take into account the other operating expenses incurred by him during the course of running the business. All such expenses are charged to the Profit and Loss account. Besides this, a businessman may have other sources of income. For example, he may receive rent from some of his business properties. He may have invested surplus funds of the business in some securities. He might be getting interest or dividends from such investments. In order to ascertain the true profit or loss which the business has made during a particular period, it is necessary that all such expenses and incomes should be considered. Profit and loss Account considers all such expenses and incomes and gives the net profit made or loss suffered by a business during a particular period. It is generally prepared in the following form.

Profit and Loss Account For the year ending

Dr.

Cr.

Particulars	Rs.	Particulars	Rs.
To Gross Loss b/d *	X x x	By Gross Profit b/d*	X x x
To Salaries	X x x	By Discount received	X x x
To Rent	X x x	By Net loss transferred to Capital a/c	X x x
To Commission	X x x		
To Advertisements	X x x		
To Bad debts	X x x		
To Discount	X x x		
To Net profit transferred to Capital Account	X x x		

- Only one figure will appear

6.3.1 Important points regarding Profit and Loss Account :

1. **Gross profit or Gross Loss:** The figure of gross profit or gross loss is brought down from the Trading Account. Of course, there will be only one figure i.e., either of gross profit or gross loss.
2. **Salaries :** Salaries payable to the employees for the services rendered by them in running the business being of indirect nature are charged to the profit and loss account. In case of a partnership firm, salaries may be allowed to the partners. Such salaries will also be charged to the Profit and Loss Account.
3. **Salaries less Tax :** In case of employees earning salaries beyond a certain limit, the employer has to deduct at source income tax from the salaries of such employees. In such a case, the amount of gross salaries should be charged to the Profit and Loss Account, while the tax deducted by the employer will be shown as a liability in the balance sheet of the business till it is deposited with the Tax Authorities.
4. **Interest :** Interest on loans whether short term or long term is an expenses of an indirect nature and, therefore, is charged tot he Profit and Loss Account. However, interest on loans advanced by a firm to third parties is an item of income and therefore, will be credited to the Profit and Loss account.
5. **Commission :** Commission may be both an item of income as well as an item of expense. Commission on business brought by agents is an item of expenses while commission earned by the business for giving business to others is an item of income. Commission to agents is, therefore, debited to the Profit and Loss account while commission received is credited to the Profit and Loss account.
6. **Trade expenses :** Trade expenses are expenses of a miscellaneous nature. They are of small amounts and varied in nature and, therefore, it is not considered worthwhile to open separate accounts for each of such types of expenses. The term `` Sundry Expenses'', ``Miscellaneous Expenses'' or ``Petty Expenses'' have also the same meaning. They are charged to the Profit and Loss Account.
7. **Printing and Stationery :** This item of expenses includes expenses on printing of bills, invoices, registers, files, letter heads, ink, pencil, paper and other items of stationery etc. It is of an indirect nature and, therefore, charged to the Profit and Loss Account.
8. **Advertisement :** Advertisement expenses are incurred for attracting the customers to the shop and therefore, they are taken as selling expenses. They are debited to the Profit and Loss Account. However, advertisements expenses incurred for purchasing of

goods should be charged to the Trading account, while advertisement expenses incurred for purchase of a capital asset (e.g. cost of insertion in a newspaper for purchase of car) should be taken as capital expenditure and debited to the concerned asset account. Similarly, advertisements expenditure incurred for sale of a capital asset should be deducted out of the sale proceeds of the asset concerned.

- 9. Bad debts :** Bad debts denotes the amount lost from debtors to whom the goods were sold on credit. It is a loss, and therefore, should be debited to the Profit and Loss account.
- 10. Depreciation :** Depreciation denotes decrease in the value of an asset due to wear and tear, lapse of time, obsolescence, exhaustion and accident. For example, a motor car purchased gets depreciated on account of its constant use. A property purchased on lease for Rs.12,000 for 12 years will depreciate at the rate of Rs.1,000 per year. On account of new inventions old assets become obsolete and they have to be replaced. Mines, etc., get exhausted after the minerals are completely taken out of them. An asset may meet an accident and may lose its value. It is necessary that depreciation on account of all these factors is charged to the Profit and Loss account to ascertain the true profit or loss made by the business.

In case the total of the credit side of the Profit and Loss Account is greater than the debit side of the Profit and Loss account, the difference is termed as Net profit. In a reverse case, it will be termed as Net Loss. The amount of Net profit or Net loss shown by the Profit and Loss account will be transferred to capital account in case of sole proprietary form. In case of a partnership firm, the amount of net profit or net loss will be transferred to the partners' capital accounts in the agreed ratio. In the absence of any agreement, the partners will share profits and losses equally.

6.3.2 Importance of Profit and Loss Account :

The profit and loss account provides information regarding the following manner.

1. It provides information about the net profit or net loss earned or suffered by the business during a particular period. Thus, it is an index of the profitability or otherwise of the business.
2. The profit figure disclosed by the profit and loss account for a particular period can be compared with that of the other period. Thus, it helps in ascertaining whether the business is being run efficiently or not.

3. An analysis of the various expenses included in the Profit and Loss Account and their comparison with the expenses of the previous period or periods helps in taking steps for effective control of the various expenses.
4. Allocation of profit among the different periods or setting aside a part of the profit for future contingencies can be done. Moreover, on the basis of profit figures of the current and the previous period estimates about the profit in the year to come can be made. These projections will help the business in planning the future courses of action.

Illu.5 : From the following ledger balances prepare Trading, Profit and Loss account for the year ending 31-12-2000.

	Debit Rs.	Credit Rs.
Opening Stock (1-1-2000)	2,000	
Purchases	18,000	
Sales		21,000
Wages	300	
Carriage inwards	100	
Carriage outwards	150	
Sales returns	2,000	
Purchase returns		1,000
Salaries	2,400	
Rent	600	
Discount	50	
General expenses	500	
Commission		1,800

Closing stock as on 31-12-2000 for Rs.9,000.

Solution :

Trading, Profit & Loss a/c for the year ended 31-12-2000

	Rs.	Rs.		Rs.	Rs.
To Opening stock		2,000	By Sales	21,000	
To Purchases	18,000		Less : Returns	2,000	19,000
Less : Returns	1,000	17,000	By Closing stock		9,000

To Wages		300			
To Carriage inwards		100			
To Gross profit c/d		8,600			
		28,000			28,000
To Salaries		2,400	By Gross Profit b/d		8,600
To Rent		600	By Commission		1,800
To General expenses		500			
To Discount		50			
To Carriage outwards		150			
To Net profit (transferred to capital account)		6,700			
		10,400			10,400

**Illu.6 : From the following Trial Balance of Ramamohan Rao as on 31-12-2003.
Prepare Trading, Profit and Loss Account.**

	Rs.		Rs.
Opening stock	12,600	Sales	26,000
Salaries, wages	2,000	Purchase returns	200
Carriage	200	Discount received	300
Sales returns	500	Capital	8,000
Trading expenses	550	Creditors	900
Rent	250	Loan	2,000
Plant	2,500		
Plant repairs	450		
Cash in hand	300		
Cash at bank	1,000		
Debtors	5,150		
Income tax	600		
Drawings	900		
Commission on purchases	400		
Purchases	10,000		
	37,400		37,400

Closing stock value as on 31-12-2003 Rs.3,000.

Solution :

**Trading, Profit & Loss a/c of Rammohan Rao
for the year ended 31-12-2003**

	Rs.	Rs.		Rs.	Rs.
To Opening stock		12,600	By Sales	26,000	
To Purchases	10,000		Less : Returns	500	25,500
Less : Returns	200	9,800	By closing stock		3,000
To Carriage		200			
To Commission on purchases		400			
To Gross profit c/d		5,500			
		28,500			28,500
			By Gross profit b/d		5,500
To Salaries, wages		2,000	By Discount received		300
To Rent		250			
To Trading expenses		550			
To Plant repairs		450			
To Net profit (transferred to capital a/c)		2,550			
		5,800			5,800

Note :

1. Income tax and drawings are personal expenses and hence they are not to be shown in profit and loss a/c.
2. Drawings are to be deducted from capital on the liability side of the Balance Sheet.

Illu.7 :From the following trial balance prepare trading and profit and loss account for the year ended March 31st 2004.

	Debit Rs.	Credit Rs.
Capital		7,610
Cash in hand	30	
Purchases	8,990	

Sales		11,060
Cash in bank	885	
Fixtures and Fittings	225	
Freehold premises	1,500	
Lighting and heating	65	
Bills Receivable	825	
Returns inwards	30	
Salaries	1,075	
Creditors		1,950
Debtors	5,700	
Stock at January 1st, 1997	3,000	
Printing	225	
Bills Payable		1,875
Rates, Taxes and Insurance	190	
Discounts received		445
Discounts allowed	200	
	22,940	22,940

Closing stock on 31st March 2004 was valued at Rs.1,800.

Solution :

Trading, Profit & Loss a/c for the year ended 31-3-2004

	Rs.		Rs.	Rs.
To Opening stock	2,000	By Sales	11,060	
To Purchases	8,990	Less : returns	30	11,030
To Gross profit c/d	840	By closing stock		1,800
	12,830			12,830
To Salaries	1,075	By Gross profit		840
To Light, Heat	65	By Discount		445
To Printing	225	By Net loss – transferred to capital a/c		470
To Rates, taxes, insurance	190			
To Discount allowed	200			
	1,755			1,755

6.5 QUESTIONS

1. What are financial statements?
2. What is a trading account?
3. What do you mean by direct expenses?
4. Distinguish between capital and revenue expenditure
5. Distinguish between capital and revenue income
6. What is Profit & Loss account?
7. Explain the important points to be followed in the preparation of trading and profit & loss account.

6.6 EXERCISES

1. From the following information, prepare the final accounts for the year ending 31-3-06.

	Rs.		Rs.
Cash in hand	7,000	Furniture	2,500
Building	4,000	Capital	60,000
Drawings	4,000	Wages	8,000
Creditors	33,000	Debtors	30,000
Bad debts	1,000	Misc. Expenses	700
Postage & Telegram	400	Insurance	2,200
Printing	1,500	Discount received	1,000
Discount allowed	2,000	Rent & Rates	4,500
Carriage	3,000	Stock	18,000
Returns outward	2,300	Returns inward	1,500
Purchases	70,000	Sales	1,00,000
Outstanding expenses	1,000	Bills Payable	4,000

Stock on 31-3-06 Rs.26,000.

[Ans.: Gross Profit Rs.27,800, Net Profit Rs.16,500]

2. From the following information, prepare the final accounts for the year 2006.

Dr. Balances	Rs.	Cr. Balances	Rs.
Cash at Bank	7,000	Sundry Creditors	30,000
Sundry Debtors	60,000	Discount	1,000
Plant & Machinery	50,000	Returns	4,000
Cash in hand	1,000	Sales	1,50,000
Advertising	6,000	Capital	56,000
Rent, Rates & Taxes	5,000		
Bank Charges	500		
Discount	2,000		
Stock	20,000		
Returns	5,000		
Purchases	70,000		

Stock as on 31-12-1996 Rs.31,000.

[Ans.: Gross Profit Rs.81,000, Net profit Rs.63,000]

3. From the following information, prepare the final accounts for the year 2006:

Dr. Balances	Rs.	Cr. Balances	Rs.
Furniture	15,000	Bills payable	20,000
Carriage	9,000	Sales	2,20,000
Bad Debts	5,000	Returns	7,000
Manufacturing Expenses	7,000	Creditors	50,000
Bills receivable	12,000	Capital	1,89,000
Rent	10,000		
Stock	45,000		
Repairs	8,000		
Salaries	30,000		
Cash at Bank	10,000		
Cash in hand	5,000		
Wages	40,000		
Returns	10,000		
Purchases	1,10,000		

Debtors	70,000		
Plant & Machinery	80,000		
Drawings	20,000		

Stock as on 31-12-2006 Rs.51,000

[Ans.: Gross Profit Rs.57,000, Net profit Rs.4,000]

6.7 SUGGESTED BOOKS

1. Agarwala, A.N., Amitabha Mukherjee, Mohammed Hanif, **Principles and Practice of Accountancy**, Kitab Mahal Agencies, New Delhi.
2. Basu & Das, **Practical in Accountancy, Volume – one**, Rabindra Library, Calcutta
3. Chopde, L.N., & Choudhari, D.H., **Accountancy**, Sheth Publishers, Pune
4. Jain, S.P., Narang, K.L., **Accountancy, Part - I**, Kalyani Publishers
5. Maheswari, S.N., Maheswari, S.K., **Advanced Accountancy (Vol.I)**, Vikas Publishing House Pvt. Ltd., New Delhi, 2005
6. Pillai, R.S.N., Bagavathi, Uma, S., **Fundamentals of Advanced Accounting (Vol.I)** S. Chand & Company Ltd., New Delhi, 2006
7. Shukla, M.C., Grewal, T.S., Gupta, S.C., **Advanced Accounts (Volume I)** S. Chand & Company Limited, New Delhi, 2005
8. Tulsian, P.c., **Accountancy** Tata McGraw-Hill Publishing Company Limited, New Delhi.

Chapter – 7

Balance Sheet

Objectives :

After study of this unit we should be able to

- Understand the meaning of balance sheet
- Know the methods in the preparation of balance sheet

Structure :

- 7.1 Introduction
- 7.2 Arrangement of Assets and Liabilities
- 7.3 Important points regarding to Balance Sheet
- 7.4 Questions
- 7.5 Exercises
- 7.6 Suggested Readings

7.1 INTRODUCTION

Having prepared the Trading and profit and loss account, a businessman will like to know the financial position of his business. For this purpose, he prepares a statement of his assets and liabilities as on a particular date. Such a statement is termed as “Balance Sheet”. Thus, Balance Sheet is not an account but only a statement containing the assets and liabilities of a business on a particular date. It is, as a matter of fact, a classified summary of the various remaining accounts after accounts relating to Incomes and Expenses have been closed off by Transfer to Manufacturing, Trading and Profit and Loss account.

Balance sheet has two sides. On the left hand side, the liabilities of the business are shown while on the right hand side the assets of the business appear. These two terms have been explained later in the chapter.

It will be useful here to quote definitions of the Balance Sheet given by some prominent writers. According to Palmer, “The Balance sheet is a statement at a given date showing on one side the trader’s property and possessions and on the other hand his liabilities.” According to Freeman, “A Balance Sheet is an itemised list of the asset, liabilities

and proprietorship of a business of an individual at a certain date. The definition given by the American Institute of Certified Public Accountants makes the meaning of Balance Sheet more clear. According to it, Balance Sheet is ``a list of balance in the assets and liability accounts. The list depicts the position of assets and liabilities of a specific business at a specific point of time.

7.2 ARRANGEMENT OF ASSETS AND LIABILITIES

There is no prescribed form of Balance Sheet for a sole proprietary and partnership concern. However, the assets and liabilities may be shown in any of the following order.

1. Liquidity Order
2. Permanency Order

1. Liquidity Order : In case a concern adopts liquidity order, the assets which are more readily convertible into cash come first and those which cannot be so readily converted come next and so on. Similarly, those liabilities which are payable first come first, and those payable later on come next and so on. A proforma of Balance Sheet according to liquidity order is given below.

Balance Sheet as on.....

Liabilities	Rs.	Assets	Rs.
Bank overdraft	X x x	Cash in hand	X x x
Outstanding expenses	X x x	Cash at bank	X x x x
Bills payable	X x x	Prepaid expenses	X x x
Sundry Creditors	X x x	Bills receivable	X x x
Long term loans	X x x	Sundry Debtors	X x x
Capital	X x x	Closing stock	X x x
		Furniture	X x x
		Plant and Machinery	X x x
		Buildings	X x x
		Land	X x x
		Goodwill	X x x
	X x x		X x x

2. Permanency order : In case of permanency order, assets which are more permanent come first, less permanent come next and so on. Similarly, liabilities which are more

permanent come first, less permanent come next and so on. In other words, an asset will be sold in the last or a liability which will be paid the last come first and that order is followed both for all assets and liabilities. In case a Balance Sheet is to be prepared according to permanency order, arrangement of assets and liabilities will be reversed than what has been shown above in case of liquidity order. Arrangement of assets according to any of these orders is also termed as 'Marshalling of Assets and Liabilities'.

7.3 IMPORTANT POINTS REGARDING BALANCE SHEET

1. Liabilities : The term 'Liabilities' denote claims against the assets of a firm whether those of owners of the business or of the creditors. As a matter of fact, the term 'Equity' is more appropriate than the term liabilities. This is supported by the definition given by American Accounting Association. According to this association, liabilities are 'Claims' of the creditors against the enterprise arising out of past activities that are to be satisfied by the disbursement or utilisation of corporate resources. While the term 'equity' stands both for owners equity (owners claims) as well as the outsiders equity (outsiders claims). However, for the sake of convenience, we are using the term 'Liabilities' for purpose of this book.

Liabilities can be classified in two categories.

1. Current Liabilities and
 2. Long term or Fixed Liabilities.
- (i) **Current Liabilities :** The term 'Current liabilities' is used for such liabilities which are payable within a year from the date of the Balance Sheet either out of current assets or by creation of new current liabilities. The broad categories of current liabilities are as follows.
- (a) Accounts payable i.e., bills payable and trade creditors
 - (b) Outstanding expenses i.e., expenses for which services have been received by the business but for which payment has not been made.
 - (c) Bank overdraft
 - (d) Short-term loans, i.e., loan from Bank which are payable within one year from the date of the Balance Sheet.
 - (e) Advance payments received by the business for the services to be rendered or goods to be supplied in future.
- (ii) **Fixed Liabilities :** All liabilities other than current liabilities come within this category. In other words, these are liabilities which do not become due for payment in one year and which do not require current assets for their payment.

2. Assets : The term ``Assets'' denotes the resources required by the business from the funds made available either by the owners of the business or others. It thus includes all rights of properties which a business owns Cash, investments, bills receivable, debtors, stock of raw materials, work in progress and finished goods, land, buildings, machinery, trade marks, patents, rights etc., are some examples of assets. Assets may be classified into the following categories.

(a) Current assets : Current assets are those assets which are acquired with the intention of converting them into cash during the normal business operations of the company. According to Grady, ``the term Current assets used to designate cash and other assets or resources commonly identified as those which are reasonably expected to be realised in cash or sold during the normal operating cycle of the business. Thus the term current assets include cash and bank balances, stocks of raw materials, work-in-progress and finished goods, debtors, bills receivable, short-term investments, prepaid expenses etc.

(b) Liquid Assets : Liquid assets are those assets which are immediately convertible into cash without much loss. Liquid assets are a part of current assets. In computing liquid assets, stocks of raw materials, work-in-progress and finished goods and prepaid expenses are excluded while all other current assets are taken.

(c) Fixed Assets : Fixed Assets are those assets which are acquired for relatively long periods for carrying on the business of the enterprise. They are not meant for resale. Land and buildings, machinery, furniture are some of the examples of Fixed assets. Sometimes, the words Block Capital is also used for them.

(d) Intangible assets : Intangible assets are those assets which cannot be seen and touched. Goodwill, patents, trade marks etc., are some examples of intangible assets.

(e) Fictitious Assets : These are assets not represented by tangible possession or property. Examples of such assets are : formation expenses incurred for establishing a business such as, registration charges paid to the registrar of a joint stock company for getting a company incorporated, discount on issue of shares, debit balance in the profit and loss account when shown on the assets side in case of a joint stock company etc.

Il.1 : From the following balances prepare Trial Balance as on 31-12-2003.

Prepare Trading and Profit and Loss Account for the above year ended and Balance Sheet as on that date.

	Rs.		Rs.
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Rajakumar 's capital	15,000	Opening stock (1-1-2003)	15,000
Drawings	3,000	Purchases	60,000
Furniture, Fittings	500	Sales	80,000
Typewriters	1,000	Purchase returns	500
Cycles	250	Sales returns	1,000
Debtors	15,000	Carriage inwards	750
Creditors	13,500	Carriage outwards	1,250
Rent	2,500	Rates, Taxes	600
Salaries	3,600	Cash in hand	2,425
Discount allowed	425	General expenses	1,800

Closing stock on 31-12-2003 Rs.11,000.

Solution :

Trial balance of Raj Kumar as on 31-12-2003

	Rs.		Rs.
Drawings	3,000	Capital	15,000
Furniture, fittings	500	Creditors	13,500
Typewriters	1,000	Sales	80,000
Cycle	250	Purchase returns	500
Debtors	15,000		
Rent	2,400		
Salaries	3,600		
Discount allowed	425		
General expenses	1,800		
Opening stock (1-1-2003)	15,000		
Purchases	60,000		
Sales returns	1,000		
Carriage inwards	750		
Carriage outwards	1,250		
Rates, taxes	600		
Cash in hand	2,425		
	1,09,000		1,09,000

Trading, Profit & Loss a/c of Raj Kumar for the year ended 31-12-003

	Rs.	Rs.		Rs.	Rs.
To Opening stock		15,000	By Sales	80,000	
To Purchases	60,000		Less : returns	1,000	79,000
Less : Returns	500	59,500	By Closing Stock		11,000
To Carriage inwards		750			
To Gross profit c/d		14,750			
		90,000			90,000
To Salaries		3,600	By Gross profit b/d		14,750
To Rent		2,400			
To Discount allowed		425			
To General expenses		1,800			
To Carriage outwards		1,250			
To Rates, taxes		600			
To Net profit transferred to capital a/c		4,675			
		14,750			14,750

Balance Sheet of Raj Kumar as on 31-12-2003

	Rs.	Rs.		Rs.	Rs.
Creditors		13,500	Cash in hand		2,425
Capital	15,000		Debtors		15,000
Add : Net profit	4,675		Stock		11,000
	19,675		Furniture, Fittings		500
Less : Drawings	3,000	16,675	Typewriters		1,000
			Cycle		250
		30,175			30,175

Illu.2 : From the following trail balance of Rao and Bors. Preparing Trading and Profit and Loss account for the year ended 31st , 2002 and Balance Sheet as on that date.

Trial Balance of Rao & Bros. As on 31-12-2002

	Debit Rs.		Credit Rs.
Debtors	12,000	Creditors	7,900
Drawings	2,900	Capital	30,000
Rent, Taxes	250	Sales	14,290
Trade expenses	670	Purchases returns	280
Purchases	8,640	Discount received	240
Sales returns	190		
Carriage inwards	250		
Wages	2,920		
Salaries	1,200		
Stock (1-1-2002)	3,100		
Discount allowed	180		
Bad debts	200		
Plant, Machinery	2,510		
Furniture, Fittings	1,800		
Cash in hand	500		
Cash at Bank	15,400		
	52,710		52,710

Closing stock as on 31-12-2002 Rs.14,220.

Solution :

**Trading and Profit & Loss a/c of Rao & Bros. ,
for the year ended 31-3-2004**

	Rs.	Rs.		Rs.	Rs.
To Opening stock		3,100	By Sales	14,290	
To Purchases	8,640		Less : Returns	190	14,100
Less : Returns	280	8,360	By Closing stock		14,220
To Wages		2,920			
To Carriage inwards		250			
To Gross profit c/d		13,690			
		28,320			28,320
To Salaries		1,200	By Gross profit b/d		13,690
To Rent, Taxes		250	By Discount received		240

To Trade expenses		670			
To Discount allowed		180			
To Bad debts		200			
To Net profit (transferred to capital a/c)		11,430			
		13,930			13,930

Balance Sheet of Rao & Bros. as on 31-12-2004

Liabilities	Rs.	Rs.	Assets	Rs.
Creditors		7,900	Cash in hand	500
Capital	30,000		Cash at bank	15,400
Add : Net profit	11,430		Debtors	12,000
	41,430		Closing stock	14,220
Less : Drawings	2,900	38,530	Furniture, Fittings	1,800
			Plant, Machinery	2,510
		46,430		46,430

Illu.3 : From the following Trial Balance prepare Trading and profit and Loss account for the year ended 31st March, 2004 and balance sheet as on that date.

	Rs.		Rs.
Machinery	30,000	Capital	1,00,000
Stock (1-4-2003)	16,000	Sales	2,03,600
Wages	50,000	Creditors	12,500
Carriage	500	Purchase returns	2,000
Salaries	5,000	Discount received	250
Factory rent	2,400	Bills payable	8,500
Repairs	400		
Fuel, power	2,500		
Furniture	5,500		
Buildings	40,000		
Debtors	20,000		
Purchases	1,22,000		
Sales returns	3,600		

Drawings	2,000		
Discount allowed	750		
Office expenses	1,000		
Manufacturing expenses	600		
Bills receivable	5,000		
Cash in hand	2,400		
Cash at Bank	15,400		
Office rent	1,800		
	3,26,850		3,26,850

Closing stock as on 31-3-2004 Rs.20,000.

Solution

Trading, Profit & Loss a/c for the year ended 31-3-2004

	Rs.	Rs.		Rs.	Rs.
To Opening stock		16,000	By Sales	2,03,600	
To Purchases	1,22,000		Less : Returns	3,600	2,00,000
Less : Returns	2,000	1,20,000	By Closing stock		20,000
To Carriage inwards		500			
To Fuel, Power		2,500			
To Wages		50,000			
To Factory rent		2,400			
To Manufacturing expenses		600			
To Gross profit c/d		28,000			
		2,20,000			2,20,000
To Salaries		5,000	By Gross profit b/d		28,000
To Repairs		400	By Discount allowed		250
To Discount allowed		750			
To Office expenses		1,000			
To Office rent		1,800			
To Net Profit (transferred to		19,300			

capital a/c)					
		28,250			28,250

Balance Sheet as on 31st March, 2004

Liabilities	Rs.	Rs.	Assets	Rs.
Creditors		12,500	Cash in hand	2,400
Bills payable		8,500	Cash at Bank	15,400
Capital	1,00,000		Bills receivable	5,000
Add : Net profit	19,300		Debtors	20,000
	1,19,300		Closing stock	20,000
Less : Drawings	2,000	1,17,300	Furniture	5,500
			Machinery	30,000
			Buildings	40,000
		1,38,300		1,38,300

Illu.4 : From the following trial balance of M/s Jairaj & Co. prepare Trading and profit and Loss Account for the year ending 31st March 2004 and Balance Sheet as on that date.

	Debit Rs.	Credit Rs.
Stock (1-4-2003)	20,000	-
Purchases	80,000	-
Sales	-	1,15,000
Returns inward	15,000	-
Returns outward	-	10,000
Carriage inwards	7,000	-
Carriage outwards	8,000	-
Wages	10,000	-
Salaries	12,000	-
Rent	7,000	-
Drawings	10,000	-
Capital	-	69,000
Interest Received	-	7,000
Investments	30,000	-
Cash	5,000	-

Bank	8,000	-
Debtors	12,000	-
Creditors	-	15,000
Bills Payable	-	5,000
Commission Received	-	3,000
	2,24,000	2,24,000

Closing stock on March 31, 2004 was valued at Rs.19,000.

Solution :

Trading, Profit & Loss a/c Jai raj & Co. for the year ended 31-3-2004

	Rs.	Rs.		Rs.	Rs.
To Opening stock		20,000	By Sales	1,15,000	
To Purchases	80,000		Less : Returns	15,000	1,00,000
Less : Returns	10,000	70,000	By Closing Stock		19,000
To Wages		10,000			
To Carriage inward		7,000			
To Gross profit c/d		12,000			
		1,19,000			1,19,000
To Salaries		12,000	By Gross profit b/d		12,000
To Carriage outwards		8,000	By Interest received		7,000
To Rent		7,000	By Commission received		3,000
			By Net Loss (transferred to capital a/c)		5,000
		27,000			27,000

Balance Sheet of Jai Raj & Co. as on 31st March, 2004

Liabilities	Rs.	Rs.	Assets	Rs.
Creditors		15,000	Cash	5,000
Bills payable		5,000	Bank	8,000
Capital	69,000		Debtors	12,000

Less : Drawings	10,000		Stock	19,000
	59,000		Investments	30,000
Less : Net Loss	5,000	54,000		
		74,000		74,000

7.4 QUESTIONS

1. What is a Balance Sheet?
2. What is Marshalling?
3. Explain the important points to be considered in the preparation of the balance sheet.
4. Give the proforma of trading and profit and loss account with hypothetical figures
5. Prepare a Balance sheet of an organisation with hypothetical figures.

7.5 EXERCISES

1. From the following information, prepare the final accounts for the year 2006.

Dr. Balances	Rs.	Cr. Balances	Rs.
Returns	15,000	Capital	1,41,000
Cash in hand	2,000	Returns	10,000
Bills Receivable	20,000	Bank overdraft	20,000
Purchases	1,50,000	Bills Payable	30,000
Bad debts	5,000	Sales	3,40,000
Income Tax	2,000	Commission	9,000
Bank Charges	1,000		
Salaries	35,000		
Insurance	5,000		
Rent & Rates	12,000		
Carriage	8,000		
Wages	70,000		
Power	10,000		
Stock	50,000		
Furniture	15,000		
Machinery	70,000		
Building	80,000		

Stock as on 31-12-2006 Rs.61,000.

[Ans.: Gross Profit Rs.1,08,000, Net Profit Rs.59,000, Balance Sheet Total Rs.2,48,000]

2. From the following information, prepare the final accounts for the year 2006.

Dr. Balances	Rs.	Cr. Balances	Rs.
Cash at Bank	5,000	Capital	60,000
Bills Receivable	9,000	Bills Payable	7,000
Salaries	11,500	Creditors	30,000
General Charges	3,000	Sales	2,20,000
Taxes & Insurance	4,000	Returns	4,000
Cash in hand	2,000	Commission	5,000
Interest	5,000		
Advertising	9,000		
Returns	5,000		
Purchases	1,20,000		
Stock	40,000		
Debtors	50,000		
Bad debts	2,500		
Furniture	10,000		
Building	50,000		

Stock as on 31-12-96 Rs.21,000.

[Ans.: Gross Profit Rs.80,000, Net Profit Rs.50,000, Balance Sheet Total Rs.1,47,000]

7.6 SUGGESTED BOOKS

1. Agarwala, A.N., Amitabha Mukherjee, Mohammed Hanif, **Principles and Practice of Accountancy**, Kitab Mahal Agencies, New Delhi.
2. Basu & Das, **Practical in Accountancy, Volume – one**, Rabindra Library, Calcutta
3. Chopde, L.N., & Choudhari, D.H., **Accountancy**, Sheth Publishers, Pune
4. Jain, S.P., Narang, K.L., **Accountancy, Part - I**, Kalyani Publishers
5. Maheswari, S.N., Maheswari, S.K., **Advanced Accountancy (Vol.I)**, Vikas Publishing House Pvt. Ltd., New Delhi, 2005

6. Pillai, R.S.N., Bagavathi, Uma, S., **Fundamentals of Advaned Accounting (Vol.I)** S. Chand & Company Ltd., New Delhi, 2006
7. Shukla, M.C., Grewal, T.S., Gupta, S.C., **Advanced Accounts (Volume I)** S. Chand & Company Limited, New Delhi, 2005
8. Tulsian, P.c., **Accountancy** Tata McGraw-Hill Publishing Company Limited, New Delhi.

Lesson - 8

FINAL ACCOUNTS WITH ADJUSTMENTS

OBJECTIVES :

After going through this unit, we should be able to

- Know the reasons for adjustments in final accounts
- Understand various types of adjustments and their adjustment in practice
- Prepare the final accounts after taking the adjustment into account.

STRUCTURE :

8.1 Need for Adjustments in Final Accounts

8.2 Adjustments in Final Accounts

8.3 Questions

8.4 Exercises

8.5 Suggested Readings

8.1 NEED FOR ADJUSTMENTS IN FINAL ACCOUNTS

After ascertaining the arithmetical accuracy of the books of accounts by preparing a Trial balance, a trader has to ascertain the results of his business activities and the financial position of the organisation. For this purpose he has to prepare a Trading and profit and loss account and a balance sheet. Final accounts (i.e., the Trading and profit and loss account and balance sheet) are prepared on the basis of a trial balance. But the trial balance is not the complete tool for the purpose of preparation of final accounts. The trial balance contains only those items, which have been recorded in the books of accounts. It does not consider the items such as expenses payable, income receivable, expenses paid in advance and income received in advance, non cash items such as depreciation on asset, interest on capital, interest on drawings, anticipated losses such as reserve for bad debts, reserve for discount on debtors etc. Unless these items are considered and given effect, the final

accounts cannot disclose a true and fair view of the organisation. Hence, necessary adjustments about the above items should be made.

8.1.2 Meaning of Adjustments :

Adjustments in final accounts mean bringing into accounts the items which have not been included in the trial balance. It means bringing into account the expenses incurred but not paid, income earned but not actually received, depreciation on assets, interest on capital, interest on drawings, reserve for bad debts, reserve for discount on debtors and anticipated gains like reserve for discount on creditors.

8.1.3. Adjustment Entries :

Various adjustments in Trading and profit and loss account and Balance sheet are made by means of journal entries. Journal entries passed for adjustments at the end of the year are called adjustment entries. All the adjustment entries are passed in the journal proper.

8.2 ADJUSTMENTS IN FINAL ACCOUNTS :

The following are usual items of adjustments which require adjustments while preparing Trading and Profit and Loss Account and Balance Sheet.

1. Outstanding expenses
2. Prepaid expenses
3. Outstanding income
4. Income received in advance
5. Depreciation on assets
6. Treatment of bad debt, provision for doubtful debts and provision for discount
7. Provision for bad debts
8. Provision for discount on debtors
9. Provision for discount on creditors
10. Interest on Drawings
11. Interest on capital
12. Closing Stock

8.3 Outstanding Expenses :

Expenses which are incurred during the year but not paid, are called "outstanding or unpaid expenses". Such unpaid expenses must be considered, otherwise the profit will be overstated. Outstanding expenses must be duly accounted for because the parties who have given services have claim against the business and hence these become the liabilities at the end of the year.

For example, office rent due for the month of December is not paid in the same month, it will be outstanding rent for the month of December. Office rent outstanding is a liability and must be shown in the Balance sheet and the amount due for Office rent will be transferred to the Profit and Loss account. Next year, when this due amount will be paid off, office rent outstanding account will be debited and cash account credited.

8.3.1 Prepaid Expenses :

When an expenses is paid in advance, and the benefit of the amount paid will be available in the next year, it is called prepaid expenses. Such expenses are shown in the Balance Sheet as an asset. Such expenses are paid during the year but not incurred..

8.3.2 Outstanding Income :

The income which is earned but not yet received in cash during the year is called as an outstanding income. Such incomes, which are earned in the current year should be credited to the Profit and Loss Account and as the amount is yet to be received, it will be transferred to the Balance Sheet on the assets side. For example, the commission earned in the month of December, 2005, but received as yet, will be outstanding incomes for the year ending 31st December, 2005. The original amount of commission shown in the Trial balance will be increased by the amount of commission receivable. Next year, when the amount due on commission will be received, it will be credited by debiting the cash account.

8.3.3 Income received in Advance :

Sometimes, a trader receives the amount of income in advance before rendering the full service. Such incomes should not be transferred to the credit side of the profit and loss account. The portion of such income is deducted from the income concerned and it is treated as liability. For example, during the year ended 31st March, 2006, the total amount received as Rent is Rs.650, out of which Rs.50 are related to the next months of April, 2006. In this case, Rent for the year ended 31st march, 2006 will be only $(Rs.650 - 50) = Rs.600$

and Rs.50 will be shown in the Balance Sheet as liability. Next year, rent received in advance account will be transferred to Rent (received account).

8.3.4 Depreciation :

The assets become useless after some time by continuous usage. Every fixed asset has a definite period of utility to the business. The value of an asset goes on decreasing year by year. Such a loss in value is known as depreciation. It is an invisible loss, but must be shown in the profit and loss account each year as long as the asset is in use. And the asset must be shown in the Balance sheet at its reduced value. Generally, the depreciation is charged on the basis of the life of the asset. One thing should be noted that, depreciation is charged only on fixed assets, and not on floating assets, because floating assets are not held by the business for a long time.

8.3.5. Bad debts :

A businessman has to sell goods on credit also in order to increase sales. In credit sales, goods are delivered to the customers immediately and cash is received from the debtors after a certain period. Hence, there is a risk of loss due to bad debt. It is likely that some customers may not pay their dues for one or the other reason. Thus, the debt due from customers becomes bad for recovery. Bad debt is the irrecoverable debt from customers. Bad debt is a loss to business. It reduces profits. It is a nominal account. Hence, it is placed on debit side of Profit and Loss account.

Sundry Debtors : It represents the total debt due from various parties on account of sale of goods on credit.

Provision for Doubtful debts : The term 'doubtful debts' suggests that the debt may be recovered or may not be recovered. It is rather doubtful about recovery of such debt. Under such a circumstances, it cannot be considered as bad. At the same time, it cannot be considered good for recovery. If all such debtors are treated as good and shown in the balance sheet, it will amount to showing the assets at a higher value. The profit and loss account also will not show true position. The profit will be overstated. On other hand, if all such debts are shown as bad the profit will be understated and the balance sheet will not show true position as the debtors will be understated. Hence, it is necessary to show the position which is very close to the correct position. This can be done by providing for doubtful debts. The amount of doubtful debt provision is estimated on the basis of past experience. A certain percentage of debt is treated as doubtful and accordingly provided for while preparing financial statement. The amount thus provided for is called 'Provision for

doubtful debts". There is a distinction between provision for doubtful debts and reserve for doubtful debts. A provision is interpreted as the amount retained by way of providing for a known liability. The amount of such provision cannot be determined with substantial accuracy. The term `reserve is interpreted as, the amount retained for known liability which is in excess of the necessary amount. The amount which is in excess of the required amount is referred to as a `reserve;. However, for the purpose of accounting the above distinction is ignored as the distinction does not materially affect accounting treatment.

8.3.6 Provision for Discount on Debtors :

In business, a proprietor may be required to allow discount to debtors if they pay their dues before the due dates. The discount allowed would be a loss to business and it is in connection with the debtors created during the year. Hence, it is quite advisable to make a provision for such discount by charging the profit and loss account. Such a provision is called as ``Provision for discount on debtors."

8.3.7. Bad debts recovery :

After writing off bad debts, it is quite likely that some debtors may pay their dues which have been written off as bad. The amount received from debtor against such bad debts written off is called as `Bad debts Recovery" The amount received is credited to Bad debts Recovery Account.

8.3.8 Reserve or provision for discount on Creditors :

As the trader allows a cash discount to his debtors he may also receive a cash discount from him creditors if he makes the payment during the stipulated period. As such, the trader may receive the cash discount from his creditors which can be estimated. Thus, the cash discount likely to be received from creditors is estimated and a provision is made for discount on creditors. Such a provision is called as `Provision or Reserve for Discount on Creditors."

A Discount received from creditors is a gain, and it is transferred to the credit of the Profit and Loss Account. A reserve for discount on creditors is created by debiting such a Reserve Account and crediting the profit and loss account. The debit balance of Reserve for discount on creditors is shown in the Balance Sheet by subtracting it from sundry creditors.

The actual amount of discount received is credited to the Discount Received Account and debited to the Creditors personal account. At the end of the year, the total amount of Discount received is transferred to the credit side of Reserve for Discount on Creditors

Accounts . Then, a new estimate is made regarding the Discount receivable from Sundry Creditors by crediting the Profit and Loss Account.

8.3.9 Interest on Drawings :

Drawings denotes the money withdrawn by the proprietor from the business for his personal use. It is usual practice to charge interest on drawings in case interest is allowed to the proprietor on his capital. In case of a partnership firm, interest on drawings will be charged on the drawings made by each partner.

Computation of Interest on drawings : There is a difference between the method of computation of interest on capital and interest on drawings. In most cases interest on capital is charged on the opening balance in the capital account. However, in case of additional capital introduced during the year by the proprietor, interest may be charged from the date of introducing additional capital till the end of the accounting period. Since the interest is to be charged on the amount withdrawn by the proprietor from the date on which he withdrew the amount from the business till the end of the accounting period, it requires computation of interest on each with

8.3.10. Closing Stock :

Stock remaining unsold at the end of the accounting year is called ``Closing stock''. Closing stock has to be taken into account while preparing final accounts. Unless it is taken into account Trading and profit and loss account and balance sheet will not disclose a true and fair view of the state of affairs of the business concern. Closing stock is credited to Trading Account and shown in the Balance Sheet on the Assets side.

Illu.1 : From following Trial Balance of Swaroop, prepare Trading and Loss account for the year ended 31st March 2006 and a Balance sheet as on that date.

<i>Debit Balances</i>	<i>Rs.</i>	<i>Credit Balances</i>	<i>Rs.</i>
Stock	45,000	Capital	75,000
Plant and machinery	75,000	Sales	4,20,750
Purchases	2,25,000	Sundry Creditors	15,000
Trade expenses	10,000	Bad debts provision	200
Carriage inwards	2,500	Bills payable	2,000

Carriage outwards	1,500		
Factory rent	1,500		
Discount	350		
Insurance	700		
Sundry debtors	60,000		
Office rent	3,000		
Stationery	600		
Salaries	17,800		
Advertising	15,000		
Bills receivable	6,000		
Drawing	6,000		
Wages	20,000		
Furniture	7,500		
Coal and gas	1,000		
Cash in hand	2,000		
Cash at Bank	12,500		
	5,12,950		5,12,950

Adjustments :

- a. Closing stock amounted to Rs. 35,000
- b. Depreciate Machinery by 10% and Furniture by 5%
- c. Raise the Bad debts provision to 5% on Debtors
- d. Outstanding Factory rent Rs.300 and Office rent Rs. 600
- e. Insurance prepaid Rs.100.

Solution :**Trading Profit & Loss Account of****Dr.****Swaroop for the year ending 31.3.2006****Cr.**

To Opening Stock	45,000	By Sales	4,20,750
To Purchase	2,25,000	By Closing Stock	35,000
To Wages	20,000		
To Coal and Gas	1,000		
To Carriage Inwards	2,500		
To Factory Rent	1,500		
Add outstanding	300	1,800	
To Gross profit c/d	1,60,450		

	4,55,750		4,55,750
To Salaries	17,800	By Gross profit b/d	1,60,450
To Advertising	15,000		
To Stationary	600		
To Office Rent	3,000		
Add outstanding	600	3,600	
To Insurance	700		
Less Prepaid	100	600	
To Discount		350	
To Carriage outwards		1,500	
To Trade expenses		10,000	
To Depreciation			
Machinery	7,500		
Furniture	375	7,875	
To Provision for Bad Debts		2,800	
To Net Profit transferred to capital		1,00,325	
	1,60,450		1,60,450

Balance sheet of Swaroop as on 31-3-2006

<i>Liabilities</i>	<i>Rs.</i>	<i>Assets</i>	<i>Rs.</i>
Sundry creditors	15,000	Cash in Hand	2,000
Bills payable	2,000	Cash at Bana	12,500
Outstanding		Bills receivable	6,000
Factory rent	300	Debtors	60,000
Office rent	600	Less P.B.D.	3,000
Capital	75,000	Closing Stock	35,000
Add Net Profit	1,00,325	Plant & Machinery	75,000
	1,75,325	Less Deprecia	7,500
Less Drawings	6,000	Furniture	7,500
		Less Deprecia.	375
		Prepaid Insurance	100
	1,87,225		1,87,225

Existing Rs. 200+ New Rs. 2,800= Rs.3,000.

Illu.2 : From following Trial Balance, prepare Trading, Profit and Loss account for the year ended 31-12-2006 and the Balance Sheet as on that date:

<i>Debit Balances</i>	<i>Rs.</i>	<i>Credit Balances</i>	<i>Rs.</i>
Chandra Sekhar's drawing	4,500	Chandra Sekhar's Capital	24,000
Purchases	20,000	Sales	30,500
Returns inwards	1,500	Discounts	1,900
Opening Stock	8,000	Sundry Creditors	10,000

Salary	4,200	Bills payable	2,500
Wages	1,200		
Rent	350		
Bad debts	400		
Discounts	700		
Sundry debtors	14,000		
Cash in hand	260		
Cash at Bank	5,940		
Insurance	400		
Trade expenses	300		
Printing	150		
Furniture	2,000		
Machinery	5,000		
	68,900		68,900

Adjustments :

- a. Closing Stock Rs. 7,000
- b. Insurance pre – paid Rs. 60
- c. Outstanding salary Rs. 200 and wages Rs. 200
- d. Make provision for doubtful debts at 5% on Sundry debtors
- e. Calculate interest on capital at 5% p.a.
- f. Depreciate Machinery at 5% and Furniture at 10%
- g. Reserve for discount on creditors at 1%.

Solution :

Dr.		Trading and Profit and Loss Account as on 31-12-2006		Cr.	
	Rs.	Rs.		Rs.	Rs.
To Opening Stock		8,000	By Sales	30,500	
To Purchases		20,000	Less Returns	1,500	29,000
To Wages	1,200		By Closing Stock		7,000
Add Outstanding	200	1,400			
To Gross Profit c/d		6,600			
		36,000			36,000
To Salary	4,200		By Gross profit b/d		6,600
Add outstanding	200	4,400	By Discounts		1,900
To Rent		350	By Discount reserve on Creditors		100

To Bad debts		400	By Net loss – transfer to capital		390
To Discount		700			
To Insurance	400				
Less pre-paid	60	340			
To Trade expenses		300			
To Printing		150			
To Provision for Doubtful debts		700			
To Interest on Capital		1,200			
To Depreciation c/d					
Machinery 5%		250			
Furniture 10%		200			
		8,990			8,990

Balance Sheet as on 31-12-2006

Liabilities		Rs.	Assets		Rs.
Bills payable		2,500	Cash in Hand		260
Sundry Creditors	10,000		Cash at bank		5,940
Less Discount reserve	100	9,900	Sundry Debtors	14,000	
Outstanding salary		200	Less provision	700	13,300
Wages		200	Closing Stock		7,000
Capital	24,000		Furniture	2,000	
Add Interest	1,200		Less Depreciation	200	1,800
Less Net Loss	25,200 390		Machinery	5,000	
Less Drawings	24,810 4,500	20,310	Less Depreciation	250	4,750
			Prepaid Insurance		60
		33,110			33,110

Illu.3 : From the following Trial Balance of Ravi prepare final accounts for the year ending 31-3-2006.

	Rs.		Rs.
Drawings	4,500	Capital	24,000
Purchases	20,000	Sales	30,500
Returns inwards	1,500	Discounts	1,900
Stock (1-4-2005)	8,000	Creditors	10,000
Salary	4,200	Bills payable	2,500
Wages	1,200		
Rent	350		
Bad debts	400		

Discounts	700		
Debtors	14,000		
Cash	6,200		
Insurance	300		
Printing	150		
Furniture	2,000		
Machinery	5,000		
	68,900		68,900

Adjustments:

- Closing Stock : Rs.7,000
- Prepaid insurance : Rs.60
- Outstanding salary: Rs.500; wages Rs.200
- Make a provision for doubtful debts at 5% on debtors.
- Calculate interest on capital at 5% and on drawings at 6%.
- Depreciate machinery at 5% and furniture at 10%.

Solution :

**Trading and Profit and loss a/c of
for the year ending 31-3-2006**

Dr.	Rs.	Cr.	Rs.
To Opening stock	8,000	By Sales	30,500
To Purchases	20,000	Less: Sales returns	1,500
To Wages	1,200	By Closing stock	7,000
Add: O/s	200		
	1,400		
To Gross Profit (transferred to Profit & Loss a/c)	6,600		
	36,000		36,000
To Salary	4,200	By Gross profit	6,600
Add: O/s	500	By Discount	1,900
	4,700	By Interest on drawings (45,000 x 6%)	270
To Rent	350	By Net Loss (transferred to Capital a/c)	520
To Bad debts	400		
To Discount	700		
To Insurance	400		
Less: Prepaid	60		
	340		
To Trade expenses	300		
To Printing	150		
To Provision for doubtful debts (1,400 x 5%)	700		
To Interest on Capital			

(24,000 x 5%)	1,200		
To Depreciation on			
- Machinery	250		
- Furniture	200		
	9,290		9,290

Balance Sheet of Ravi as on 31-3-2006

Liabilities		Rs.	Assets		Rs.
Creditors		10,000	Cash		6,200
Bills payable		2,500	Debtors	14,000	
Capital	24,000		Less: Provision for bad debts	700	13,300
Less: Drawings	4,500		Prepaid Insurance		60
	19,500		Closing Stock		7,000
Less: Net loss	520		Furniture	2,000	
	18,980		Less: Depreciation	200	1,800
Add: Interest on Capital	1,200		Machinery	5,000	
Less: Interest on drawings	270	19,910	Less: Depreciation	250	4,750
Outstanding salary		500			
Outstanding wages		200			
		33,110			33,110

Illu.4 : The following Trial Balance is extracted from the books of merchant on 31-12-2006:

	Rs.	Rs.
Capital		12,500
Furniture	640	
Vehicles	6,250	
Buildings	7,500	
Bad debts	125	
Provision for bad debts		200
Debtors and creditors	3,800	2,500
Stock on 1-1-2006	3,460	
Purchases and sales	5,475	15,450
Bank overdraft		2,850
Returns	200	125
Advertising	568	
Commission		375

Cash	650	
Insurance	1,250	
General expenses	782	
Salaries	3,300	
	34,000	34,000

Adjustments:

- Stock on 31-12-2006 was Rs.3,250.
- Depreciate buildings by 5%, Furniture by 10% and Vehicles by 20%.
- Outstanding interest Rs.85, Salaries 300 and taxes Rs.120.
- Prepare insurance is Rs.100.
- 1/3 of the commission received is in respect of work to be done next year.
- Write off further bad debts Rs.100 and provision for bad debts is to be made equal to 5% on debtors.

Prepare final accounts for the year ending 31-12-2006.

Solution :

**Trading and Profit & Loss a/c
for the year ending 31-12-2006**

Dr.	Rs.	Cr.	Rs.
To Opening stock	3,460	By Sales	15,450
To Purchase	5,475	Less: Sales Returns	200
Less: Purchase Returns	125	By Closing stock	3,250
To Gross profit	9,690		
	18,500		18,500
To Advertising	568	By Gross Profit	9,690
To Insurance	1,200	By Commission	375
Less: prepaid	100	Less: Received Earlier	125
To General expenses	782	By Provision for bad debts (3,800 – 100 = 3,700 x 5/100 = 185 – 200)	15
To Salaries	3,300		
Add: Outstanding	300		
To Outstanding interest	85		
To Bad debts (100 + 125)	225		
To Depreciation			
Buildings	375		
Furniture	64		
Vehicles	1,250		

To Net Profit	1,736		
	9,955		9,955

Balance Sheet as on 31-12-2006

Liabilities	Rs.	Assets	Rs.
Capital	12,500	Current Assets:	
Add: Net profit	1,736	Cash	650
Current Liabilities:		Debtors	3,800
Bank overdraft	2,850	Less: Bad debts	100
Outstanding interest	85		3,700
Outstanding Salaries	300	Less: Provision for Bad debts	185
Outstanding taxes	120	Prepaid insurance	100
Creditors	2,500	Closing Stock	3,250
Commission received	125	Fixed Assets:	
		Furniture	640
		Less: Depreciation	64
			576
		Vehicles	6,250
		Less: Depreciation	1,250
			5,000
		Buildings	7,500
		Less: Depreciation	375
			7,125
	20,216		20,216

Illu.5 : From the following Trial Balance of Shri Goyal, prepare Trading and Profit & Loss a/c for the year ending 31st December, 2006 and Balance Sheet As on that date:

Trial Balance as on 31st December, 2006

Debit Balance	Rs.	Credit Balance	Rs.
Adjusted purchases	3,49,600	Sales	3,70,000
Wages	10,450	Capital	34,250
National insurance	150	Discount received	300
Carriage inwards	200	Commission received	10,000
Carriage outwards	250	Dividends received	150
Lighting	300		
Rates and insurance	250		
Stock at 31-12-06	30,625		
Cash in Hand and at Bank	875		
Plant and machinery	15,000		
Discount allowed	3,000		
Furniture	4,000		
	4,14,700		4,14,700

Adjustments:

- i) Depreciate plant and machinery @ 15% and furniture 10%.
- ii) Goods worth Rs.2, 000 given to his son at cost by Shri Goyal.
- iii) Manager Commission 20% of profit after charging commission.

Solution :

Trading and Profit & Loss a/c of Mr. Goyal
For the year ending 31-12-2006

Dr.

Cr.

<i>Particulars</i>		<i>Amount Rs.</i>	<i>Particulars</i>		<i>Amount Rs.</i>
To Adjusted purchases	3,49,600		By Sales		3,70,000
Less: Goods given to son	2,000	3,47,600			
To Wages		10,450			
To Carriage inwards		200			
To Gross profit (transferred to P&L a/c)		11,750			
		3,70,000			3,70,000
To Lighting		300	By Gross profit		11,750
To Rates and insurance		250	By Dividends received		150
To National insurance		150	By Commission received		10,000
To Carriage outwards		250	By Discount received		300
To Discount allowed		3,000			
To Depreciation on P&M (15,000 X 15 / 100)		2,250			
To Depreciation on Furniture (4,000 X 10 / 100)		400			
To Manager's commission (15,600 X 20 / 120)		2,600			
To Net profit transferred to Capital a/c		13,000			
		22,200			22,200

Balance Sheet of Mr. Goyal as on 31-12-2006

<i>Liabilities</i>		<i>Amount Rs.</i>	<i>Assets</i>		<i>Amount Rs.</i>
Capital	34,250		Plant and Machinery	15,000	
Add: Net profit	13,000		Less: Depreciation	2,250	12,750
	47,250		Furniture	4,000	
Less: Drawings	2,000	45,250	Less: Depreciation	400	3,600
O/s Manager's commission		2,600	Stock		30,625
			Cash in Hand		875
		47,850			47,850

Illu.6 : From the Trial Balance of Aditya as on 31st December 2006, prepare a Trading and Profit and Loss a/c for the year ended December 2006 and a Balance Sheet as on that date:

Particulars	Dr. Rs.	Cr. Rs.
Purchases	1,80,000	
Opening stock	10,000	
Salaries	5,400	
Bonus to employees	1,200	
Rent @ 250 per month	2,750	
Machinery	29,000	
Wages	3,000	
Furniture and fittings	5,000	
Electricity	550	
Trade expenses	1,500	
Debtors	10,500	
Interest on loan	900	
Building	30,000	
Commission	200	
Sales		2,05,000
Loan @ 10%		10,000
Creditors		15,000
Capital		55,000
Drawings	5,000	
	2,85,000	2,85,000

The following adjustments need to be considered:

- (i) Closing Stock on 31st December amounted Rs.12,000
- (ii) Purchases include the cost of moped for Rs.5,000
- (iii) Wages include Rs.1,000 paid for erection charge.
- (iv) Sundry Debtors include Rs.500 which had become bad and a provision of 10% need to be maintained on doubtful debts.
- (v) Electricity outstanding Rs.50 and
- (vi) Provide 10% depreciation on Building.

Solution :

**Trading and Profit and Loss a/c
for the year ended 31st December, 2006**

Particulars	Rs.	Rs.	Particulars	Rs.
To Opening Stock		10,000	By Sales	2,05,000
To Purchases	1,80,000		By Closing stock	12,000
Less : Cost of Moped	5,000	1,75,000		
To Wages	3,000			
Less : Erection charges	1,000	2,000		
To Gross Profit c/d		30,000		
		2,17,000		2,17,000
To Salaries		5,400	By Gross profit b/d	30,000
To Bonus to employees		1,200		
To Rent	2,750			
Add : outstanding	250	3,000		
To Electricity	550			
Add : Outstanding	50	600		
To Trade expenses		1,500		
To Interest on loan	900			
Add : Outstanding	100	1,000		
To Commission		200		
To Bad debts		500		
To Provision for bad and doubtful debts		1,000		
To Depreciation on Building		3,000		
To Net Profit transferred to capital a/c		12,600		
		30,000		30,000

Balance Sheet as on 31st December, 2006

Liabilities	Rs.	Rs.	Assets	Rs.	Rs.
Creditors		15,000	Debtors	10,500	
10% Loan	10,000		Less : Bad debts	500	
Add : Outstanding	100	10,100		10,000	
Outstanding rent		250	Less : Provision for doubtful debts	1,000	9,000
Outstanding electricity		50	Closing stock		12,000
Capital	55,000		Machinery	29,000	
Add : Net Profit	12,600		Add : Erection charges	1,000	30,000
	67,600		Furniture & Fittings		5,000
Less : Drawings	5,000	62,600	Buildings	30,000	
			Less : Depreciation	3,000	27,000
			Moped		5,000
		88,000			88,000

Illu.7 : From the following Trial Balance of Rahul, prepare Trading, profit and Loss Account for the year ending 31st March, 2006 and Balance Sheet as on that date.

	Debit Rs.	Credit Rs.
Factory Rent	4,000	
Bills receivable	5,300	
Bills payable	-	4,200
Insurance	1,200	
Furniture	10,000	
Machinery	28,000	
Office Rent	2,000	
Manufacturing Wages	21,500	
Provisions for doubtful debts		1,000
Manufacturing expenses	1,500	
General expenses	5,400	
Capital		60,000
Drawings	7,200	
Stock on 1 st April, 2005	20,500	
Purchases	68,000	
Carriage inwards	1,500	
Sales		1,40,500
Sundry Debtors	23,500	
Sundry Creditors		14,300
Cash in hand	500	
Cash at Bank	2,200	
Carriage outwards	1,700	
Salaries	16,000	
	2,20,000	2,20,000

Adjustments :

- i. Write off bad debts Rs.500 and maintain the provision for doubtful debts at 5% on Sundry debtors.
- ii. Stock on 31st March, 2006 Rs.27,000
- iii. Unexpired Insurance Rs.300
- iv. Depreciate Machinery by 5% and furniture by 10%
- v. On 24th December, 2004 a fire broke out and destroyed the stock of the value of Rs.10,000 and the insurance company has admitted the claim to the extent of Rs.6,000

Solution :**Trading and Profit and Loss a/c
for the year ended 31st March, 2006**

	Rs.	Rs.		Rs.
To Opening stock		20,500	By Sales	1,40,500
To Purchases		68,000	By Loss due to goods destroyed by fire	10,000
To Manufacturing wages		21,500	By Closing stock	27,000
To Manufacturing expenses		1,500		
To Carriage inwards		1,500		
To Factory rent		4,000		
To Gross Profit c/d		60,500		
		1,77,500		1,77,500
To Insurance	1,200		By Gross profit b/d	60,500
Less : Prepaid	300	900		
To Office rent		2,000		
To General expenses		5,400		
To Carriage outwards		1,700		
To Salaries		16,000		
To Bad debts		500		
To Provision for doubtful debts		150		
To Loss of stock destroyed by fire		4,000		
To Depreciation on				
Machinery	1,400			
Furniture	1,000	2,400		
To Net profit transferred to capital a/c		27,450		
		60,500		60,500

Balance Sheet of Rahul as on 31st March, 2006

	Rs.	Rs.		Rs.	Rs.
Sundry Creditors		14,300	Cash in hand		500
Capital	60,000		Cash at Bank		2,200
Add : Net profit	27,450		Bills receivable		5,300
	87,450		Sundry Debtors	23,500	
Less : Drawings	7,200	80,250	Less : Bad debts	500	
				23,000	
Bills payable		4,200	Less : Provision for doubtful debts	1,150	21,850
			Closing stock		27,000
			Insurance claim		6,000
			Prepaid insurance		300
			Machinery	28,000	
			Less : Depreciation	1,400	26,600

			Furniture	10,000	
			Less : Depreciation	1,000	9,000
		98,750			98,750

Illu.8 : Prepare Trading account, Profit & Loss account and balance Sheet from the following data of M/s. Anil & Co. as on 31st March, 2006 :

Particulars	Debit Rs.	Particulars	Credit Rs.
Drawings	5,000	Capital	40,000
Debtors	10,900	Creditors	6,000
Wages	6,000	Sales	40,000
Purchases	25,000	Purchase returns	2,000
Rent	1,000	Provision for bad debts	2,000
Commission	2,000	Interest	750
Advertising	1,000		
Bad debts	1,000		
Machinery	10,000		
Furniture	10,000		
Tools	5,000		
Insurance	1,000		
Carriage outwards	1,000		
Investment	10,000		
Salary	1,750		
	90,750		90,750

Additional information:

- Provide 10% depreciation on furniture and 5% depreciation on machinery.
- Wages includes Rs.1,000 paid for installation of machinery.
- Closing stock Rs.30,000.
- Create 5% provision for doubtful debts.
- Goods given as free samples Rs.500.

Solution :

**Trading and Profit & Loss a/c of M/s Anil & Co.
for the year ending 31st March, 2006**

Particulars	Rs.	Rs.	Particulars		Rs.
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To Opening Stock		-	By Sales		40,000
To Purchases	25,000		By Closing stock		30,000
Less : returns	2,000	23,000	By Advertising		500
To Wages	6,000				
Less : Installation charges	1,000	5,000			
To Gross profit c/d		42,500			
		70,500			70,500
To Salary		1,750	By Gross profit b/d		42,500
To Rent		1,000	By Interest		750
To Commission		2,000	By Provision for bad debts	2,000	
To Advertising	1,000		Less : 5% Provision for doubtful debts	545	1,455
Add : Free Sample	500	1,500			
To Bad debts		1,100			
To Insurance		1,000			
To Carriage outwards		1,000			
To Depreciation on					
Furniture	1,000				
Machinery	550	1,550			
To Net profit (transferred to capital a/c)		33,805			
		44,705			44,705

Balance Sheet of M/s Anil & Co. as on 31-3-2006

Liabilities	Rs.	Rs.	Assets	Rs.	Rs.
Capital	40,000		Debtors	10,900	
Add : Net profit	33,805		Less : Reserve for bad debts	545	10,355
	73,805		Machinery	11,000	
:Less : Drawings	5,000	68,805	Less : Depreciation	550	10,450
Creditors		6,000	Furniture	10,000	
			Less : Depreciation	1,000	9,000
			Tools		5,000
			Investments		10,000
			Closing stock		30,000
		74,805			74,805

Illu. 9 : From the following Trial balance of Mr. Samsan, prepare the final accounts for the year ended 31-3-2006.

Debit balances	Rs.	Credit balances	Rs.
Land and buildings	50,000	Returns	2,500
Purchases	1,10,000	Discount	1,200

Stock	40,000	Sales	2,05,000
Returns	1,500	Capital	1,15,000
Wages	10,000	Loan from Vijay	15,000
Salaries	9,000	Commission	1,500
Office expenses	2,400	Sundry Creditors	25,000
Carriage	1,200	Bills payable	2,350
Carriage outwards	2,000		
Discount	750		
Bad debts	1,200		
Insurance	1,500		
Machinery	50,000		
Furniture	10,000		
Bills receivable	20,000		
Sundry debtors	40,000		
Cash in hand	1,500		
Cash at bank	4,500		
Office equipment	12,000		
	3,67,550		3,67,550

Adjustments :

- (a) Closing stock Rs.60,000
- (b) Outstanding wages Rs.2,000, rent Rs.3,000
- (c) Depreciation on land and buildings at 5%, machinery at 10%, Office equipment by 10%
- (d) Bad debts reserve 21/2% on sundry debtors.
- (e) Prepaid insurance Rs.200
- (f) Provide interest on capital at 5%
- (g) Loan from Vijay was taken on 1-1-2006 at 8% interest.

Solution :

**Trading and Profit & Loss a/c of Mr. Samsan
for the year ending 31-3-2006**

Particulars	Rs.	Rs.	Particulars	Rs.	Rs.
To Opening Stock		40,000	By Sales	2,05,000	
To Purchases	1,10,000		Less : Returns	1,500	2,03,500
Less : Returns	2,500	1,07,500	By Closing stock		60,000

To Wages	10,000				
Add : Outstanding wages	2,000	12,000			
To Carriage		1,200			
To Gross profit c/d		1,02,800			
		2,63,500			2,63,500
To Salaries		9,000	By Gross Profit b/d		1,02,800
To Office expenses		2,400	By Discount		1,200
To Carriage outwards		2,000	By Commission		1,500
To Discount		750			
To Bad debts		1,200			
To Insurance	1,500				
Less : Prepaid insurance	200	1,300			
To Depreciation on					
Land and buildings		2,500			
Machinery		5,000			
Office equipment		1,200			
To reserve for bad debts		1,000			
To Outstanding rent		3,000			
To Interest on capital		5,750			
To Interest on Vijay loan (for 3 months)		300			
To Net profit (transferred to balance sheet)		70,100			
		1,05,500			1,05,500

Balance Sheet of Mr. Samsan as on 31-3-2006

Liabilities	Rs.	Rs.	Assets	Rs.	Rs.
Capital	1,15,000		Land and Buildings	50,000	
Add : Interest	5,750		Less : Depreciation	2,500	47,500
Add : Net profit	70,100	1,90,850	Machinery	50,000	
Loan from Vijay	15,000		Less : Depreciation	5,000	45,000
Add : Outstanding interest	300	15,300	Furniture		10,000
Sundry Creditors		25,000	Bills receivable		20,000
Bills payable		2,350	Sundry debtors	40,000	
Outstanding wages		2,000	Less : Reserve for bad debts	1,000	39,000
Outstanding rent		3,000	Cash in hand		1,500
			Cash at bank		4,500
			Office equipment	12,000	
			Less : Depreciation	1,200	10,800
			Closing stock		60,000
			Prepaid Insurance		200
		2,38,500			2,38,500

Illu.10 : Prepare Trading and profit and Loss account and Balance Sheet of Rajesh as on 31-3-2006 from the following Trial balance and adjoining information:

	Rs.	Rs.
Cash in hand	540	
Cash at Bank	12,630	
Purchases	1,40,675	
Sales		2,58,780
Returns	2,680	1,500
Wages	20,480	
Fuel and power	4,730	
Carriage on sales	3,200	
Carriage on purchase	2,040	
Stock (1 st April, 2005)	25,760	
Buildings	50,000	
Machinery	20,000	
Patents	7,500	
Salaries	15,000	
General expenses	13,000	
Insurance	600	
Drawings	15,245	
Capital		82,000
Sundry debtors and creditors	14,500	6,300
	3,48,580	3,48,580

Additional Information:

- (a) Stock on hand on 31-3-2006 was Rs.26,800.
- (b) Machinery is to be depreciated @ 10% and patents @ 20%
- (c) Salaries amounting to Rs.1,500 stand unpaid.
- (d) Prepaid insurance Rs.170.
- (e) A provision of bad and doubtful debts be created to the extent of 5% on debtors.

Solution :

**Trading, Profit & Loss a/c of Mr. Ganguli
for the year ending 31-3-2006**

Particulars	Rs.	Rs.	Particulars	Rs.	Rs.
To Opening Stock		25,760	By Sales	2,58,780	

To Purchases	1,40,675		Less : Returns	2,680	2,56,100
Less : Returns	1,500	1,39,175	By Closing stock		26,800
To Wages		20,480			
To Fuel and power		4,730			
To Carriage inward		2,040			
To Gross profit c/d		90,715			
		2,82,900			2,82,900
To Salaries	15,000		By Gross profit b/d		90,715
Add : Outstanding	1,500	16,500			
To Carriage on sales		3,200			
To General expenses		13,000			
To Insurance	600				
Less : Prepaid	170	430			
To Depreciation :					
Machinery		2,000			
Patents		1,500			
To Provision for bad debts		725			
To Net profit (transferred to Balance Sheet)		53,360			
		90,715			90,715

Balance Sheet of Mr. Ganguli as on 31-3-2006

Liabilities	Rs.	Rs.	Assets	Rs.	Rs.
Creditors		6,300	Cash in hand		540
Outstanding salaries		1,500	Cash at bank		12,630
Capital	82,000		Closing stock		26,800
Add : Net profit	53,360		Debtors	14,500	
	1,35,360		Less : Provision	725	13,775
Less : Drawings	15,245	1,20,115	Prepaid insurance		170
			Buildings		50,000
			Machinery	20,000	
			Less : Depreciation	2,000	18,000
			Patents	7,500	
			Less : Depreciation	1,500	6,000
		1,27,915			1,27,915

Illu.11 : From the following Trial balance of Venkata Krishna as at 31st March, 2004. Prepare trading and profit and loss account for the year ended 31st March, 2004 and a Balance Sheet as on that date.

Debit balances	Rs.	Credit balances	Rs.
Stock	45,000	Capital	75,000
Plant and Machinery	75,000	Sales	4,20,750
Purchases	2,25,000	Sundry Creditors	15,000
Trade charges	10,000	Bad debts provision	200

Carriage inwards	2,500	Bills payable	2,000
Carriage outwards	1,500		
Factory rent	1,500		
Discount	350		
Insurance	700		
Sundry debtors	60,000		
Office rent	3,000		
Printing and Stationery	600		
General expenses	2,800		
Advertising	15,000		
Bills receivable	6,000		
Drawings	6,000		
Salaries	15,000		
Wages	20,000		
Furniture	7,500		
Coal and Gas	1,000		
Cash in hand	2,000		
Cash at bank	12,500		
	5,12,950		5,12,950

Adjustments :

1. Closing stock amounted to Rs.35,000
2. Depreciate machinery 10% and furniture by 2%
3. Raise the bad debts provision to 5% on debtors
4. Outstanding factory rent Rs.300 and office rent Rs.600
5. Insurance prepaid Rs.100

Solution :

**Trading and Profit & Loss account of Venkata Krishna Reddy
for the year ending 31-3-2004**

Particulars	Rs.	Rs.	Particulars	Rs.
To Opening stock		45,000	By Sales	4,20,750
To Purchases		2,25,000	By Closing stock	35,000
To Wages		20,000		
To Coal and Gas		1,000		
To Carriage inwards		2,500		
To Factory rent	1,500			
Add : Outstanding	300	1,800		

To Gross profit c/d		1,60,450		
		4,55,750		4,55,750
To Salaries		15,000	By Gross profit b/d	1,60,450
To Advertising		15,000		
To General expenses		2,800		
To Printing & Stationery		600		
To Office rent	3,000			
Add : Outstanding	600	3,600		
To Insurance	700			
Less : Prepaid	100	600		
To Discount		350		
To Carriage outwards		1,500		
To Trading expenses		10,000		
To Depreciation				
Machinery	7,500			
Furniture	375	7,875		
To Provision for bad debts		2,800		
To Net profit (transferred to balance sheet)		1,00,325		
		1,60,450		1,60,450

Balance Sheet of Venkata Krishna as on 31-3-2004

Liabilities	Rs.	Rs.	Assets	Rs.	Rs.
Sundry Creditors		15,000	Cash in hand		2,000
Bills payable		2,000	Cash at bank		12,500
Outstanding factory rent		300	Bills receivable		6,000
Outstanding office rent		600	Debtors	60,000	
Capital	75,000		Less : Reserve for bad & doubtful debts	3,000	57,000
Add : Net Profit	1,00,325		Closing stock		35,000
	1,75,325		Plant & Machinery	75,000	
Less : Drawings	6,000	1,69,325	Less : Depreciation	7,500	67,500
			Furniture	7,500	
			Less : Depreciation	375	7,125
			Prepaid insurance		100
		1,87,225			1,87,225

8.4 QUESTIONS

1. Explain the need for adjustments in final accounts
2. Give five journal entries for adjustments in final accounts
3. How do you treat the following in final accounts?
 - (a) Outstanding expenses
 - (b) Prepaid expenses

- (c) Outstanding income
- (d) Income received in advance
- (e) Depreciation on assets
- (f) Treatment of bad debt, provision for doubtful debts and provision for discount
- (g) Provision for bad debts
- (h) Provision for discount on debtors
- (i) Provision for discount on creditors
- (j) Interest on Drawings
- (k) Interest on capital
- (l) Closing Stock

8.5 EXERCISES

1. From the following Trial Balance of M/s Ram & Sons, prepare trading and profit and loss account for the year ending on 31st December, 2006 and the balance sheet as on that date.

Particulars	Dr. Rs.	Cr. Rs.
Purchase	21,750	
Discount allowed	1,300	
Wages	6,500	
Salaries	2,000	
Sales		35,000
Travelling Expenses	400	
Commission	425	
Carriage Inward	275	
Administration Expenses	105	
Trade Expenses	600	
Interest	250	
Building	5,000	
Furniture	200	
Debtors	4,250	
Capital		13,000
Creditors / Cash	7,045	2,100
	50,100	50,100

Stock on 31st December, 2006 was Rs.6,000. Depreciate buildings by 20%, create a provision for bad debts at 10% on debtors. Provide for outstanding wages Rs.475, salaries Rs.500 and goods used by the proprietor Rs.500.

[Ans.: Gross profit Rs.12,500, Net Profit Rs.5,495, Balance Sheet Total Rs.21,070]

2. From the following ledger balances prepare Trading and profit and Loss Account for the year ended 30th September, 2006 and a Balance Sheet as on that date.

Particulars	Rs.	Particulars	Rs.
Rama's Capital a/c	1,19,400	Cash	530
Rama's drawings a/c	10,550	Repairs & Renewals	3,370
Bills Receivable	9,500	Bank	18,970
Plant and Machinery	28,800	Interest and Discount (Dr.)	5,870
Sundry debtors (including Madan's dishonoured bill Rs.1,000)	62,000	Bad Debts	3,620
Loan a/c (Cr.) at 6%	20,000	Sundry Creditors	39,630
Wages (Manufacturing)	40,970	Fixtures & Fittings	8,970
Returns Inwards	2,780		
Purchases	2,56,590		
Sales	3,56,430		
Commission received	5,640		
Rent and Taxes	5,620		
Stock on 1 st October, 2006	89,680		
Salaries	11,000		
Travelling Expenses	1,880		
Insurance (including Rs.300 p.a. paid up 31 st March 2006)	400		

Stock in hand on 30th September, 2006 was Rs.1,28,960. Write off half of Madan's dishonoured bill. Depreciate Plant and Machinery by 5% and Fixtures and Fittings by 10%.

[Ans.: Gross Profit Rs.95,370; Net Profit Rs.66,563 and Balance Sheet Total Rs.2,55,043].

3. From the following Trial Balance of Mr. A, Prepare Trading and Profit & Loss Account for the year ending 31st December, 2006 and a Balance Sheet as on that date :

Debit Balances	Rs.	Credit Balances	Rs.
Drawings	5,275	Capital	59,700
Bills Receivable	4,750	Loan at 8% on (1-1-88)	10,000
Machinery	14,400	Commission received	2,820
Debtors (including X for Dishnoured Bill of Rs.1,000)	30,000	Creditors	29,815
Wages	20,485	Sales	1,78,215
Returns inwards	2,390		
Purchases	1,28,295		
Rent	2,810		
Stock (1-1-06)	44,840		
Salaries	5,500		
Travelling Expenses	945		
Insurance	200		
Cash	9,750		
Repairs	1,685		
Interest on Loan	500		
Discount Allowed	2,435		
Bad Debts	1,810		
Furniture	4,480		
	2,80,550		2,80,550

The following adjustments are to be made:

- (i) Stock in the shop on 31st December, 2006 was Rs.64,480.
- (ii) Half the amount of X's bill is irrecoverable.
- (iii) Create a provision of 5% on other debtors.
- (iv) Wages include Rs.600 for erection of new machinery.
- (v) Depreciate Machinery by 5% and Furniture by 10%.
- (vi) Commission include Rs.300 being Commission received in advance.]

[Ans.: Gross profit Rs.47,285, Net Profit Rs.30,472, Balance Sheet Total Rs.1,25,312].

4. The following are the balances of Messers Gupta & Co. as on June, 2006.

Debit Balances	Rs.	Credit Balances	Rs.
Cash in hand	540	Sales a/c	98,780
Cash at Bank	2,630	Returns outward	500
Purchases a/c	40,675	Capital Account	62,000
Returns Inwards	680	Sundry creditors	6,300
Wages Account	8,480	Rent	9,000
Fuel & power	4,730		
Carriage on Sales	3,200		
Carriage on Purchases	2,040		
Stock (1-7-06)	5,760		
Building a/c	32,000		
Freehold Land	10,000		
Machinery	20,000		
Patents	7,500		
Salaries	15,000		
General expenses	3,000		
Insurance	600		
Drawings	5,245		
Sundry debtors	14,500		
	1,76,580		1,76,580

Prepare Trading and Profit & Loss a/c and a Balance Sheet as on 30th June, 2006 after taking into account the following adjustments:

- (i) Stock on hand as on 30th June, 2006 is Rs.6,800.
- (ii) Machinery is to be depreciated at 10% and Patents at 20%.
- (iii) Salaries for the month of June, 2006 amounting to Rs.1,500 were unpaid.
- (iv) Insurance, includes a premium of Rs.170 on a policy expiring on 31st December, 2006.
- (v) Further Bad Debts are Rs.725.
- (vi) Rent Receivable Rs.1,000.

[Ans.: Gross profit Rs.43,715, Net profit Rs.26,275, Balance Sheet Total Rs.90,830].

5. The following is the Trial Balance of Amrit Raj as on 31st December, 2006:

Particulars	Dr. Rs.	Cr. Rs.
Capital		25,000
Building	30,000	
Furniture	2,640	
Scooter	4,000	
Returns inward and outward	2,300	
Stock on 1 st January, 2006	8,000	
Purchases and sales	33,800	56,040
Bad debts	400	
Carriage Inward	600	
General Expenses	1,200	
Bad Debts Provision		700
Bank Loan		5,000
Interest on Bank Loan	300	
Commission		900
Insurance and Taxes	2,000	
Scooter Expenses	2,600	
Salaries	4,400	
Cash in hand	2,000	
Debtors and Creditors	3,000	8,000

You are required to prepare the final accounts for the year ending 31st December, 2006 taking into account the following adjustments:

- (a) Closing Stock on 31-12-06 was valued at Rs.4,340.
- (b) Insurance is prepaid to the extent of Rs.200 and carriage inward is unpaid Rs.100.
- (c) Salaries have been paid for 11 months.
- (d) Bank Loan has been taken at 10% p.a. interest.
- (e) Depreciate building by 5% and Scooter by 15%.
- (f) Write off Rs.200 as further bad debts and increase bad debts provision by 5% on book debts.
- (g) Scooter is used for business as well as for private purposes equally.

[Ans.: Gross Profit Rs.17,180, Net Profit Rs.6,640, Balance Sheet Total Rs.43,740]

6. From the following Trial Balance of C.C. Lakadwala as at 31st March, 2006, you are required to prepare the Trading and Profit and Loss Account for the year ended 31st March, 2006 and Balance Sheet as at that date :

Debit Balances	Rs.	Credit Balances	Rs.
Stock	45,000	Capital	75,000
Purchases	2,25,000	Sales	4,20,750
Plant & Machinery	75,000	Sundry Creditors	15,000
Trade charges	10,000	Bad debts provision	200
Carriage Inwards	2,500	Bills Payable	2,000
Carriage outwards	1,500		
Factory Rent	1,500		
Discount	350		
Insurance	700		
Sundry Debtors	60,000		
Office Rent	3,000		
Printing and Stationery	600		
General Expenses	2,800		
Advertising	15,000		
Bills Receivable	3,000		
Drawings	6,000		
Salaries	18,000		
Manufacturing wages	20,000		
Furniture and Fixtures	7,500		
Coal, gas and Water	1,000		
Cash in hand	2,000		
Cash at Bank	12,500		
	5,12,950		5,12,950

The following adjustments are to be taken into consideration:

- Closing stock amounted to Rs.35,000
- Plant and Machinery and Furniture to be depreciated by 5% and 10% respectively.
- Bad debts provision to be raised to 21% on debtors.

(d) Provided for outstanding liabilities for Factory Rent Rs.300 and Office Rent Rs.600.

(e) Insurance include Rs.100 in respect of 2006-07.

[Ans.: Gross Profit Rs.1,56,700, Net Profit Rs.91,100, Total of Balance Sheet Rs.1,78,000].

8.6 SUGGESTED BOOKS

1. Agarwala, A.N., Amitabha Mukherjee, Mohammed Hanif, **Principles and Practice of Accountancy**, Kitab Mahal Agencies, New Delhi.
2. Basu & Das, **Practical in Accountancy, Volume – one**, Rabindra Library, Calcutta
3. Chopde, L.N., & Choudhari, D.H., **Accountancy**, Sheth Publishers, Pune
4. Jain, S.P., Narang, K.L., **Accountancy, Part - I**, Kalyani Publishers
5. Maheswari, S.N., Maheswari, S.K., **Advanced Accountancy (Vol.I)**, Vikas Publishing House Pvt. Ltd., New Delhi, 2005
6. Pillai, R.S.N., Bagavathi, Uma, S., **Fundamentals of Advanced Accounting (Vol.I)** S. Chand & Company Ltd., New Delhi, 2006
7. Shukla, M.C., Grewal, T.S., Gupta, S.C., **Advanced Accounts (Volume I)** S. Chand & Company Limited, New Delhi, 2005
8. Tulsian, P.c., **Accountancy** Tata McGraw-Hill Publishing Company Limited, New Delhi.

LESSON - 9

DEPRECIATION

OBJECTIVES:

By the study of this Chapter, you will be able to understand the meaning and definition of Depreciation, Concepts & Causes of Depreciation, Factors influencing depreciation, and various methods of Depreciation.

STRUCTURE:

5.1 Introduction

9.1 Meaning & Definition

9.2 Causes of Depreciation

9.3 Need & Objectives

9.4 Methods of Depreciation

9.5 Methods of Providing Depreciation

9.6 Fixed Instalment Method - Illustrations Advantages & Disadvantages

9.7 Diminishing Balance Method

9.8 Annuity Method

9.9 Depreciation Fund Method

9.10 Insurance Policy Method

9.11 Sum of Digits Method

9.12 Revaluation Method

9.13 Machine Hour Rate Method

9.14 Mileage Method

9.15 Questions

9.16 Exercises

9.1 INTRODUCTION :

The traditional view of depreciation is that it is meant to be a provision for replacing depreciable assets. Therefore, it is left to the management to decide as to when they should provide for it and when they can dispense with it. Some managements provide for depreciation only when the firm made profits and dispense with it during the years when the firm incurs losses. Even the Companies Act of 1956 has made charging of depreciation compulsory only if the company desired

to declare dividends. The accounting practice of showing profits before charging depreciation first, and then later profits after charging depreciation, confirms the view that it has to be regarded as an appropriation of profit. But the modern view is different. All the fixed assets are considered to be “future services” to be used by the enterprise over the entire period of the economic life (estimated useful life) of such assets. Therefore, the cost of acquisition must be properly allocated over the period of its useful economic life. The amount charged to each period is called depreciation (the expired portion of the capital expenditure on the asset) and it is a technique employed by the accountants to recover the investment in fixed assets. The effects of charging of depreciation in the accounts are:

- (1) it reduces the value of the fixed asset to the extent to which it has been used up;
- (2) it reduces the profits of the concern;
- (3) it is possible to show a true and fair view of the value of the fixed assets in the balance sheet;
- (4) funds are made available to replace the old asset at the end of its useful economic life.

9.2 MEANING & DEFINITION :

Since the cost of fixed asset is nothing but “the price paid for a series of future services”, it is necessary to spread its cost over a number of years during which benefit of the asset is received. This process of spreading the cost of fixed asset is termed as “depreciation”. AICPA in its Accounting Research Bulletin No.22, writes that; “depreciation accounting is a system of accounting which aims to distribute the cost or other basic value of tangible capital assets, less salvage (if any), over the estimated useful life of the unit (which may be group of assets) in a systematic and rational manner. It is a process of allocation not of valuation. Depreciation for the year is the portion of the total cost of the fixed assets that is allocated to the year. Although the allocation may properly take into account occurrences during the year, it is not intended to be the measurement of the effect of all such occurrences”.

The views of the Institute of Chartered Accountants in Australia are: “depreciation represents that part of the cost of a fixed asset to its owner, which is not recoverable when the asset is finally put out of use by him. Provision against this loss of capital is an integral cost of conducting the business during the effective commercial life of the asset and it is not dependent upon the amount of profit cleared. J.N. Carter’s definition runs as follows; “depreciation is the gradual decrease in the value of an assets from any cause”. According to IASC-4 depreciation is the allocation of the depreciable amount of an asset over its estimated useful life. As per the standard, depreciation is to be provided only for assets which (a) are expected to be used during more than one accounting period; (b) have a limited useful life, and (c) and held by an enterprise for use in the production of supply of goods and services, for rental to others or for administrative purposes.

9.3 CAUSES OF DEPRECIATION :

Depreciation may be said to arise from two causes-internal and external. Internal depreciation is that arising from the operation of any cause natural to, or inherent in the asset. External depreciation is that arising from the operation of forces outside the asset itself. These are discussed below.

Internal Causes :

- (a) **Wear and Tear:** "Wear and tear" is an important cause of depreciation in the case of tangible fixed assets like buildings, machinery, furniture, fixtures, tools, fitting etc. "Wear and tear" results from friction, vibration, strain, chemical reaction, weathering intensity of the use, care in handling, standard of maintenance, minor accidents inevitable in the handling of plant etc. The term 'depreciation' (not "amortization") is generally used to indicate the expired utility of an asset due reasons mentioned above.
- (b) **Depletion:** Depletion is also one of the internal causes of decrease in the value of wasting assets such as mine, quarries, oil-wells and forest-stands; The term "depletion" (neither "amortization" not 'depreciation") is correctly used to refer to the expired utility of the wasting asset.

External Causes :

- (a) **Obsolescence:** It is an experience in every day life that many times a particular machine is discharged before it is completely worn-out. This means that there are some external factors too which are responsible for throwing out of use an asset which is in a good condition. Among the external causes, "obsolescence" or "suppression" is the prominent factor. Obsolescence is induced by new investments, improvement, loss of demand due to change in fashion, changes in governmental requirements. Loss in demand, for any reason, has a direct impact on the economic life of the asset. Since the market for the product collapses, the machine, if not adaptable to different uses, goes out of use or is obsoleted.
- (b) **Effluxion of Time:** There are some intangible fixed assets which decrease in value as time elapses. For example, if Rs.50,000 are paid for a certain lease (excluding lease of mine) for 10 year, then with the lapse of every year, the value of the asset goes down by Rs.50,000, whether utilised or not. Its value is reduced to zero at the end of the 10th year. Copyrights, patent rights are other examples of intangible fixed assets which decrease in value due to effluxion of time.

9.4 NEED AND OBJECTIVES :

One unfortunate thing about depreciation is that it is not visible like other expenses till the very end. In case of other expenses, the expenditure is patent and hence such expenses are provided for. It is not so with depreciation. Some firms do not deduct depreciation from their gross earnings to ascertain the net profit. This is not correct. Provision for depreciation is necessary firstly, for ascertaining true profit, secondly, for retaining funds in the business so that the asset can be replaced at the proper time, and thirdly, for presenting a true balance sheet. Depreciation of current assets is taken care of by valuing them for balance sheet purposes at cost or market prices which ever is less.

It is necessary that a reasonable amount is provided for as depreciation, every year, on fixed assets owing to the following reasons:

- (i) to ascertain correct profits of the period,

- (ii) to present financial position in the balance sheet,
- (iii) to include the depreciation in cost of production, to arrive at true cost of production,
- (iv) to provide funds for replacement of the asset at the end of the life of the original asset,
- (v) to recover the cost of the fixed assets spread over their useful life; to keep the capital in tact,
- (vi) to conserve the cash resources of the concern (to the extent of depreciation) from being distributed as dividends (profits get reduced when depreciation is charged),
- (vii) to save tax payable on profits (as the profits get reduced to the extent of depreciation, which is a permissible deduction as per the Income Tax Act), and
- (viii) to get an approximate idea of the amount for which the used asset can be sold in the second-hand market.

9.5 METHODS OF DEPRECIATION :

There are two ways of recording depreciation in the books of account:

First Method: When no provision for depreciation account is maintained :

Under this method, depreciation is directly charged to the asset account by debiting depreciation account and crediting the asset account. At the end of the accounting period, depreciation account is closed by transferring it to the profit and loss account. In the balance sheet, the asset appears at its written down value (cost less depreciation provided to date). Here, the actual cost of an asset and the total amount of depreciation that has been provided (to-date) cannot be ascertained from the balance sheet. The following are the journal entries passed under the first method:

		Rs.	Rs.
1.	When the asset is purchased :		
	Asset account..... Dr	xxx	
	To cash account		xxx
2.	Installation charges, reconditioning or over handling expenses incurred on second hand machine should also be charged to the asset account. The entry is :		
	Asset account..... Dr	xxx	
	To cash account		xxx
3.	For providing depreciation at the end of the year :		
	Depreciation account..... Dr	xxx	
	To Asset account		xxx

4.	For transfer of depreciation to profit and loss account :		
	Profit and loss account.....Dr	xxx	
	To Depreciation account		xxx
5.	It the asset is sold, for the amount realised on the sale of asset :		
	Cash account..... Dr	xxx	
	To Asset account		xxx
6.	For depreciation on the asset to the date of sale :		
	Depreciation accountDr	xxx	
	To Asset account		xxx
7.	(a) For the profit on sale of asset :		
	Asset accountDr	xxx	
	To profit and loss account		xxx
	(or)		
	(b) For the loss on sale of asset :		
	Profit and loss account.....Dr	xxx	
	To Asset account		xxx

Second Method: When Provision for depreciation account is maintained

Under this method (in contrast to the above), depreciation is not directly charged to the asset account. The depreciation for the period is debited to depreciation account and credited to “accumulated depreciation account” or “provision for depreciation account”. As in the previous method, depreciation account is closed by transferring it to the profit and loss account. In the balance sheet, the asset appears at its original cost and the accumulated depreciation is shown as a deduction from the asset account. Here, from the balance sheet, the original cost of the asset and the total depreciation to-date that has been charged on that asset, can be easily ascertained. As the year passes, the balance of the accumulated depreciation goes on increasing since constant credit is given to this account in each accounting year. After the expiry of the useful life, these two accounts are closed by debiting accumulated depreciation account and crediting the asset account - any balance in asset account is transferred to the profit and loss account. The following are the journal entries passed under the second method.

	Every year accounting period	Rs.	Rs.
1.	Depreciation account..... Dr. To provision for depreciation account (Being depreciation written of)	xxx	xxx
2.	Profit and loss accountDr. To Depreciation account (Being depreciation charged to profit and loss account)	xxx	xxx
In the year in which the assest is sold :			
3.	Cash account Dr. To Assest account (Being the amount realised on the sale of the asset)	xxx	xxx
4.	Depreciation account..... Dr. To provision for depreciation (Being depreciation on the asset upto the date of sale written off)	xxx	xxx
5.	Profit and loss accountDr. To Depreciation account (Being depreciation charged to profit and loss account)	xxx	xxx
6.	Provision for depreciation account..... Dr. To Asset account (Being the transfer of provision to asset account)	xxx	xxx
7.	Asset account..... Dr. To profit and loss account (Being the profit on sale of asset)	xxx	xxx
8.	Profit and loss accountDr. To Asset account (Being the loss on sale of asset)	xxx	xxx

9.6 METHODS OF PROVIDING DEPRECIATION :

As has been pointed out earlier, the total depreciation to be written off during the life time of the asset is original cost less scrap value or residual value. But there are different methods of calculating the amount of depreciation to be charged every year. They vary from asset to asset depending on its nature and also from concern to concern. The following are the various methods used for providing depreciation:

- 9.6.1 Fixed Instalments of Straight Line Method
- 9.6.2 Diminishing Balances or Reducing Installment Method.
 - 9.6.2.1 Written Down Value Method
 - 9.6.2.2 Double Declining Balance Method
- 9.6.3 Annuity Method
- 9.6.4 Depreciation Fund or Sinking Fund Method
- 9.6.5 Insurance Policy Method
- 9.6.6 Sum of Digits Method
- 9.6.7 Depletion Method
- 9.6.8 Revaluation Method
- 9.6.9 Machine Hour Rate Method
- 9.6.10 Mileage Method

9.7 FIXED INSTALMENT METHOD :

This method is also known as "Equal Instalment" or "Straight Line" method. According to this method, a fixed and equal amount is charged as depreciation every year during the life time of the asset. When the amount of depreciation is presented on a graph, it would be a straight line. The amount is such that at the end of the useful life of the asset the asset gets reduced to zero or its residual value. This can be calculated using the following formula.

$$\text{Annual depreciation} = \frac{[\text{Cost of asset} + \text{Erection charges}] - \text{Residual value}}{\text{Life of the asset in terms of years (life period)}}$$

Similarly, the rate of depreciation is calculated as under:

$$\text{Rate of depreciation} = \frac{\text{Annual depreciation}}{[\text{Cost of asset} + \text{Erection charges}] - \text{Residual value}} \times 100$$

ILLUSTRATIONS**Illustration-1:**

Calculate the amount of annual depreciation for three years by straight line method when (i) Cost of machinery Rs.30,000 (ii) Expected life of asset 3 years (iii) Scrap value Rs.3,000.

Solution:

Straight Line Method

$$\begin{aligned} \text{Annual depreciation} &= \frac{\text{Original cost} - \text{Scrap value}}{\text{Life of asset}} \\ &= \frac{30,000 - 3,000}{3 \text{ Years}} \\ &= \frac{27,000}{3} = \text{Rs.9,000} \end{aligned}$$

Therefore, annual depreciation is Rs.9,000.

Illustration-2:

A company purchased a plant for Rs.50,000; the useful life of the plant is 10 years and the residual value is Rs.5,000. Determine the rate and amount of depreciation to be charged every year.

Solution:

$$\begin{aligned} \text{Depreciation to be charged every year} &= \frac{\text{Original cost} - \text{Residual value}}{\text{Life of the plant}} \\ &= \frac{50,000 - 5,000}{10} \\ &= \frac{45,000}{10} = \text{Rs.4,500} \end{aligned}$$

$$\begin{aligned} \text{Rate of depreciation} &= \frac{\text{Depreciation}}{\text{Original cost} - \text{Residual value}} \times 100 \\ &= \frac{4,500}{50,000 - 5,000} \times 100 = \frac{4,500}{45,000} \times 100 = 10\% \end{aligned}$$

Illustration-3:

Saicharan purchased a machine by cheque for Rs.1,80,000 on 1st January 1998. Its probable working life was estimated at 10 years and its probable scrap value at the end of that time as Rs.20,000. It was decided to write off depreciation by equal annual instalments. You are required to pass necessary journal entries for first two years and show necessary accounts and the balance sheet:

(a) when no provision for depreciation account is maintained.

(b) when provision for depreciation account is maintained.

[It was decided to close books each year on December, 31st]

Solution:

$$\text{Annual depreciation} = \frac{1,60,000}{10} = \text{Rs.16,000}$$

(a) When no provision for depreciation account is maintained: $\frac{\text{Rs.1,80,000}-\text{Rs.20,000}}{10}$

In the books of Saicharan Journal Entries

Date	Particulars	L.f	Rs.	Rs.
1998 Jan.1	Machinery account.....Dr		1,80,000	
	To Bank account			1,80,000
	(Being the purchase of machinery by cheque)			
1998 Dec.31	Depreciatoin account.....Dr		16,000	
	To Machinery account			16,000
	(Being depreciation charged to machinery)			
1998 Dec.31	Profit and loss accountDr		16,000	
	To Depreciation account			16,000
	(Being the depreciation transferred to profit & loss account)			

1999

Dec.31	Depreciation account.....Dr	16,000	
	To Machinery account		16,000
	(Being depreciation charged to machinery)		

1998

Dec.31	Profit and loss accountDr	16,000	
	To Depreciation account		16,000
	(Being depreciation transferred to profit & loss account)		

Machinery Account

Dr.				Cr.			
Date	Particulars	L.f	Rs.	Date	Particulars	L.F.	Rs.
1998				1998			
Jan. 1	To Bank		1,80,000	Dec.31	By Depreciation		16,000
				„	By Balance c/d		1,64,000
			<u>1,80,000</u>				<u>1,80,000</u>
1999				1999			
Jan. 1	To Balance		1,64,000	Dec.31	By Depreciation		16,000
				„	By Balance c/d		1,48,000
			<u>1,64,000</u>				<u>1,64,000</u>
2000							
Jan. 1	To Balance b/d		1,48,000				

Depreciation Account

Dr.				Cr.			
Date	Particulars	L.F	Rs.	Date	Particulars	L.F.	Rs.
1998				1998			
Dec. 31	To Machinery A/c		16,000	Dec.31	By P & L A/C		16,000
1999				1999			
Dec.31	To Machinery A/c		16,000	Dec.31	By P & L A/C		16,000

Balance sheet as on 31-12-98

Liabilities	Rs.	Rs.	Assets	Rs.	Rs.
			Machinery A/c.	1,80,000	
			Less : Depreciation	16,000	1,64,000

Balance sheet as on December 31, 1999

Liabilities	Rs.	Rs.	Assets	Rs.	Rs.
			Machinery A/c.	1,64,000	
			Less : Depreciation	16,000	1,48,000

(b) When provision for depreciation account is maintained:

In the books of Saicharan Journal Entries

Date	Particulars	L.F	Rs.	Rs.
1998				
Jan.1	Machinery account.....Dr		1,80,000	
	To Bank account			1,80,000
	(Being the machinery purchase by cheque)			
1998				
Dec.31	Depreciatoin account.....Dr		16,000	
	To provision for depreciation account			16,000
	(Being depreciation provided for the accounting period)			

1998

Dec.31	Profit and loss accountDr	16,000	
	To Depreciation account		16,000
	(Being the depreciation transferred to profit & loss account)		

1999

Dec.31	Depreciation account.....Dr	16,000	
	To provision for depreciation account		16,000
	(Being depreciation provided for the accounting period)		

1998

Dec.31	Profit and loss accountDr	16,000	
	To Depreciation account		16,000
	(Being depreciation transferred to profit & loss account)		

Machinery Account

Dr.				Cr.			
Date	Particulars	L.F	Rs.	Date	Particulars	L.F.	Rs.
1998				1998			
Jan. 1	To Bank A/c		1,80,000	Dec.31	By Balance c/d		1,80,000
1999				1999			
Jan. 1	To Balance b/d		1,80,000	Dec.31	By Balance c/d		1,80,000
2000							
Jan. 1	To Balance b/d		1,80,000				

Provision for depreciation Account

Dr.				Cr.			
Date	Particulars	L.f	Rs.	Date	Particulars	L.F.	Rs.
1998				1998			
Dec. 31	To Balance c/d		16,000	Dec.31	By Depreciation A/c		16,000
1999				1999			
Dec.31	To Balance c/d		32,000	Dec.31	By Balance b/d		16,000
				Dec.31	By Depreciation A/c		16,000
			<u>32,000</u>				<u>32,000</u>
				2000			
				Jan. 1	By Balance b/d		32,000

Depreciation Account

Date	Particulars	L.F	Rs.	Date	Particulars	L.F.	Rs.
31.12.98	To Provision for Depreciation		16,000	31.12.98	By P & L A/C		16,000
31.12.99	To Provision for Depreciation		16,000	31.12.99	By P & L A/C		16,000

Balance sheet as on December 31, 1998

Liabilities	Rs.	Rs.	Assets	Rs.	Rs.
			Machinery	1,80,000	
			Less : Provision for depreciation	16,000	
					<u>1,64,000</u>

Balance sheet as on December 31, 1999

Liabilities	Rs.	Rs.	Assets	Rs.	Rs.
			Machinery	1,80,000	
			Less : Provision for depreciation	32,000	
					<u>1,48,000</u>

Advantages of Fixed Instalment Method

- (1) It is simple to calculate and easy to understand
- (2) It can reduce the book value of the asset to zero
- (3) The valuation of the asset each year in the balance sheet is reasonably fair.

Disadvantages of Fixed Instalment Method

- (i) This method ignores the fact that the service yielding ability of the assets tends to fall but the repairs and maintenance costs increase with passage of time. Though each year's charge for depreciation is the same, the charge for repairs and renewals goes on increasing as the asset becomes old. Therefore, the charge to the profit and loss account increases over the years.
- (ii) If an additional asset is acquired, the amount to be charged as depreciation needs to be recalculated.

9.8 DIMINISHING BALANCE OR REDUCING INSTALMENT METHOD:

The most important defect of the fixed instalment method is that the burden (along with repairs and renewals) on the Profit and loss account of various years is disproportionate. To remedy this defect, the reducing instalment methods of depreciation are devised so that the total burden on the profit and loss account is the same every year, while the depreciation instalments will be decreasing, the repairs and renewal charges will be increasing year after year. There are two important methods under the diminishing balance system. They are:

- (i) Written down value method.
 - (ii) Double-declining balance method
- (i) **Written Down Value Method:** Under this method, depreciation is charged at a fixed rate on the reducing balance of the asset every year. Every year the depreciation charge will get reduced because depreciation is calculated on the opening balance of the asset. Since the depreciation is calculated in the written down value of the asset each year, it is known as written down value method. Under this method also, repairs and renewals have to be separately charged to the profit and loss account and provision for replacement of the asset has also to be made separately.

Current year depreciation = Current year beginning value of the asset \times Rate/100.

Here, the calculation of rate of depreciation involves a complex procedure. The formula used for calculating the rate under this method is:

$$\text{Rate of depreciation} = 1 - n \sqrt[n]{\frac{\text{Scrap value}}{\text{Cost of the asset}}}$$

n = the expected useful life in years.

Illustration- 6:

Calculate the amount of annual depreciation for three years by reducing balance method from the following particulars

- i. Cost of machinery is Rs. 40,000
- ii. expected life is 3 years
- iii. rate of depreciation 33 1/3%
- iv. Scrap value is Rs. 40,000.

Solution :

	Rs.
Reducing balance Method :	
Original cost	40,000
Less : depreciation for first year ($33\frac{1}{3}\% \times 40,000$)	13,333
Written down value (WDV)	26,667
Less : depreciation for second year ($33\frac{1}{3}\% \times 26,667$)	8,889
Written down value	17,778
Less : depreciation for thrid year ($33\frac{1}{3}\% \times 17,778$)	5,926
Written down value	11,852

Illustration- 7:

A company purchased a machinery on 1.1.1998 for Rs. 1,50,000. It was decided to write off the machinery by using diminshing balance method. The rate of depreciation was 15% p.a., on 1.7.1999 the machine was sold for Rs. 1,00,000 show the Machine account for the year 1998 and 1999.

Solution :

Date	Particulars	L.F	Rs.	Date	Particulars	L.F.	Rs.
1998				1998			
Jan. 1	To cash A/c.		1,50,000	Dec.31	By Depreciation A/c		22,500
				„	By Balance c/d		1,27,500
			1,50,000				1,50,000
1999				1999			
Jan. 1	To Balance c/d		1,27,500	July 1	By cash A/c.		1,00,000
				„	By Depreciation A/c		9,563
				Dec.31	By profit and loss A/c.		17,937
			1,27,500				1,27,500

Illustration- 8:

On 1st April 1998 Sahitya Ltd. purchased a second - hand machine for Rs. 98,000 and spend Rs. 2,000 on its erection. On 1st July. 2000 this machine was sold for Rs. 48,000.

Prepare the machinery account for the first 3 years according to the written down value method taking the rate of depreciation as 10% p.a.

Solution :**Working Notes :****Profit and Loss on sale of Machinery**

	Rs.
Book value of the machine as on date of sale (83,250 - 4,162,50)	79,087,50
Less : Sale of machinery	48,000,00
Loss on sale of machinery	31,087,50

In the Bookd of Sahitya Ltd.**Machinery Account**

Date	Particulars	L.f	Rs.	Date	Particulars	L.F.	Rs.
1998				1998			
April 1	To cash A/c.		98,000	Dec.31	By Depreciation A/c		7,500
"	To cash A/c.		2,000				92,500
			1,00,000				1,00,000
1999				1999			
Jan. 1	To Balance b/d		92,500	Dec.31	By Depreciation A/c		9,250
				Dec.31	By balance c/d		83,250
			92,500				92,500

Accounting for Hospitals		9.17	Depreciation		
2000			2000		
Jan. 1	To Balance b/d	83,250	July 1	By Depreciation A/c	4,162,50
			July 1	By cash A/c.	48,000,00
			Dec.31	By profit and loss A/c.	31,087,50
		<hr/>			<hr/>
		83,250			83,250

(ii) **Double Declining Balance Method:** Under this method also, depreciation is charged on the reduced balance at the beginning of the period, but the rate is arrived at by doubling the straight line rate. The rate under this method, is calculated on the residual value of the asset.

Illustration-9:

Sudheer & Co, purchased a plant on January 1, 1997 for Rs. 21,000 and spent Rs. 1,000 on its erection. The asset is expected to last for 4 years, after which its break up value is estimated to be Rs. 2,000. Find out the amount of depreciation to be charged every year under double declining balance method and show how the plant account would appear for the 4 years assuming that it is sold away for Rs. 1,700 at the end.

22,000

Solution :

4

The rate can be arrived at as follows :

Cost of the asset to be depreciated Rs. 22,000

(including erection charges)

Estimated life 4 year

Depreciation per annum = Rs 5,500

Rate of depreciation under straight line method ; $\frac{100 \times 5,500}{22,000} = 25\%$

Rate of depreciation under double declining balance method $2 \times 25 = 50\%$ [of the balance at the beginning of each year]

The amount charged as depreciation during the 4 years of life would be as follows :

	Balance at the beginning	Rate	Depreciation
	Rs.		Rs.
1st Year	22,000	50%	11,000
2nd Year	11,000	50%	5,500
3rd Year	5,500	50%	2,750
4th Year	2,750	50%	1,375
Balance left at the end of assets - life	1,375		

Dr			Plant Account			Cr	
Date	Particulars	L.F	Rs.	Date	Particulars	L.F.	Rs.
1997				1997			
Jan. 1	To cash A/c.		21,000	Dec.31	By Depreciation A/c		11,000
"	To cash A/c. (erection charges)		1,000		By balance c/d		11,000
			22,000				22,000
1998				1998			
Jan. 1	To Balance b/d		11,000	Dec.31	By Depreciation A/c		5,500
				Dec.31	By balance c/d		5,500
			11,000				11,000
1999				1999			
Jan. 1	To Balance b/d		5,500	Dec.31	By Depreciation A/c		2,750
				Dec.31	By balance c/d		2,750
			5,500				5,500

2000			2000		
Jan. 1	To Balance b/d	2,750	Dec.31	By Depreciation A/c	1,375
Dec.31	To P& L A/c	325	Dec.31	By cash c/d	1,700
		3,075			3,075

Advantages of Diminishing Balance Method

1. As the decreasing charge for depreciation cancels out the increasing charges for repairs over the years, it gives a fair charge for depreciation.
2. No recalculation is necessary when additional assets are purchased.
3. This method is applicable for income tax purposes.

Disadvantages:

1. This method lacks simplicity - the ascertainment of the percentage to be applied.
2. This method cannot be applied for assets with a very short life.
3. The assets is never fully depreciated.

Illustration-10:

A plant is purchased for Rs. 20,000. It is depreciated at 5% p.a. on reducing balance method for five years when it becomes obsolete due to new method of production and is therefore scrapped. The scrap produces Rs. 5,385. Show the plant account in the ledger.

Plant Account							
Date	Particulars	L.F	Rs.	Date	Particulars	L.F.	Rs.
I yrs.	To cash A/c.		20,000	II yrs.	By Depreciation A/c (20,000x 5/100)		1,000
					By balance c/d		19,000
			20,000				20,000
II yrs.	To balance A/c.		19,000	II yrs.	By Depreciation A/c (19,000x 5/100)		950
					By balance c/d		17,147
			19,000				19,000

III yrs.	To balance A/c.	18,050	III yrs.	By Depreciation A/c (18,050x 5/100)	903
				By balance c/d	18,050
		<hr/>			<hr/>
		18,050			18,050
IV yrs.	To balance A/c.	17,147	IV yrs.	By Depreciation A/c (17,147x 5/100)	857
				By balance c/d	16,290
		<hr/>			<hr/>
		17,147			17,147
V yrs.	To balance A/c.	16,290	V yrs.	By Depreciation A/c	815
			"	By cash A/c	5,385
				By P & L A/c (loss on sale of plant)	1,090
		<hr/>			<hr/>
		16,290			16,290

9.9 ANNUITY METHOD :

This method takes into account not only the shrinkage in the utility value of the asset (depreciation) but also the loss by way of interest on the capital invested in the purchase of the asset. The amount invested in the asset would have earned some interest if it was not invested in that particular asset. Thus, the loss of interest foregone also has to be taken into account. The asset account is debited every year with the annual interest on the (diminishing) value of the asset account appearing at the beginning of each year, and the value of the asset plus interest is sought to be completely written off during a given period by this method. Thus, the amount written off as depreciation is the same each year, but the interest to be debited will diminish year after year. The fixed amount to be charged every year as depreciation is calculated from the annuity table, an extract of which is given below:

Amount required to be written off Re.1 by annuity method

Year	Interest on 3%	Interest on 4%	Interest on 5%	Interest on 6%
1	1.0300	1.0400	1.0500	1.0600
2	0.5226	0.5302	0.5378	0.5454
3	0.3535	0.3603	0.3672	0.3741
4	0.2690	0.2755	0.2820	0.2885
5	0.2184	0.2246	0.2310	0.2374
6	0.1846	0.1908	0.1907	0.2034
7	0.1605	0.1666	0.1728	0.1791
8	0.1425	0.1485	0.1547	0.1610
9	0.1284	0.1345	0.1407	0.1470
10	0.1172	0.1233	0.1295	0.1359
15	0.0838	0.0899	0.0963	0.1030
20	0.0672	0.0736	0.0802	0.0872
25	0.0574	0.0640	0.0710	0.0782

This method of depreciation can only be applied to an asset, the life of which will extend to a known period, e.g., a lease. Since the depreciation charge is same and the interest charges decrease each year (because interest is calculated on reducing balance). The net charge for depreciation (depreciation less interest) gradually decreases.

Accounting entries		Rs.	Rs.
1.	Asset A/c..... Dr.	xxx	
	To Interest A/c.		xxx
	(Being interest debited to asset A/c.)		
2.	Depreciation A/c..... Dr.	xxx	
	To Asset A/c.		xxx
	(Being depreciation charges)		

Illustration-14:

Bhargavi Ltd., took a lease on 1st January, 1995, costing Rs.1,00,000 for a period of 5 years. The company decided to amortise the lease by annuity method, interest at the rate of 5% p.a. being charged. If annuity of Re.1 for 5 years at 5% is 0.230975, show lease account for the whole period.

Solution:

$$\text{Annual instalment} = 1,00,000 \times 0.230975 = \text{Rs.}23,097.50$$

In the Books of Bhargavi Ltd. Lease Account

Dr.				Cr.			
Date	Particulars	L.f	Rs.	Date	Particulars	L.F.	Rs.
1995				1995			
Jan. 1	To cash A/c.		1,00,000	Dec.31	By Depreciation A/c		23,097.50
Dec.31	To interest A/c.		5,000	"	By balance c/d		81,902.50
			<u>1,05,000</u>				<u>1,05,000</u>
1996				1996			
Jan. 1	To Balance b/d.		81,902.50	Dec.31	By Depreciation A/c		23,097.50
Dec.31	To interest A/c.		4,095.13	"	By balance c/d		62,900.13
			<u>85,997.63</u>				<u>85,997.63</u>
1997				1997			
Jan. 1	To Balance b/d.		62,900.13	Dec.31	By Depreciation A/c		23,097.50
Dec.31	To interest A/c.		3,145.00	"	By balance c/d		42,947.63
			<u>66,045.13</u>				<u>66,045.13</u>
1998				1998			
Jan. 1	To Balance b/d.		42,947.63	Dec.31	By Depreciation A/c		23,097.50
Dec.31	To interest A/c.		2,147.38	"	By balance c/d		21,997.51
			<u>45,095.01</u>				<u>45,095.01</u>

Accounting for Hospitals	9.23	Depreciation
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1999			1999		
Jan. 1	To Balance b/d.	21,997.51	Dec.31	By Depreciation A/c	23,097.50
Dec.31	To interest A/c.	1,099.99			
		<u>23,097.50</u>			<u>23,097.50</u>

Note: (difference between last year opening balance and annual installment = last year interest).

We give below a table showing the amount of interest and depreciation charged each year and net debit to profit and loss account:

Year	Depreciaton (debited P&L A/C)	Interest (credited to P&L A/C)	Net (debited to P&L A/C)	Remarks
1995	23,097.50	5,000	18,097.50	Note that:cost
1996	23,097.50	4,095.13	19,002.37	of lease and
1997	23,097.50	3,145.00	19,952.50	interst is
1998	23,097.50	2,147.38	20,950.12	equal to the
1999	23,097.50	1,099.99	21,997.51	total depreciation
Total	1,15,487.50	15,487.50	1,00,000.00	

Illustration-15:

A trader takes a lease of 5 years for Rs.5,000. He decided to write off lease by annuity method presuming the rate of interest at 5% p.a. The annuity table shows that annual amount necessary to write off Re.1 in 5 years at 5% p.a. is Re.0.230975.

Show the lease account for 5 years.

Solution:

$$\text{Annual instalment} = 5,000 \times .230975 = 1,154.88$$

Lease Account

Dr.				Cr.			
Date	Particulars	L.F	Rs.	Date	Particulars	L.F.	Rs.
I Yr.	To Cash		5,000.00	I yr	By Depreciation A/c		1,154.88
	To Interest		250.00		By Balance c/d		4,095.12
			<u>5,250.00</u>				<u>5,250.00</u>

II Yr.	To Balance b/d	4,095.12	II yr	By Depreciation A/c	1,154.88
	To interest	204.76		By balance c/d	3,145.00
		<u>4,299.88</u>			<u>4,299.88</u>
III Yr.	To Balance b/d	3,145.00	III yr	By Depreciation A/c	1,154.88
	To interest	157.25		By balance c/d	2,147.37
		<u>3,302.25</u>			<u>3,302.25</u>
IV Yr.	To Balance b/d	2,147.37	IV yr	By Depreciation A/c	1,154.88
	To interest	107.37		By balance c/d	1,099.86
		<u>2,254.74</u>			<u>2,254.74</u>
V Yr.	To Balance b/d	1,099.86	V yr	By Depreciation A/c	1,154.88
	To interest	55.02			
		<u>1,154.88</u>			<u>1,154.88</u>

Notes: (i) The amount of depreciation is fixed for all the years.

(ii) The amount of interest is reduced every year for the reason it is calculated on the written down balance.

(iii) The total charge to profit and loss account can be found out by striking out the balance of depreciation and interest. The net amount to be charged to the profit and loss account in the above example has been given in the following list:

Year	Depreciation debited Rs.	Interest credited Rs.	Net charge against profit Rs.
1	1,154.88	250.00	904.88
2	1,154.88	204.76	950.12
3	1,154.88	157.25	997.63
4	1,154.88	107.37	1,047.51
5	1,154.88	55.02	1,099.86
	<u>5,774.40</u>	<u>774.40</u>	<u>5,000.00</u>

(iv) It should be noted that net charge against profit increase year after year for the reason depreciation is a fixed amount while interest credited reduces every year.

(v) Cost price of the asset Rs.5,000.00

Rs. 774.40

Total Depreciation Rs.5,774.40

9.10 DEPRECIATION FUND METHOD :

This method is also known as "Sinking fund" method. This method is followed when provision for replacement of the asset has to be made. Under this method, a fixed amount is charged for depreciation to the profit and loss account every year and credited to 'depreciation fund' account and on equal amount of money is invested in outside securities every year. These investments are allowed to accumulate at compound for replacement of the used asset through the realisation of the securities. The asset account will remain at its original value in the ledger till the end of its life and closed at the end, by transferring the balance in the 'depreciation fund' account to the asset account.

Since the securities always earn some interest, it is not necessary to write off the full cost of the asset as depreciation. Something less will be adequate. Ultimately, the total depreciation written off and interest earned on securities should be equal to the original cost of the asset. Hence, under this method the depreciation charge will be less than what it would be under other methods. In addition, this method has an added advantage of providing ready funds for replacement of the old asset at the end of its life.

It is necessary to refer to sinking fund table to arrive at the depreciation to be provided every year, as the interest (at a fixed rate) earned on the proposed investments is also to be taken into account. An extract of sinking fund table is given below:

Sinking Fund Table

Periodic deposit which will amount to Re.1

Years	1%	2%	3%	4%	5%	6%
1	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
2	0.4975	0.4951	0.4926	0.4902	0.4878	0.4854
3	0.3300	0.3268	0.3235	0.3203	0.3172	0.3141
4	0.2463	0.2426	0.2390	0.2355	0.2320	0.2286
5	0.1960	0.1922	0.1884	0.1846	0.1810	0.1174
6	0.1625	0.1585	0.1546	0.1508	0.1470	0.1434
7	0.1386	0.1345	0.1305	0.1266	0.1228	0.1191

8	0.1207	0.1165	0.1125	0.1082	0.1047	0.1010
9	0.1067	1.1025	0.0984	0.0945	0.0907	0.0870
10	0.0956	0.0913	0.0872	0.0833	0.0795	0.0759
15	0.0621	0.0578	0.0538	0.0499	0.0463	0.0430
20	0.0454	0.0412	0.0372	0.0336	0.0302	0.0272
25	0.0354	0.0312	0.0274	0.0240	0.0219	0.0182

Accounting Treatment

The entries to be recorded under this method are as follows:

I. At the end of first year:

		Rs.	Rs.
(a)	For providing annual depreciation :		
	Depreciation A/cDr.	xxx	
	To Depreciation fund A/c.		xxx
(b)	For investing the amount of depreciation:		
	Depreciation Fund investments A/C...Dr.	xxx	
	To Bank A/c.		xxx
(c)	For transferring depreciation to profit and loss A/c :		
	Profit and Loss A/c..... Dr.	xxx	
	To Depreciation A/c.		xxx

II. At the end of second and subsequent years upto last but one year:

(a)	For interest received on investments purchased out of depreciation fund :		
	Cash A/cDr.	xxx	
	To Depreciation fund A/c.		xxx
(b)	For annual instalment of depreciation :		
	Depreciation A/cDr.	xxx	

	To Depreciation fund A/c.		xxx
(c)	For investing the amount of depreciation of this year and interest earned on investment of fund :		
	Depreciation fund investments A/c Dr.	xxx	
	To cash A/c.		xxx
(d)	For transferring depreciation to profit and loss A/c :		
	Profit and Loss A/c Dr.	xxx	
	To Depreciation A/c.		xxx

III. At the end of the last year of the life of the asset :

(a)	For annual instalment of depreciation :		
	Depreciation A/c Dr.	xxx	
	To Depreciation fund A/c.		xxx
(b)	For transferring depreciation to profit and loss A/c :		
	Profit and Loss A/c Dr.	xxx	
	To Depreciation A/c.		xxx
(c)	For sale of investments :		
	Cash A/c Dr.	xxx	
	To Depreciation funds investments A/c.		xxx
(d)	For profit earned on sale of investments :		
	Depreciated Fund Investments A/c Dr.	xxx	
	To Depreciation funds A/c.		xxx
(If there is a loss reverse entry has to be passed)			
(e)	For writing off the old asset :		
	Depreciation Fund A/c Dr.	xxx	
	To Asset A/c.		xxx

- (f) For transferring the balance of depreciation fund account :
- (i) If it shows credit balance :
- | | | | |
|-------------------------|-----|-----|-----|
| Depreciation Fund | Dr. | xxx | |
| To profit and loss A/c. | | | xxx |
- (ii) If it shows debit balance :
- | | | | |
|---------------------------|-----|-----|-----|
| Profit and loss A/c..... | Dr. | xxx | |
| To Depreciation Fund A/c. | | | xxx |
- (g) For purchasing new asset :
- | | | | |
|--------------------|-----|-----|--|
| New Asset A/c..... | Dr. | xxx | |
| To Bank A/c. | | | |

Illustration-16:

A company purchased 3 years lease on January, 1997 for Rs.1,00,000. It has decided to provide for the replacement of the lease at the end of 3 years by setting up a depreciation fund. It is expected that investments will fetch interest at 5%. Sinking fund table shows that 0.317208 at 5% will accumulate to Re.1 in 3 years.

Investments are sold on 31.12.1999 at the book value. Pass necessary journal entries and record for three years in the books of the company.

Solution:

$$\begin{aligned} &\text{Depreciation (annual contribution)} \\ &= \text{Rs. } 1,00,000 \times 0.317208 = \text{Rs. } 31,720.80 \end{aligned}$$

Journal Entries in the books of company

Date	Particulars	L.F	Rs.	Rs.
1997 Jan.1	Lease A/c..... Dr		1,00,000	
	To Cash A/c			1,00,000
	(Being the purchase or lease for 3 year)			
Dec.31	Depreciatoin A/c..... Dr		31,720.80	
	To Depreiation Fund A/c			31,720.80
	(Being depreciation written off)			

Dec.31	Depreciatoin Fund investments A/c..Dr	31,720	
	To Cash A/c		31,720
	(Being the amount invested in Securities)		
Dec.31	Profit and loss account..... Dr	31,720.80	
	To Depreciation account		31,720.80
	(Being transfer of depreciation to profit & loss account)		
1998			
Dec.31	Cash A/c.....Dr	1,586	
	To Depreciation Fund A/c.		1,586
	(Being the interest on depreciation fund investments received)		
Dec.31	Depreciatoin A/c. Dr	31,720.80	
	To Depreiation Fund A/c		31,720.80
	(Being depreciation written off)		
Dec.31	Depreciatoin Fund investments A/c..Dr	33,306	
	To Cash A/c		33,306
	(Being depreciation written off)		
Dec.31	Profit and loss account..... Dr	31,720.80	
	To Depreciation account		31,720.80
	(Being transfer of depreciation to profit & loss account)		
1998			
Dec.31	Depreciatoin A/c. Dr	31,720.80	
	To Depreiation Fund A/c		31,720.80
	(Being depreciation written off)		
Dec.31	Profit and loss account..... Dr	31,720.80	
	To Depreciation account		31,720.80
	(Being transfer of depreciation to profit & loss account)		

Dec.31	Cash A/c..... Dr	65,026	
	To Depreciation fund investments A/c.		65,026
	(Being the sale of investment)		
Dec.31	Depreciation Fund A/c Dr	99,999.82	
	To Lease A/c.		99,999.82
	(Being writing off the old lease)		
Dec.31	Profit and loss A/c..... Dr	0.18	
	To Lease A/c.		0.18
	(Being transfer of the balance of lease A/c. to profit and loss A/c.)		

**Ledger Account in the books of the company
Depreciation Fund Investments Account**

Dr.							Cr.
Date	Particulars	L.F	Rs.	Date	Particulars	L.F.	Rs.
1997				1997			
Dec.31	To Cash A/c		31,720	Dec.31	By Balance c/d		31,720
			31,720				31,720
1998				1998			
Jan. 1	To Balance b/d		31,720	Dec.31	By balance c/d		65,026
Dec.31	To Cash A/c		33,306				
			65,026				65,026
1998				1998			
Jan. 1	To Balance b/d		65,026	Dec.31	By cash A/c. (sale of investments)		65,026
			65,026				65,026

Depreciation Fund Account

Dr.				Cr.			
Date	Particulars	L.F	Rs.	Date	Particulars	L.F.	Rs.
1997 Dec.31	To Balance c/d		31,720.80	1997 Dec.31	By Depreciation		31,720
			<u>31,720.80</u>				<u>31,720.80</u>
1998 Jan. 1	To Balance b/d		65,027.64	1998 Dec.31	By balance c/d		31,720.80
				Dec.31	To Cash		1,586.04
					(interest) A/c.		
					By Depreciation		31,720.80
					A/c.		
			<u>65,027.64</u>				<u>65,027.64</u>
1999 Jan. 1	To Lease A/c		1,00,000.00	1999 Dec.31	By balance b/d		65,027.64
				Dec.31	To Cash		3,251.56
					(interest) A/c.		
					By Depreciation		31,720.80
					A/c.		
			<u>1,00,000.00</u>				<u>1,00,000.00</u>

Lease Account

Dr.				Cr.			
Date	Particulars	L.F	Rs.	Date	Particulars	L.F.	Rs.
1997 Jan. 1	To cash A/c		1,00,000	1997 Dec.31	By Balance c/d		1,00,000

1998				1998			
Jan. 1	To Balance b/d		1,00,000	Dec.31	By Balance c/d		1,00,000
1999				1999			
Jan. 1	To Balance b/d		1,00,000	Dec.31	By Depreciation Fund A/c		1,00,000
			1,00,000				1,00,000

Depreciation Account

Dr.				Cr.			
Date	Particulars	L.F	Rs.	Date	Particulars	L.F.	Rs.
1997				1997			
Dec.31	To Depreciation Fund A/c.		31.720.80	Dec.31	By Profit and loss A/c.		31.720.80
1998				1998			
Dec.31	To Depreciation Fund A/c.		31.720.80	Dec.31	By Profit and loss A/c.		31.720.80
1999				1999			
Dec.31	To Depreciation Fund A/c.		31.720.80	Dec.31	By Profit and loss A/c.		31.720.80

9.11 INSURANCE POLICY METHOD :

This is similar to the sinking fund method but, instead of investing the money in securities, the amount is used in paying premium on a policy taken out with an insurance company. The policy should mature immediately after the expiry of the useful life of the asset. The money that is received from the insurance company is used to replace the asset. Though the interest received is lower than could be obtained by investing in securities, the risk of loss on realization of securities is avoided. To be more conservative, some accountants are of the opinion that the policy account should be adjusted, at the year end, at its surrender value, because the policy is for a fixed sum and there is no intention of surrendering it.

The following are the journal entries passed under this method:

During the first and subsequent years, except in the last year:

(a)	For payment of yearly premium	Rs.	Rs.
	Depreciation insurance policy A/c.....Dr.	xxx	
	To Bank a.c.		xxx
(b)	For yearly depreciation:		
	Depreciation A/c.....Dr.	xxx	
	To Depreciation fund A/c.		xxx
	or		
	To Insurance fund A/c.		
(c)	For transferring to profit and loss A/c.		
	Profit and Loss A/c.Dr.	xxx	
	To Depreciation A/c.		xxx

During the last year:

(d)	For realisation of insurance policy:		
	Cash A/c. Dr.	xxx	
	To Depreciation insurance policy A/c.		xxx
(e)	For the excess amount transferred to depreciation fund account:		
	Depreciation insurance policy A/c. Dr.	xxx	
	To Depreciation fund A/c.		xxx
	or		
	To Insurance fund A/c.		
(f)	For writing off the old asset:		
	Depreciation fund A/cDr.	xxx	
	or		
	Insurance fund A/c..... Dr.		
	To Old asset A/c.		xxx
(g)	For purchase of new asset:		
	New Asset A/c. Dr.	xxx	
	To Cash A/c.		xxx

Illustration-19:

On 1st January 1996, a lease of premises was purchased four years for Rs.1,00,000 and decided to make provision for the replacement of the lease by means of an insurance policy purchased for an annual premium of Rs.24,000. Show depreciation fund A/c. lease on premises A/c. and depreciation insurance policy A/c. for four years.

Solution:**Depreciation Fund Account or Insurance Fund A/c.**

Dr.				Cr.			
Date	Particulars	L.F	Rs.	Date	Particulars	L.F.	Rs.
1996				1996			
Dec.31	To Balance c/d		24,000	Dec.31	By Depreciation		24,000
			<hr/>				<hr/>
			24,000				24,000
1997				1997			
Dec.31	To Balance c/d		48,000	Jan.1	By Balance c/d		24,000
				Dec.31	By Depreciation		24,000
					A/c.		
			<hr/>				<hr/>
			48,000				48,000
1998				1998			
Dec.31	To Balance b/d		72,000	Dec.31	By balance c/d		48,000
				Dec.31	By Depreciation		24,000
					A/c.		
			<hr/>				<hr/>
			72,000				72,000
1999				1999			
Dec.31	To Lease on		1,00,000	Dec.31	By balance b/d		72,000
	premises A/c			Dec.31	By Depreciation		24,000
					A/c.		
					By Depreciation		4,000
					insurance policy		
					A/c.		
			<hr/>				<hr/>
			1,00,000.				1,00,000

Depreciation Insurance Policy Account

Dr.				Cr.			
Date	Particulars	L.F	Rs.	Date	Particulars	L.F.	Rs.
1996				1996			
Jan. 1	To cash A/c		24,000	Dec.31	By Balance c/d		24,000
1997				1997			
Jan. 1	To balance b/d		24,000	Dec.31	By Balance c/d		48,000
Jan. 1	To cash A/c		24,000				
			<hr/>				<hr/>
			48,000				48,000
1998				1998			
Jan. 1	To balance b/d		48,000	Dec.31	By Balance c/d		72,000
Jan.1	To cash A/c		24,000				
			<hr/>				<hr/>
			72,000				72,000
1999				1999			
Jan. 1	To balance b/d		72,000	Dec.31	By cash A/c		1,00,000
Jan.1	To cash A/c		24,000				
Dec. 31	To Depreciation Fund A/c		4,000				
			<hr/>				<hr/>
			1,00,000				1,00,000

Lease on Premises Account

Dr.				Cr.			
Date	Particulars	L.F	Rs.	Date	Particulars	L.F.	Rs.
1996				1996			
Jan. 1	To cash A/c		1,00,000	Dec.31	By Balance c/d		1,00,000
1997				1997			
Jan. 1	To balance b/d		1,00,000	Dec.31	By Balance c/d		1,00,000
1998				1998			
Jan. 1	To balance b/d		1,00,000	Dec.31	By Balance c/d		1,00,000
1999				1999			
Jan. 1	To balance b/d		1,00,000	Dec.31	By Depreciation Fund A/c		1,00,000

9.12 SUM OF DIGITS METHOD :

This method is an improvement over written down value method. In this method also, the depreciation charge gets reduced year after year, but the depreciation is not calculated on the balance at the beginning of each year. Since a constantly declining rate is applied to the original cost (plus erection charges minus residual value, if any), the asset value is reducible to zero. Under this method, the individual years (in the asset's life) in reverse order is taken as numerator and the total life of the asset in years is taken as the denominator. The cost is multiplied with this factor.

For example: The cost of the asset to be depreciated is Rs.30,000. Life of the asset is 3 years.

Sum of the years=1+2+3=6 will be taken as denominator, individual years, i.e., 1, 2 & 3 (in reverse order) will be taken as numerator. Thus, depreciation to be charged in each of the years will be:

	Rs.	=	Rs.
1 st year	30,000 x		15,000
2 nd year	30,000 x		10,000
3 rd year	30,000 x		5,000

Illustration-20:

Sainath & Co., purchased a cold storage plant on January 1, 1996 for Rs.10,500 and spent Rs.500 on its erection. The asset is expected to last for 4 years, after which its break up value is estimated to be Rs.1,000. On 31st December, 1999 the plant was sold for Rs.850. Find out the amount of depreciation to be charged every year under sum of digits method and show the plant account for 4 years.

Solution:

Sum of the year=1+2+3+4=10 will be taken as denominator.

Individual years i.e., 1, 2, 3 & 4 (in reverse order) will be taken as numerator. Thus depreciation to be charged in each of the years will be:

	Rs.	=	Rs.
1st year [10,500+500-1,000]	10,000 x		4,000
2nd year	10,000 x		3,000

3rd year $10,000 \times = 2,000$

4th year $10,000 \times = 1,000$

Plant Account

Dr.				Cr.			
Date	Particulars	L.F	Rs.	Date	Particulars	L.F.	Rs.
1996				1996			
Jan. 1	To cash A/c		10,500	Dec.31	By Depreciatoin		4,000
"	To cash A/c. (erection charges)		500	"	By Balance c/d		7,000
			<hr/>				<hr/>
			11,000				11,000
1997				1997			
Jan. 1	To Balance b/d		7,000	Dec.31	By Depreciation A/c.		3,000
					By Balance c/d		4,000
			<hr/>				<hr/>
			7,000				7,000
1998				1998			
Jan. 1	To Balance b/d		4,000	Dec.31	By Depreciation A/c.		2,000
					By Balance c/d		2,000
			<hr/>				<hr/>
			4,000				4,000
1999				1999			
Jan. 1	To Balance b/d		2,000	Dec.31	By Depreciation A/c.		1,000
					By Cash A/c.		850
					By Loss on sale of asset A/c.		150
			<hr/>				<hr/>
			2,000				2,000

Depletion Method:

This method is specially suited to mines, quarries, oil-wells, timber stands etc., from which a certain quantity of out put is expected to be raised. For example, the value of a mine depends upon the quantity of mineral that is obtained. Hence, it can be said that the mine depreciates according to the quantity of mineral mined. It is advisable in such cases not to calculate the depreciation in terms of years. Rather it is most appropriate to compute the cost per unit by dividing the total cost with total quantity of units that can be obtained and charge the depreciation every year based on the number of units obtained. For example, if the unit cost is Re.1 and in a year 1,000 units are obtained, the depletion value will be 1,000 units x Re.1 = Rs.1,000. The following illustration will clarify the position further:

Illustration-21:

Sai Timber Company acquired a timber tract for Rs.7,500 and spent Rs.1,500 on developing the tract. The tract was estimated to contain 5 lakh board feet of timber. It was estimated that the cut over land could to be sold for Rs.500.

Calculate the depletion charge if 50,000 board feet were cut in 1999.

Solution:

Depletion=

Depletion per 1000 Board Feet= $\frac{850}{1000}$ x 50,000= Rs.850/-

For the year 1999 depletion (i.e., depreciation) is = 850/-

9.13 REVALUATION METHOD :

This method is also known as “inventory method”. It is adopted where the assets to be depreciated consist of a large of small and diverse items of small unit cost. Example are loose tools, sacks, bottles etc., when there are large numbers of items of small value, too much clerical work will be necessary to maintain individual accounts.

Under this method, the asset in question are revalued at the end of every year. Usually the value at the end of the period will be less than at the beginning of the period. The difference, i.e., the fall in the value is charged as depreciation by debiting the profit and loss A/c. and crediting the asset A/c.. It may be noted that the depreciation amount is not accumulated and credited to depreciation fund account.

Illustration-22:

M/s. Raj Bros., has loose tools valued at Rs.10,000 on the 1st January 1999. On July 1, 1999 they purchased additional tools to the tune of Rs.6,000. On December 31, 1999 the entire stock of tools are revalued at Rs.11,000. Pass the necessary journal entries and show the asset account for 1999.

Solution:**Journal Entries**

Date	Particulars	L.F	Dr. Amount . Rs.	Cr. Amount Rs.
1999 Dec.31	Depreciation A/c.....Dr.		5,000	
	To Loos tools A/c			5,000
	(Being the depreciation on revaluation of loose tools written off)			
	Profit and Loss A/c.....Dr.		5,000	
	To Depreciaton A/c.			5,000
	(Being transfer of depreciaton to profit and loss A/c.)			

Loose Tools Account

Dr.				Cr.			
Date	Particulars	L.F	Rs.	Date	Particulars	L.F.	Rs.
1999 Jan. 1	To Balance b/d		10,000	1999 Dec.31	By Depreciation A/c.		5,000
July . 1	To Cash A/c.		6,000	Dec.31	By Balance c/d		11,000
			16,000				16,000

9.14 MACHINE HOUR RATE METHOD

This method is useful in the case of machines. The life of machine is sometimes fixed in terms of number of hours it can work. Then the cost of the machine is divided by the estimated total number of hours the machine can work and the hourly rate of depreciation arrived at. This rate is multiplied with the number of hours the machine has worked in a given period, to arrive at the depreciation charged for that period. For example: a machine costing Rs.50,000 is expected to be used for 24,000 hours in all. It has a scrap value of Rs.2,000. Then the hourly rate of depreciation is

$$\frac{\text{Rs.50,000}-\text{Rs.2000}}{24,000} = \frac{48,000}{24,000} = \text{Rs.2}$$

If the machine has worked for 2,000 hours in a year total depreciation to be written off that year would be $\text{Rs.} 2 \times 2,000 = \text{Rs.} 4,000$.

9.15 MILEAGE METHOD :

This method is used in the case of buses, cars, trucks, rolling stock etc., whose working life depends upon the number of kilometers they are driven. Suppose a car costing Rs.75,000 was purchased and its useful life was estimated to be 50,000 km. Then the rate of depreciation would be Rs.1.50 per km. During a given period if the car is driven for 10,000 km, the depreciation to be charged for that period will be $1.50 \times 10,000 = \text{Rs.} 15,000$.

9.16 QUESTIONS :

I. Short Answer Type:

1. Define depreciation. Explain the reasons for providing depreciation.
2. What are the causes of depreciation?
3. What is an annuity?
4. What is meant by sinking fund?

II. Essay Type:

1. What is depreciation? Why is it needed?
2. Define depreciation and explain the objectives and causes thereof?
3. Discuss the various methods of depreciation
4. Why is the straight line method so called? What are its advantages and disadvantages?
5. What are the methods based upon diminishing balances? Discuss the differences between these methods in calculating depreciation?
6. What do you understand by the annuity method? How is it different from the depreciation fund method?

EXERCISES :

1. Sridhar & Co., purchased a machinery on January 1, 1996 at 72,000. The Scrap value in ten years time is expected to be Rs.17,000. If depreciation is written off by equal installments every December 31, show the machinery account for the first three years. Calculate rate of depreciation.

[Ans: Balance at the end of third year Rs.55,500 rate 7.64%]

2. A machine was purchased on 1st January 1997. Depreciation was written off at 10 percent per annum on diminishing balance method. At the end of 1999 the depreciated value of asset was Rs.72,000. Find out the cost price of the asset.

[Ans: Rs.1,00,000]

3. Prasad purchased machinery for Rs.60,000. The asset has estimated life of 10 years and the residual value of Rs.10,000. If depreciation has to be provided on straight line basis, what would be the annual depreciation to be provided in percentage terms?

[Ans: Rate of depreciation 10%]

4. On 1st January, 1996 Ganga purchased a plant for Rs.1,00,000. Rate of depreciation is 10% p.a. Prepare plant account for 4 years under strength line method of depreciation.

[Ans: Balance Rs.60,000]

Straight Line Method

1. A machinery was purchased on 1.1.1997 for Rs.3,00,000. 10% depreciation is to be calculated every year. Prepare machinery account for three years assuming the method of depreciation. (Calculation followed is diminishing balance method and straight line method.)

[Ans: S.L.M. balance Rs.2,10,000: D.B.M. balance Rs.2,18,700]

2. An asset was purchased for Rs.50,000 on 1st January 1996. What would be its value after 3years when the method of depreciation is straight line method and written down value method at the rate of 10% p.a. Prepare a ledger account.

[Ans: S.L.M. balance Rs.35,000, W.D.V. balance Rs.36,450]

3. On 1st January, 1996 Chandra purchased a machinery for Rs.80,000. Again on July 1, 1997 he purchased an additional machinery worth Rs.20,000. On 1st April, 1998 he bought another machinery for Rs.10,000. Accounts are closed 31st December every year. Write off depreciation @ 10% p.a. as per diminishing balance method. Prepare machinery account for first 3 years and find out the balance of machinery account as on 31.12.1998.

[Ans: Machinery A/c. balance as on 1.4.1999 Rs.84,670]

4. A truck costing Rs.40,000 was purchased on 1.1.1998 and used for two years. 10% depreciation was provided on diminishing balance method and sold for Rs.24,000 at the end of the second year. Show the truck account for two years.

[Ans: Loss on sale of Truck Rs.84,00]

5. A company purchased a plant for Rs.8,000 on January 1, 1995. It further spent on it for installation and other capital expenses Rs.1,000. It was brought in use from 1st of May, 1995. You are required to draw the following ledger accounts for the first four years when the rate of depreciation is 10% p.a. on straight line method; (a) Asset account and (b) provision for depreciation account the accounts of the company are closed on December 31 each year.

[Ans: Provision for depreciation account credit balance Rs.3,300]

6. Madhu Ltd., purchased a machine on the 1st of March, 1996 for Rs.80,000 and spent Rs.4,000 on it erection, which was completed on 31.3.1996. The machine was put to use on 1.4.1996. If the machine is to be depreciated under the fixed instalment method at Rs.8,400 per annum, show the asset account for the first 4 years.

[Ans: Balance Rs.52,500]

7. On 1.1.1996 Nitish bought a machine for Rs.42,000 and installed it by incurring Rs.4,000 towards installation expenses. On 1st July 1996 he purchased additional machinery worth Rs.24,000. On 31.12.1997 he sold the machinery purchased on 1st July 1996 for Rs.22,000. Nitish decided to write off depreciation @ 10% p.a. as per fixed instalment method. Prepare machinery account for 2 years assuming that the accounting year closes on 31st December every year.

[Ans: Machinery A/c. balance as on 1.1.1998 Rs.36,800]

8. Chakravarthi purchased a second hand machine for Rs.18,000 on 1st April, 1996. He spent Rs.2,000 on its overhaul and installation. Depreciation is written off at 10 per cent annum on the original cost. On 30th June 1999, the machine was found to be unworkable and sold for Rs.8,000. Prepare the machine account from 1996 to 1999 assuming that the accounts are closed on 31st December every year.

[Ans: Loss on sale of machine Rs.5,500]

9. Ranga purchased on 1st January, 1998 a machine for Rs.6,000. On 1st July, 1998 he purchased another machine for Rs.5,000. On 1st July, 1999 he sold the machine purchased on 1st January 1998 for Rs.4,000. It was decided that depreciation @ 10% p.a. was to be written off every year under the diminishing balance method. Assuming the accounts were closed on 31st December every year, show the machine account for the year 1998 and 1999.

[Ans: Balance Rs.4,275]

10. On 1.1.1999, balance of machinery A/c. was Rs.48,600. On 1.7.1999, a new machinery was purchased for Rs.24,000, installment cost Rs.1,000. On 1.9.1999 machinery was sold for Rs.6,000. The original cost of the machinery sold was Rs.10,000 On 1.1.1997. Machinery is depreciated at 10% p.a. under the diminishing balance method. Show machinery A/c. for the year 1999. The books are closed on 31st December every year.

[Ans: Machinery A/c. balance Rs.60,200]

11. A limited company bought a machinery for Rs.12,000 on 1st January, 1997. On 30th June, 1998 another machinery was purchased for Rs.2,000. On 31st March, 1999 the company sold a machine from those acquired on 1st January 1997 costing Rs.500 (Actual price) for Rs.50 as it is found to be defective.

On the same day another new machine is bought for Rs.800.

Assuming that the depreciation is written off @ 15% p.a. as per diminishing balance method. Prepare machinery account for first 3 years.

[Ans: Machinery A/c. balance as on 1.1.2000 Rs.9,345]

Annuity Method

12. A Lease is purchased on 1st January 1996 for 5 years at a cost of Rs.50,000. It is proposed to depreciate the lease by annuity method charging 5% interest. A reference to the annuity table shows but to depreciate Re.1 by annuity method over 5 years, charging 5% interest, the amount to be written off is 0.230975. Show the lease A/c. for five years.

13. A firm purchased a lease hold property for a period of five years for Rs.1,00,000 on 1.1.1995. It was decided to write off the lease by annuity method presuming the rate of interest 5% p.a. The annuity table shows that the annual amount necessary to write off Re.1 at 5% is 0.230975. You are required to prepare lease account for the five years show the net amount to be charged to profit and loss account for these five years.
14. Ram & Co., Ltd., acquired a seven-year lease for a sum of Rs.60,000. It is proposed to depreciate it under the annuity method after charging interest at 4% p.a. Reference to the annuity table indicated that 0.1666091 at 4% p.a. is required to write off Rs.1 in seven years. You are required to show lease account for the first five years.

[Ans: Balance at the end of fifth year Rs.18,854.59]

15. A plant is bought on 1.1.1995 for a sum of Rs.1,00,000 which has got a useful life of 5 years. It is estimated that it will fetch a scrap value of Rs.16,000 at the end of 5 years. It is decided to charge depreciation according to depreciation fund method. The investments are expected to earn 5% interest. Sinking fund table shows that Rs.0.180975 invested yearly at 5% produces Re.1 at the end of 5 years.

The investments are sold at the end of 5th year for Rs.64,000. The scrap realised Rs.17,000.

Show the necessary accounts.

[Ans: Loss on sale of investments Rs.14002.49]

16. M. Ltd. purchased machinery costing Rs.25,000 on 1st January, 1995. The company establishes a depreciation fund, investment are expected to realize 4% interest and the expected life of the machinery is 10 years. Table shows that to produce Re.1 at the end of 10 years at 4%, an annual investment of Rs.0.08329 is required.

At the end of fifth year the machinery has to be sold off as scrap. It realised Rs.7,000, investments were realized at 5% less then the book value. New machinery costing Rs.35,000 was purchased.

Show the necessary accounts.

[Ans: Loss on sale of machinery Rs.7,163.93]

17. Ram & Co., purchased a four years lease an January 1, 1995 for Rs.50,000. It is decided to provide for the rental of the lease at the end of four years by setting up a depreciation fund. It is expected that investments will fetch interest at 4% p.a. Sinking fund table shows that 0.235490 invested each year will produce Re.1 at the end of four years at 4% p.a.

On 31st December, 1998, the depreciation fund investments are sold for Rs.36,455.22. Prepare the necessary ledger accounts.

[Ans: Loss and sale of investments Rs.300.06]

Insurance Policy Method

18. A firm purchases a lease for 3 years for Rs.30,000 on 1.1.1996. It has decided to provide for its replacement by means of insurance policy for Rs.30,000. The annual premium is Rs.9,500. On 1.1.1999 the lease is renewed for a further period of three years for Rs.30,000. You are required to show the necessary ledger accounts.

[Ans: Profit on realisation of policy Rs.1,500]

19. Sri Ram has acquired manganese mines on payment of Rs.1,00,000 on 1st April, 1995. The lease period is five years. He proposes to provide for its replacement by means of an insurance policy for Rs.1,00,000. The annual premium is Rs.9,750. In 1st April, 2000 the lease is renewed for a further period of five years for the same amount. Show the necessary ledger accounts.

[Ans: Profit on the realisation of policy Rs.51,250]

Sum of Years Digits Method

20. Mahesh purchased an asset for Rs.8,400. Estimated life of the asset is 6 years, You are requested to open the asset account for the first three years when depreciation is charged by sum of years digit method.

[Ans: Balance at the end of third year Rs.2,400]

Depletion Method

21. Avinash Timber Co., acquired a timber tract for Rs.21,000 and spent Rs.1,000 on its development. The tract is estimated to contain 5 lakh board feet of timber, is expected that the cut over the land can be sold for Rs.2,000. Calculate the depletion per hundred board feet: and depletion if 80,000 board feet were cut in 1998.

[Ans: Rs.4 per 100 board feet Rs.3,200]

Revaluation Method

22. Rakesh Bearings Ltd., purchased tools on the 1st of January, 1997 for Rs.4,000. During the year additions were made to the extent of Rs.800. On the 31st December, 1997 the tools were valued at Rs.4,400 and at the end of 1998 at Rs.3,600. Prepare the loose tools account for 1997 and 1998.

[Ans: Depreciation under revaluation method 1st year Rs.400;

2nd year Rs.800]

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LESSON - 10

NON - PROFIT ORGANISATIONS - I

OBJECTIVES : After going through this lesson the student can know what is a Non trading concern What are the books maintained by them ? How a Receipt and Payment account and an Income and Expenditure account is prepared ?

STRUCTURE OF THE LESSON :

- 10.1 Introduction.
- 10.2 Capital and Revenue.
- 10.3 Capital Expenditure.
- 10.4 Revenue Expenditure
- 10.5 Revenue Expenditure becoming capital expenditure.
- 10.6 Usual items of capital expenditure
- 10.7 Usual items of Revenue expenditure.
- 10.8 Capital and Revenue Receipts.
- 10.9 Receipts and Payments Account.
- 10.10 Income and Expenditure Account.
- 10.11 Preparation of income and expenditure Account from Receipts and Payment account.
- 10.12 Summary
- 10.13 Self Assessment Questions
- 10.14 Exercises
- 10.15 Suggested Readings

10.1 INTRODUCTIONS :

The purpose of every trading or manufacturing activity is to make profit. But there are certain charitable and social institutions which are created not with a profit making object but for the development of welfare activities, both for the general public and for its members such as educational institutions, hospitals, clubs, charitable trusts etc. are called non - trading concerns.

These non profitable institution are not interested in the quantum of profits earned by them during the year but certainly they are interested in knowing the receipts and expenditure during the year and their financial position at the end of each year. To achieve these objectives they prepare the following statements.

- a. Receipts and payments account.
- b. Income and Expenditure account.
- c. Balance sheet.

The concepts of capital and revenue are very important in the preparation of Final accounts of Non -Trading concerns, Therefore let us first know the distinction between capital and revenue items.

10.2 CAPITAL AND REVENUE :

One of the objects of Accounting is to determine whether the business has earned profit or not. For this purpose a proper distinction between capital and revenue, as regards expenditure receipts and losses, is required. Failure or neglect to discriminate capital and Revenue will falsify the whole of the results of accounting. For example, plant may be purchased and charged to the purchases account, some of the fixed assets may be sold and the proceeds may be treated as income. In each case both the profit and loss account and Balance sheet will be affected while preparing the final accounts, all revenue items are included in the revenue account i.e. Trading and profit and loss account and all capital items in the balance sheet. Any error committed in distinguishing between “capital” and “Revenue” will effect the ascertainment of correct profit.

It is very difficult to give a clear cut rule as to distinguish capital and revenue expenditure. However, the following rules may serve as a guide for making distinction between capital and revenue expenditure.

10.3 CAPITAL EXPENDITURE :

Capital expenditure is such an expenditure which benefits the business over a long period. It includes assets acquired for the purpose of earning and not for resale, improving and extending fixed assets, increasing the earning capacity of the business and raising capital for the business. Purchase of new plant, additions to the building, brokerage and commission paid for procuring long term loans are a few examples of such expenditure. All items of capital expenditure appear on the asset side of the Balance sheet.

10.4 REVENUE EXPENDITURE :

Revenue expenditure consists of expenditure incurred on one accounting period and the full benefit of it is enjoyed in the same period. Therefore, it is normally of recurring nature. Such an expenditure does not increase the earning capacity of the business and it does not bring into existence an asset. It includes expenses incurred for acquiring assets for resale at a profit or for conversion into finished products, for maintaining fixed assets for resale at a profit or for conversion into finished products for maintaining fixed assets in good working order e.g. normal repairs and renewal of plant, white washing of building replacement of machinery etc; for keeping the organization going e.g. Rent, rates and taxes, wages and salaries, insurance and other trade charges. All items of revenue expenditure appear in the trading and profit and loss Account.

10.5 REVENUE EXPENDITURE BECOMING CAPITAL EXPENDITURE OR CAPITALISED EXPENDITURE :

An expenditure which is primarily of revenue nature but incurred for the purpose of acquiring any asset or adding to its value is termed as capitalised expenditure. The following are some of the examples of revenue expenditure becoming capital expenditure.

1. **Repairs** : Repairs are usually revenue expenditure but if we purchase a second hand machinery and pay for repairs necessary to make it suitable for our purpose, then repairs become capital expenditure and should be added to the cost of the machinery.
2. **Wages** : Wages are usually a revenue charge but if paid to the employees for the construction or erection or installation of the fixed assets of the business ,then these become capital expenditure and should be added to the cost of the fixed asset concerned.

3. **Legal expenses :** Legal expenses are usually a revenue charge but if paid on acquiring a property should form an additional cost of the asset acquired.
Those are usually a revenue items but payments made for transporting newly acquired asset will form additional cost of the asset thus being treated as capital expenditure.
4. **Freight and carriage :** These are usually a revenue items but payments made for transporting newly acquired asset will form additional cost of the asset thus being treated as capital expenditure.
5. **Interest :** Interest on borrowing and capital generally a revenue item is allowed to be treated as capital item if paid during the period of construction.
6. **Preliminary expenses :**Initial expenses, connected with the formation of a company though revenue in nature are allowed to be capitalised and can be shown as an asset in the balance sheet.
7. **Brokerage and stamp duty :** Normally these are revenue items but, brokerage paid on the purchase of a property and also the stamp duty on it may be treated as capital expenditure as an additional cost of purchase
8. **Development Expenditure :** In concerns like mines, tea, calories, horticulture, rubber plantations etc. a sizeable amount is spent during the period of development and up to the time they begin to earn. Such expenses must be treated as capital expenditure.
9. **Advertising :** A huge sum spent on advertising in a year, the benefit of which shall accrue in future years, also may have the effect of creating a future good will and thus sums spent may be capitalised. For example, lakhs of rupees are spent in changing the name from Binaca to cibaca and Hutch to oda.
10. **Raw materials and stores :** They are usually a revenue charge but if consumed in making of a fixed asset they must be treated as a part of the cost of the asset.

Deferred revenue Expenditure : It is the expenditure which would normally be treated as revenue expenditure but, it is not written off in one year as its benefit is to completely exhaustible in the year in which it is incurred or is of a non - recurring and special nature and large in amount. It may be spread over a number of years a proportionate amount being charged to the profit and loss account of each year and the balance is carried forward to subsequent years as deferred revenue expenditure and is shown as an asset in the balance sheet. Sometimes extraordinary losses are also treated as deferred revenue expenditure and charged to profit and loss account for four to five years.

10.6 USUAL ITEMS OF CAPITAL EXPENDITURE :

The following items usually represent capital expenditure.

1. Cost of acquisition of fixed asset like good will, land, building, leasehold promises, tools and equipment, furniture, trade marks etc.
2. Expenses of putting a new asset in a working condition like installation and erection expenses of any fixed asset.
3. Additions or extensions or structural improvements to the existing assets leading to their working efficiency or revenue earning capacity or cost reduction e.g. refurbishing of the sitting accommodation of a cinema hall etc.
4. Development nature like development of mines and plantation.
5. Formation expenses of a business are called preliminary expenses like preparing and filing the legal documents required for starting a business etc.

10.7 USUAL ITEMS OF REVENUE EXPENDITURE :

The following are usual items of revenue expenditure.

1. Expenses incurred in the ordinary conduct and administration of the business e.g rents, salaries, wages, advertisement etc.
2. Expenses incurred in purchasing raw materials or stock of finished goods for resale and supplies like grease, cotton, oil for machines etc.
3. Expenses incurred to maintain assets in working order like ordinary repairs renewals or alterations etc.
4. Expenses incurred on maintaining or pushing sales like, carriage of finished goods, commission, travelling expenses, free samples and gifts etc.
5. Loss arising from sale of fixed assets.
6. Loss arising from damage, destruction, theft of stock in trade, cash etc.
7. Loss arising from depreciation in the values of fixed assets or book values of assets discarded.
8. Annual renewal fees of patents etc.

Illustration 1 which of the following expenditures are capital, revenue or deferred revenue expenditure.

1. Rs 10,000 spent on dismantling, removing and reinstallation of machinery.
2. Rs 2,00,000 was spent on putting up a gallery in a theatre hall.
3. Rs 3,000 paid as insurance premium.
4. The freight and cartage on the new machinery amounted to Rs 5,000 and the erection charges cost Rs 1000
5. A machinery whose book value was Rs 17,000 and was sold for Rs 7,000
6. Rs 15,000 was paid as compensation for cancellation of a contract.
7. An amount of Rs 1000 was spent as legal expenses for maintaining an existing title to the assets of the business.
8. Rs 1,50,000 was spent on advertising a new product in the market.
9. Rs 20,000 was spent on white washing and painting of the factory building.
10. Rs 1,500 was spent by a chartered accountant on books helping in his profession.

Solution :

1. Rs 10,000 spent on dismantling, removing and reinstallation is a capital expenditure.
2. Rs 2,00,000 spent on putting up a gallery in a cinema hall is a capital expenditure
3. Insurances premium paid is a revenue expenditure
4. Rs 5,000 spent on freight and cartage and the erection charges Rs 1,000 on new machinery is a capital expenditure and it shall be added to the cost of the machinery
5. Rs. 10,000 incurred as a loss on the sale of an old machinery being manageable is a revenue loss and to be debited to the profit and loss account of the year in which it occurs.
6. Rs 15000 paid for cancellation of contract is a capital expenditure since it has resulted in avoiding an unnecessary investment.
7. Rs 1000 spent as legal expenses on defending the title to the assets of the business as revenue expenditure.

8. Rs 1,50,000 spent on advertising is a heavy amount, so it should be capitalised and the portion of current year should be debited to profit and loss account and the remaining portion should be shown in the balance sheet till it is completely wiped off.
9. Rs 20,000 spent on white washing and painting of the factory building is a revenue expenditure.
10. Rs 1,500 spent by a chartered Accountant on books helping in his profession is a revenue expenditure.

10.8 CAPITAL AND REVENUE RECEIPTS :

Capital receipts of business comprise capital contributed by partner or by the share holders, loans sale proceeds of any fixed assets etc. In case of clubs and associations, receipts on account of life subscriptions, entry free, government grants, legacies and endowments are capital receipts, Revenue receipts, received commission, interest on investment etc. In case of club etc annual subscriptions, sale of golf balls, receipts arising out of the premises being given to others for use on charges are revenue receipts, Revenue receipts are treated in the revenue account while the capital receipts are treated in the balance sheet.

Guidelines for deciding a receipt as capital or revenue :

The following guidelines may be stated to decide whether a particular receipt is capital or revenue.

1. Nature of receipts is to be determined by its character in the hands of the person receiving it not by the source from which payment was made e.g. payment of interest out of capital by a company still under construction is capital expenditure for the company but revenue receipt in the hands of the person receiving it.
2. In case of a single transaction of purchase and sale of property the motive of the owner will decide whether the receipt is capital or revenue ex; A sells shares held by him as investment it is a capital receipt but if A sells the shares with speculative motive it will be a revenue receipt.
3. A receipt on account of fixed asset is a capital receipt while a receipt on account of current asset is a revenue receipt, for ex; sale proceeds of building, plant etc constitute capital receipt while sale of stock - in - trade is revenue receipt.
4. Where a receipt is in substitution of a source of income there it is a capital receipt but if it is in substitution of income alone it is a revenue receipt. For eg; if a railway passenger meets with an accident and dies or is permanently disabled, compensation received from the railway department is capital receipt because this receipt is in substitution of source of income i.e his life, but if he is rendered only temporarily disabled the receipt will be revenue one as it is in substitution of income alone i.e loss of earnings during the period of disablement.
5. Where a sum is received for the surrender of certain right, there it is a capital receipt but where the sum received is in the nature of compensation for loss of future profits there it is a revenue receipt. For eg. A the lease holder of fire field and manufacturer of fire - clay goods was prevented by the railway company for working on the field adjacent to the railway lines. Amount paid by the railway company to A is a capital receipt because it is the receipt in lieu of his right to work upon the clay field.

Examples of capital Receipts :

1. Compensation received for the loss of right of future remuneration.
2. Compensation received for suspension of export license.
3. Compensation received by one partner of a partnership from another partner for relinquishing all his rights in the partnership etc.

Examples of Revenue Receipts :

1. Receipts of annuities for transfer of a capital asset.
2. Lump - sum received in consideration of reduction of remuneration
3. Compensation received for premature termination of contract.
4. Considerations received for transfer of permits etc.

Capital and Revenue losses :

Revenue loss is the loss of some revenue receipts in the course of the business and is incidental to it. Any loss which can't be termed as revenue loss is a capital loss. For eg: loss of stock - in - trade by fire, white ants or by theft is a revenue loss where as loss of fixed asset like building plant etc. By fire or accident or earth quake is a capital loss.

Loss caused to the business by reason of cash being appropriated by an employee is a revenue loss but if the fund reach home of the owner and there after if the funds are lost, then the loss is outside the trade and not incidental to the business therefore it is a capital loss (\$Exceptions are banks or lending houses).

10.9 RECEIPTS AND PAYMENTS ACCOUNT :

It is a summary of cash transactions at the end of a particular period showing the receipts and payments of cash during the period under different heads.

Features :

The features of Receipts and payments account are as follows.

1. It is prepared by non - trading concerns in lieu of cash book of trading concerns.
2. It is a real account.
3. It starts with the opening balance of cash in hand and at bank.
4. All receipts and payments of cash are entered on the debit and credit side respectively.
5. No distinction is made between the capital and revenue items while entering the receipts and payments.
6. All receipts and payments whether they are relating to the current, preceding or succeeding period, are written in this account.
7. Opening balance of this account shows cash in hand at the beginning of the accounting period and closing balance shows cash in hand at the end of accounting period.
8. All types of Accounts i,e, personal real and nominal are written in this account.
9. No adjustments, outstanding expenses, prepaid expenses provision for doubtful debts or depreciation are made in this account as it is prepared on cash system of accounting.
10. It does not reveal the financial results or the financial position of the account of the accrued incomes and outstanding expenses.

The following is a specimen of the receipts and payments account of a club for a particular year.

Receipts and payments Account of
for the year ending 31 March 2007.

Dr.		Cr	
Receipt	Rs	Payment	Rs
To Balance b/d	xxx	By Rent	xxx
To Subscriptions	xxx	By Furniture	xxx
To Entrance fee	xxx	By Sports Material purchased	xxx
To Legacy	xxx	By Building	xxx
To Donations for building	xxx	By Ground maintenance	xxx
To Interest received	xxx	By Salaries	xxx
To Sale of furniture	xxx	By Honorarium	xxx
To Sale of old Sports material	xxx	By Match expenses	xxx
To Match fund	xxx	By Stationery	xxx
		By Investments	xxx
		By Entertainment	xxx
		By Balance c/d	xxx
	xxx		xxx

Illustration 1

Jimkhana club kept its accounts on cash basis and the figures for the year 2006-07 are given below. You are required to prepare Receipts and payments Account

	Rs.		Rs.
Subscriptions received		Watchman s wages	27,200
2005 - 06	8000	salaries	40,000
2006 - 07	72,000	postage	4,800
		stationery	12,000
Receipts from common Room	50,000	Rent	20,000
Hiring Rooms	4,000	cash in hand	
Billiards Rooms	24,000	1 - 4- 2006	7,200
supplies room	34,000		

Receipts and payments Account of JimKhana Club for the year ending on 31 - 3- 2007

Dr.		Cr	
Receipts	Amount	Payment	Amount
	Rs		Rs.
To Balance b/d	7,200	By supplies for	
To Subscriptions		Entertainment Room	34,000

2005-2006	8,000	By Watchman's wages	27,200
2006-2007	72,000	By Salaries	40,000
To Receipts from		By Postage	4,800
Common Room	50,000	By Stationery	12,000
Hiring Room	4,000	By Rent	20,000
Billiards Rooms	24,000	By Electricity	16,000
		By Balance c/d	11,200
	1,65,200		1,65,200

10.10 INCOME AND EXPENDITURE ACCOUNT :

It is prepared by non - trading concerns in lieu of profit and loss Account. To know whether during a particular period the income of the concern or organisation have exceeded or faller short of the expenses this account is prepared. In this account current expenses are compared with current incomes. The features of this account are.

1. It does not start with any opening balance.
2. It is a nominal account Expenses are shown on the debit side and incomes on the credit side.
3. Only revenue items are recorded in it capital items are totally excluded.
4. Only incomes and expenses of the concerned year are recorded in it and income and expenditure relating to the preceding or succeeding periods are excluded while preparing this account.
5. This account is prepared on mercantile system of accountancy and thus all adjustments relating to prepaid or outstanding expenses and incomes, provision for depreciation or doubtful debts will be made.
6. Only nominal accounts are taken into consideration for the preparation of this account and for personal and real accounts a Balance sheet must be prepared along with this account.

Difference between Receipts and payments.
Account and Income and Expenditure Account

The following are the main differences between a Receipts and payments Account and Income and Expenditure Account.

Receipts and payments account	It come and Expenditure Account.
1. It is a real Account	1. It is a nominal account.
2. It is like cash book prepared by trading concerns.	2. It is like profit and loss account prepared by non - trading concerns.
3. It starts with a balance being cash at the being of the year.	3. It does not start with any opening balance.
4. Receipts are shown on the debit sid and payment on the credit side.	4. Incomes are shown the credit side and expenditure on the debit side.

- | | |
|--|---|
| <ol style="list-style-type: none"> 5. All items whether of capital or revenue nature are shown in this account. 6. All receipts and payments whether they are of preceding, current or succeeding period are entered in it. 7. Outstanding receipts and payments are not shown in it as it is prepared on cash basis. 8. The closing balance represents cash in hand on that date. 9. It is not necessary to prepare Balance sheet along with this account. 5. Only revenue items are shown in this account. | <ol style="list-style-type: none"> 6. Income and expenditure of the current year only shown in it. 7. Income and expenses are shown after including all outstanding income and expenses on accrued basis. 8. The closing balance represents surplus or deficit for the concerned period. 9. The Balance sheet must be prepared in order to accommodate real and personal accounts a long with this account. |
|--|---|

10.11 PREPARATION OF INCOME AND EXPENDITURE ACCOUNT FROM RECEIPTS AND PAYMENTS ACCOUNT :

The following steps are to be taken to convert a receipts and payments account into an Income and Expenditure account:

1. Leave the opening and closing balance of cash given in the Receipts and payments account.
2. Take only revenue items of income and expenditure and leave all those items which are of capital nature.
3. Make all adjustments for outstanding and prepaid incomes and expenses, provision for depreciation or bad debts etc.
4. Take items only of the current period i.e; items relating to the preceding and succeeding periods are to be ignored.
5. In Income and Expenditure account expenditure is recorded on the debit side and income is recorded on the credit side.
6. Once Income and Expenditure Account is balanced it shows either surplus or deficit, If credit balance is more than Debit balance it is called surplus and if the debit balance is more than credit balance, it is called as Deficit.

Illustration – 2 :

From the following particulars prepare Income and Expenditure account of Guntur club for the year ended 31st Dec 2007.

Subscriptions received for 2007	22,000	
Entrance fees received for 2007	3,000	
subscriptions and entrance fee for 2006 (estimated Rs 600 realised)	1120	
subscriptions and entrance fees for 2008	6,200	
subscriptions for 2007 to be taken at	4000	
Miscellaneous Expenses	840	
Expenses for 2007 paid		32,000
Expenses unpaid	920	
Liabilities for 2007 paid (estimated Rs 2800)	2400	
Audit fees for 2007 not paid	800	

Profit on service account net	9200
Interest on loan paid	1280
capital expenditure written off	4800
surplus from 2006 account	1600
capital expenditure in 2007 provide for depreciation	8240
for this year	2680
cash in hand	7200

Solution :

Guntur club Income And Expenditure Account for the year ended 31st December 2007.

Expenditure Rs	Amount	Income Rs	Amount
To Expenses (32000 + 920)	32,920	By subscription and Entrance fees (22000 + 3000 + 4000 + 520)	29,520
To Audit Fees	800	By Miscellaneous Expenses	8,400
To Interest on loan	1,280	By Liabilities provided in excess last year (2800 - 2400)	400
To Capital Expenditure (Written off)	4,800	By Profit on service account.	9,200
To Depreciation	2,680		
Surplus	5,040		
	47,520		4,7520

10.12 SUMMARY :

The institution which are created not with a Profit making object but for the development of Welfare activities both for the General Public and for its members are called Non-trading concerns. Even this concerns are not started with Profit motive these concerns also will have certain expenses and incomes, Assets and Liabilities. At the end of the year to know the total expenses, Incomes and to know the financial positions of the concerns they prepare certain accounts such as receipts and payments account, Income and Expenditure account and Balance sheet. Receipt and Payment account is in lieu of cash book, and incoming expenditure account is in lieu of profit and loss account of the trading concerns.

10.13 SELF ASSESSMENT QUESTIONS :

1. What is Capital Expenditure ? Illustrate.
2. What is Revenue Expenditure ? Illustrate.
3. Distinguish Capital and Revenue Expenditure giving illustrations.
4. What is Deferred Revenue Expenditure ? Illustrate.

5. What are Capital and Revenue receipts ? Explain with illustrations.
6. Explain the importance of distinguishing the Capital and Revenue items while preparing final accounts of concerns.
7. What types of accounts are prepared by non-trading concerns ?
8. What is Receipts and Payments account ?
9. What is Income and Expenditure account ?

10.14 EXERCISES :

1. From the following items find out which are of Capital and Revenue items.
 - i Amount paid on goods purchased Rs.1,000
 - ii Rs. 2,000 paid for whitewash of cinema theatre.
 - iii Rs. 2,500 paid for repairs of second hand lorry purchased.
 - iv New machinery purchase and erection charges paid Rs.5,000.
 - v Repairs on machinery Rs.1,000.
 - vi Spare parts of machinery Rs.1,500.
 - vii Equipment purchased for improving the production capacity Rs.10,000.

2. The following are the expenses paid by the Padmalaya Ltd. for construction of cinema theatre up to 30th June, 1999. Find out whether they are Capital Expenditure or Revenue Expenditure.

	Rs.
i. Fire Insurance	2,000
ii. Construction of temporary accommodation to workers at site, which is demolished after completion of construction work	11,000

3. Out of the followings which are Capital and Revenue items.
 - i. Cost of dismantling, removing and re-installing plant Rs.8,000
 - ii. For transporting goods to the new spot Rs.1,600.
 - iii. Sale of old machinery Rs.6,000 which had a book value of Rs.10,000. Installation of new machinery at a cost of Rs.15,000.
 - iv. Installation expenses of new machinery Rs.500.
 - v. Repairs paid Rs.2,500.
 - vi. Construction of new factory building with a cost of Rs.5,00,000. Cost of preparation of plan (blue print) Rs.30,000, repairs of old building Rs.20,000.
 - vii. Fire Insurance Premium Rs.2,000.

1.	Purchased second hand furniture	50,000
	Repairs of furniture	5,000
	Wages paid for erection	4,000
2.	Licence fee	25,000
3.	Fine paid for violation of rules	1,000

4. From the following particulars prepare a Receipts and Payments A/c

	Rs.	
Cash in hand	1,000	
Cash at Bank	5,000	
Subscription Receive	33,000	
Donations received	2,600	
Investments purchased	10,000	
Rent paid	4,000	
General expenses	2,100	
Postage & Stationery	700	
Sundry expenses		300
Cash balance at close	200	

(Ans : Cash at Bank closing Rs.24,300)

5. Prepare a Receipt and Payment account from the following particulars.

	Rs.	
Opening balance of cash in hand	1,800	
Rent paid	450	
Stationery purchased	540	
Subscriptions received		
Previous year	1,800	
Current year	4,050	5,850
Flood relief expenses	684	
Repairs	756	

(Ans : Cash in hand closing Rs.6,300)

6. From the following particulars prepare Income and Expenditure account Rs.
Fees collected (Including Rs.24,000

on account of last year)	2,24,000	
Fees for the year outstanding	40,000	
Salary paid (including Rs.2,400 on account of last year)	19,200	
Salary outstanding	3,200	
Entertainment expenses	4,000	
Tournament expenses	8,000	
Meeting expenses	16,000	
Honorarium paid	810	
Sale of old furniture	1,890	

Travelling & Conveyance	6,400	
Purchase of books	16,000	
Periodicals		8,000
Rents	9,600	
Postage, Telephone and Telegrams	13,600	
Printing and Stationery	4,000	
Donations received	6,400	

(Ans : Surplus Rs.1,56,800)

7. Following is the Receipt and Payments account of Visakapatnam cultural club for the year ended 31-12-2000.

Dr.		Cr.	
Receipts	Rs	Payments	Rs
To Donations	25,000	By Salaries	900
To Life membership	2,000	By Cricket	300
To Sports competition fund	5,000	By Tennis	270
To Subscription (including Rs.50 for 2001)	1,600	By Inusrance	180
To Locker rent	50	By Garden maintenance	85
To Interest on securities	200	By Printing	15
To Cricket	150	By Telephone	125
To Tennis	100	By Investments	9,000
To Billiards	100	By Balance c/d	1,825
	34,200		34,200

Subscriptions receivable for 2000 Rs.150, outstanding salaries Rs.100. Half of the donations are to be capitalised, accrued interest Rs.300, Prepaid insurance Rs.30.

Prepare Income and Expenditure Account for the year ended 31-12-2000. (Asn : Surplus Rs.13,155)

10.15 SUGGESTED READINGS :

Financial Accountancy	:	Shukla Grewal
Financial Accountancy	:	Jain and Narang
Financial Accountancy	:	R.L. Gupta & V.K. Gupta

LESSON - 11

NON - PROFIT ORGANISATIONS - II

OBJECTIVES : In the previous lesson you learned what is a Non trading concern and how a receipt and payment account and an Income and Expenditure Account is prepared? After going through this lesson the student can know how the Balance sheet of a Non - Trading concern is prepared ? And what are the items appear in this statement ?.

structure:

- 11.1 Introduction
- 11.2 Some special terms pertaining to Non -Profit Organisations
- 11.3 Illustrations
- 11.4 Summary
- 11.5 Self Assessment Questions
- 11.6 Exercises
- 11.7 Suggested Readings

11.1 INTRODUCTION :

Even a non - Trading concern is established with service motive , these concerns also will have some assets as well as liabilities for expenses etc. Hence the Income and Expenditure Account is accompanied by the Balance sheet like in trading concerns a balance sheet is to be prepared even by non - Trading concerns to complete the double entry effect. The Balance sheet covers all those items such as assets, capital fund etc. Capital Fund is similar to capital Account of Trading concerns. Non - Trading concerns do not have formal capital like that of Trading concerns. Hence, excess of income over expenditure and capital receipts or receipts that are capitalised are accumulated under the heading “ capital Fund” and shown as liability in the Balance sheet.

11.2 SOME SPECIAL TERMS PERTAINING TO NON - TRADING ORGANISATIONS :

While preparing final accounts of non - profit organisations the following items are often used:

- 11.2.1 **Legacy :** When an amount is received as per the will of some person it is called legacy As it is non - recurring and capital nature, it is to be capitalised. But if the amount is small it can be taken as an in come.
- 11.2.2 **Donation :** Donations are often received by these organisations from both individuals and institutions, Donation is the amount received as a gift. Donations may be broadly classified into two categories; viz : specific donations and general donations.
- 11.2.3 **Specific Donations :** A donation received for a specific purpose, whether big or small is capitalised and is taken to the liabilities side of the balance sheet For example a donation for the construction of a building. This amount should be utilised only for the purpose for which it is received.
- 11.2.4 **General Donations :** A general donation is the amount given by parties without specifically mentioning the purpose for which it should be utilised. This amount can be spent for any purpose.

However, normally general donations of big amounts are capitalised and small amounts are treated as revenue income.

- 11.2.5 **Endowment Fund :** “ Endowment is the money or property given by parties so as to provide a permanent source of income to support the institution, e.g: the corpus fund of a university since the fund provides a permanent means of support, any amount received on

account of this

- 11.2.6 is capitalised and shown as a liability, but the interest or dividend received on account of this fund is treated as income.
- 11.2.7 **General fund** : Amounts which are received for no specific purpose and which are capitalised are shown under this head on the liabilities side of Balance sheet. But the income obtained on account of this fund is taken to the credit side of income and expenditure account.
- 11.2.8 **Specific funds** : Amounts received for a specific purpose are capitalised and shown in the Balance sheet on its liabilities side e.g; price fund tournament fund, building fund, receipts and incomes on account of these specific funds should be added to the fund account and should not be taken to Income and Expenditure Account. All expenses on account of these funds should be deducted from the particular fund in the Balance sheet only. In case the expenses exceed the fund amount the excess expenses should be charged to the debit side of the income and Expenditure Account.
- 11.2.9 **Subscription** : Amounts agreed to be paid by the members or subscribers regularly at periodical intervals are called subscriptions : They are a regular source of income to the organisation.
Hence subscriptions are shown as income.
- 11.2.10 **Admission or Entrance fees** : This is the amount received from a member at the time of his initial admission or readmission into the organisation. There is a difference of opinion about the treatment of this item in accounts. Some people argue that it should be capitalised since it is not a recurring item as each member pays it only once. However, there are others who contend that though it is paid by each member only once, the club or college receives it regularly and that as such, according to them, it should be treated as income, whatever the arguments are, in the absence of specific instructions to capitalise. entrance or admission fees, it may be treated as revenue income i.e. shown as the credit side of income and expenditure account.
- 11.2.11 **Honourarium** : It is taken payment made to certain people for their services. It is generally treated as revenue expenditure and charged to the Income and Expenditure Account. But if the amount is paid on account of a specific programme conducted in connection with a specific fund the amount should be deducted from the specific fund in the Balance sheet.
- 11.2.12 **Sale of old Assets** : Any receipt from the sale of an old asset such as furniture, is a capital receipt and as such it should not be taken to Income and Expenditure account, It should be deducted from the concerned asset in the Balance sheet. However, any loss on the sale of asset is charged to income and expenditure account. In case of gain on the sale of an asset, if the amount is small, it is taken to the Income and Expenditure Account, but if it is a big amount it is treated as a capital gain and shown in the Balance sheet.
- 11.2.13 **Sale of old news papers etc:** The amount received on account of sale of old news papers or old sports material etc. treated as revenue income.

11.3 ILLUSTRATIONS :

From the following Receipts and payments account of a Hospital for the year ending 31-12-2007 prepare an Income and Expenditure Account and Balance sheet as at the date.

Receipts and Payments Account for
the year ended 31-12-2007.

Receipts	Amount	Payment	Amount
----------	--------	---------	--------

	Rs		Rs
To Cash in hand	3,565	By Medicine	15,295
To Subscriptions	23,998	By Doctors honourarium	4,500
To Donations	7250	By Salaries	13,750
To Interest on		By petty expenses	230
investments @ 7%	3,500	By Equipment	7,500
To Proceeds from charity	5,225	By Expenses on charity show	375
		Cash in hand	1,888
	43,538		43,538

Additional Information

	1-1-2007	31-12-2007
1. Subscriptions due	120	140
2. Subscriptions received in Advance	32	55
3. Stock of medicines	4405	4870
4. Estimated value of equipment	10,600	15,800
5. Buildings (cost less depreciation)	20,000	19,000

Solution :

Balance sheet as on 1-1-2007

Liabilities	Rs	Assets	Rs
Subscriptions received		Buildings	20,000
in advance	32	Equipment	10,600
Capital fund		Stock of medicines	4,405
(Balancing figure)	88,658	Investments	50,000
		Cash in hand	3565
		Subscriptions due	120
	88,690		88,690

Income and Expenditure Account for the year ended 31st December , 2007.

Dr		Cr	
Expenditure	Amount Rs	Assets	Amount Rs
To cost of medicines	14,830	By subscription	23,995
To Salaries	13,750	By Donations	7,259
To Doctors honourarium	4,500	By Interest on investments	3,500
To Petty expenses	230	By proceeds from	
To Depreciation		charity show	5m225
Equipment 2300			
Buildings 1000	3,300	Less expenses 375	4850

To Excess of Income over expenditure	2985	
	39,595	39595

Dr Balance sheet as on 31-12-2007 Cr			
Liabilities	Amount Rs	Assets	Amount Rs
subscription received		Buildings 20,000	
in advance	55	less Depreciation 1,000	19,000
Capital fund 88658	4,500	Equipment 10,600	
Add Excess		Add additions 7,500	
of Income			18,100
Over expend		<u>Less: Depreciation 2,300</u>	15,800
deture 2,985	91,643	Stock of medicines	4,870
		Investments	50,000
		Cash in hand	1,888
		Subscriptions due	140
	91,698		91,698

Working Notes :

1. Cost of Medicines used	Rs.
Stock of Medicines 1-1-2007	4,405

<u>Add</u> Purchases during the year	15,295
	19,700

<u>Less</u> Stock of Medicines on 31-12-2007	4,870
--	-------

14,830

2. Subscriptions :	Rs
--------------------	----

Actual amount received	23,998
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<u>less</u> Received for 2006	120
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Received in advance	55
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175

<u>Add</u> Due at the end of the year	140
---------------------------------------	-----

Received in advance in

2006

23,995

3. Depreciation on Equipment	Rs.
Equipment on 1-1-2007	10,600
<u>Add</u> Additional during the year	7,500
<u>less</u> Equipment on 31-12-2007	18,100
	15,800
	<u>2,300</u>

Illustration II

The following is the statement of assets and liabilities of the city central library as at 30-6-2006.

Liabilities	Amount Rs	Assets	Amount Rs
Out standing expences	6,500	Cash	32,000
Capital Fund	4,43,500	Furniture	48,500
		Debtors :	
		Subscriptions outstanding 7500	
		For use of lecture hall 3500	11,000
		Books Account	1,68,500
		Investments	50,000
		Buildings	1,40,000
	4,50,000		4,50,000

The following were the cash transactions for the year ending 30-6-2007

Particulars	Amount Rs	Particulars	Amount Rs
To Balance b/d	32,000	By salaries	24,000
To Entrance Fee	26,000	By Municipal taxes	7,000
To subscriptions	85,000	By Insurance on builder	5,000
To sale of furniture	6,000	By Additions to library	12,500
To sale of old News Papers	600	By Outstanding creditors of last year paid	6,500
		Repairs	2,500
To rent on library hall		By Electric installation expenses	45,000
To proceeds from		By printing & stationery	
4,000 lectures and entertainments		By postage	500
		By sundry expenses	1500
		Balance c/d	81,500
			<u>1,90,000</u>

It was ascertained that Rs 11,000 was outstanding by way of subscriptions and Rs 3,750 for use of library hall. Insurance on building was prepaid to the extent of 1,750. There were creditors outstanding for expenses to the extent of Rs 8000,

You are required to prepare an Income and Expenditure Account and Balance sheet as at 30-6-2007 after providing for depreciation on building @ 2 1/2% and writing down investments by 5% and library books by 10%.

Solutions:

Dr City Central Library Income & Expenditure for year ending 30-6-2007 Cr

Expenditure	Amount Rs	Income	Amount Rs
To Salaries	24,000	By subscriptions	85,000
To municipal taxes	1,000	<u>Add</u> Outstand	11,000
To insurance 5000 <u>less</u> prepaid 1750	3250		96,000
To repairs	2500	less last year	7500
To sundry expenses	1500	By sale of old Newspaper	600
To printing & stationery	4000	By rent of library hall	10,400
To postage	500	<u>Add</u> Out standing	3,750
To outstanding expenses	8000		14,150
To Depreciation	3500	<u>less</u> Last year	3500
Buildings		By proceeds from	
Investment	25,00	lectures and entertainment	30,000
Library books	18,700		
To surplus (excess of income over expenditure)	54,100		
	1,29,750		1,29,750

Dr City central Library Balance sheet as on 30-6-2007 Cr

12,500	1,62,900
1,81,100	
18,100	47,500
50,000	11,000
2,500	3,750
	1,750
	81,500
	5,32,400

		<u>less</u> Depreciation		<u>Add</u> Additions			
Liabilities		Amount		Assets		Amount	
(1)		Rs. (2)	(3)			(4)Rs	
			5,32,400				
Capital fund	4,43,500			Buildings	1,40,000		
<u>Add</u> surplus	54,900			<u>less</u>	3,500	1,36,500	
Entrance fees	26,000			Depreciation		42,500	
outstanding				Furniture <u>less</u>			
express				furniture sold	48,500		
					6,000		
		5,24,400		Electric Installation			45,000
		8,000					
				Library books	1,68,500		
				<u>Less</u> Depreciation			
				Sundry debtors			
				For subscriptions			
				For rent of library hall			
				Prepaid insurance			
				Cash			

Sometimes income and Expenditure and Receipts and payment amounts are given in the question and it is required to prepare the balance sheet both at the beginning and at the end of the period, in such case following procedure may be adopted.

11.3.1 From the particulars given in the questions prepare the balance sheet in the beginning of the year.

- 11.3.2 Compare the 'receipts side' of the Receipts and payments amount to income side of income and expenditure about to ascertain
- 11.3.2.1 Subscription in arrears, previous and current years
- 11.3.2.2 income received in advance and
- (iii) sale of an asset during the year
- 11.3.3 Similarly compare the payment side of the Receipts and payment account to expenditure side of the income and expenditure account to ascertain,
- (i) outstanding expenses during the year.
- (ii) prepaid expenses during the year.
- (iii) stock of stationery in hand
- (iv) depreciation on assets and
- (v) purchase of an asset during the year.

Illustration 5 :

From the following information relating to Hyderabad sports club prepare the balance sheet as on 1-1-2007 and 31-12-2007. Assets and liabilities as on 1-1-2007 club grounds and pavilion Rs,250,000 sports equipment's Rs, 1,50,000, Furniture Rs 3,51,000 and subscription in assets on that date Rs 5000. Creditors For stationery Rs 5,000.

Receipts and payment for the year
Ending on 31-12-2007

Receipts	Amount Rs	Payment	Amount Rs
To Balance b/d	25,000	By printing and stationery	15,000
To Subscription		By Salaries	55,000
2006	4,500	By Advertising	10,000
2007	90,000	By Fire insurance	7,500
2008	2,500	By Furniture	10,000
To Sale of old news papers	1,500	By Investment	90,000
To Rent received	11,000	By Balance c/d	7,000
To Entrance fees	60,000		
	1,94,500		1,94,500

Dr Cr Income and expenditure Account for the year ending on 31-12-2007

Expenditure	Amount Rs	Income	Amount Rs
To Salaries	60,000	By subscriptions	95,000
To Printing and stationery	14,000	By entrance fees	60,000
To Audit fees	2500	By rent received	12,000
To Advertising	10,000	By sale of old news paper	1,500
To fire insurance	6,000		

Dr	Rs		Rs
Creditors for stationery	4000	Cash	7000
Salary outstanding	5000	Ground and pavilion	2,50,000
Audit fees out standing	2500	Sports equipment	1,20,000
		(1,50,000 - 30,000)	1,20,000
Subscriptions in advance	2500	Furniture	41,000
		(35,000 + 10,000 - 4000)	
Capital Fund 4,60,000		Investments	90,000
<u>Add</u> surplus 42,000	5,02,000	Subscription outstanding	
		2006 500	
		207 5000	5,500
		Insurance prepaid	1,500
		(7500 - 6000)	
		Rent Due	1000
		(12000 - 11,000)	
To Depreciation on sports equipment	30,000		
To Furniture	4,000		
To excess of income over Expenditure	42,000		
	1,68,500		1,68,500

Solution :

Balance sheet As on 1-1-2007			
Dr			Cr
Liabilities	Amount Rs	Assets	Amount Rs
Creditors for stationery	5000	Cash	25,000
Capital Fund	4,60,000	Ground and pavilion	2,50,000
		Sports equipment	1,50,000
		Furniture	35,000
		Subscription outstanding	3,000
	4,65,000		4,65,000
	5,16,000		5,16,000

Some times Income and expenditure account is given along with notes and it is required to prepare the receipts and payments account. In such a case the following producer may be adopted.

1. All expenditure, whether capital or revenue or relating to the current succeeding and preceding period incurred during the year must be shown on the credit side of this account.
2. All receipt of cash, whether capital. Revenue or relating to the current, sending and preceding period, should go to debit side of this account.

3. Opening and closing balance of receipts and payment account are to be taken into consideration.
4. Eliminate all adjustments relating to provisions for doubtful debts or depreciation which are made for preparing income and expenditure account.
5. Purchase or sale of assets can be calculated by comparing the net value of asset on two dates beginning and the end of the year.

Illustration 6 :

The following is the Income and expenditure account of Guntur stadium club for the year ended 31st March 2007.

Dr	Income and Expenditure Account		Cr
For the year ended 31-3-2007			
Expenditure	Amount	Income	Amount
	Rs		Rs
To salaries	7,800	By subscription	27,200
To Rent	1,800	By Donation	2000
To Printing	300		
To Insurance	200		
To Audit fees	300		
To Games & sports	1,400		
To Subscription written off	140		
To Miscellaneous expences	5,800		
To loss on sales of furniture	1,000		
To Depreciation on sports Equipment	24,00		
To furniture	1,240		
To excess of income over expenditure	6,820		
	29,200		29,200

Additional information :

	31-3-2006	31-3-2007
Subscription in areas	1040	1,480
Advance subscription	400	600
<u>Outstanding expences</u>		
Rent	200	320
Salaries	480	140
Audit fees	200	300
Sports equipment loss depreciation	10,000	9,600
Furniture less depreciation	12,000	11,160
Prepaid Insurance	----	60

Book value of furniture sold is Rs 2,800

Entrance fees capitalised Rs 1600. On 1st April 2007 there was no cash in hand but there is bank overdraft for Rs. 6,000 on 31st march 2007, cash in hand amounted to Rs 340 and the remaining was Bank balance.

Prepare the receipts and payment amount of the club for the year ended 31st march 2007.

Solution:

Dr	Guntur stadium club receipt and payments Account for the year ended 31-3-2007		Cr
Receipts	Amount Rs	Income	Amount Rs
To subscription Received		By Balance b/d	6000
(27,200 + 1040) + 600 - (1480 - 400)	26,820	By sports equipment s	2000
-140)	2000	(9600 + 2400 - 10,000)	
To Donations received	1,600	By Furniture purchased	32,00
To Entrance Fees	1,800	(11,160 + 2800 + 1240	
To sale of furniture		- 12,000)	
(2800 - 1000)		By salaries	8140
		(7800 + 480 - 140)	
		By Rent	
		(1800 + 200 - 320)	1680
		By printing	300
		By Insurances (200 + 60)	260
		By Games & Sports	1,400
		By Misc, expences	5,800
		By closing balance	
		Cash in hand 340	
		Cash in hand <u>2900</u>	3,240
	32,220		32,220

Illustration – 7 :

Secunderabad club had the following assets and liabilities as on 1-1-2007. cash in hand Rs 12,000, subscription receivable Rs 12,00. Furniture Rs 6000, Sports material Rs 3600. Investments Rs 15,000, buildings Rs 30,000 outstanding for supplies Rs 1,800 and capital fund Rs 66,000 During the year 2007 the club did the following business.

Subscriptions received (including the arrears) Rs 18,000 subscriptions due Rs 18,00 paid to the outstanding creditors for supplies, subscriptions to News papers Rs 3000, Sports material purchased Rs 6,000, sale of old newspapers Rs 300, meeting expenses Rs 2,700; lighting charges Rs 2,400 salaries of establishments RS 6,000 stocks of sports material at the end Rs 3,000 interest received on investment

RS 450 (outstanding Rs 150) Borrowing Rs 12,000, donations received Rs 10,800 (has to be capitalised) provide depreciation at 5% on furniture and buildings

Prepare a Receipts and payment amount an Income and expenditure amount for the year 31st Dec 2007, and a Balance sheet as on that date.

Secundrabad club Receipts and payment Account for the
year ended 31-12-2007

Dr			Cr
Receipts	Amount	Payments	Amount
	Rs		Rs
To Balance b/d	12,000	By outstanding creditors	1800
To Subscriptions	18,000	for supplies	
To Sale of old news paper	300	By subscription to news papers	3,000
To Interest on investments	450	By purchase of sports materials	
To Borrowings	12,000	By meeting expenses	6,000
To Donations	10,800	By lighting charges	2,700
		By salaries of establishment	6,000
		By purchase of furniture	2,400
		By Annual function expenses	2,250
		By Balance c/d	27,000
	53,550		53,550

Income and expenditure Account for the year 31-12-2007

Dr	Cr
	24,900

Buildings	1500	1,800
To Surplus		150
		24,900

Balance sheet as on 31-12-2007			
Dr			Cr
Expenditure	Amount	Income	Amount
	Rs		Rs
To subscription to News papers	3000	By subscription (18000 + 1800 – 1200)	18,600
To sports materials used (6000 + 3,600 – 3,000)	6,600	By sale of old News papers	300
To Meeting expenses	2,700	By interest on investments	600
To lighting charges	2,400	By Donations	5,400
To salaries of establishment	6,000		
To functions expenses	2,250		
To annual function expenses			
To Depreciation on Furniture 300			
Liabilities	Amount	Assets	Amount
	Rs		Rs
Borrowing	12,000	Cash in hand	27,000
Capital fund 66,000		Subscriptions due	18,00
<u>Add surplus</u> 150		Furniture	8,100
Donations 5,400	71,550	(6000 + 2400 – 300)	
		Stock of sports material	3000
		Investment	15,000
		Accured Interest	150
		Buildings (30,000 - 1,5000)	28,500
	83,550		83,550

11.4 SUMMARY :

Non trading concerns Income and Expenditure account is accompanied by the Balance sheet like in case of Trading concerns. Capital Fund appear in the Balance sheet of Non-Trading concerns is similar to capital Account of Trading concerns, Non - trading concerns do not have formal capital like that of Trading concerns. The Exceed of income over expenditure and capital receipts or receipts that are capitalised are accumulated under the heading “Capital fund” and shown as liability in the Balance sheet. While preparing Final accounts of Non - Trading organisations special items like legacies

Donations Endowment fund, general fund, special fund Entrance fees, Honorarium etc should be given importance.

11.5 SELF ASSESSMENT QUESTIONS :

- 11.5.1 Explain the meaning of the following terms
- Legacies
 - Donation for specific purpose
 - Life membership fees
 - Entrance fees
 - Endowment fees.
 - Receipts for tournament fund.
- 11.5.2 How will you prepare the Balance sheet both at the beginning and at the end of the accounting period from a given Receipts and payments Account and an income and Expenditure Account.
- 11.5.3 What special items are considered while preparing accounts of Non-trading Concerns?
- 11.5.4 What is legacy ?
- 11.5.5 How will you treat the following items while preparing final accounts of non-trading concerns ?
- Specific donations
 - Entrance fees
- 11.5.6 How do you convert Income and Expenditure account into Receipts and Payments account?

11.6 EXERCISES :

1. From the following Trial Balance prepare an Income and Expenditure Account of the Mumbai club for the year ended 31-12-2007 and a Balance sheet as on that date.

Depreciate furniture by 10% billiards tables and accessories by 20% China glass cuttlery etc. by $33\frac{1}{3}$. of the subscriptions Rs 2,400 is paid in advance and Rs 1500 is in arrears Rs 1,800 is owing for salaries to staff.

	Debit Rs		Credit Rs
Furniture	15,000	Members subscription	63,360
Billiards table (brought in 2005)	7500	Sundry receipts from Billiards etc	10,458
Chinaglass cuttlery	1998	Sale of Tickets for entertainment	19,404
Repairs	4404	Sundry creditors	15,600
Salaries and wages	13,572	Entrance fees	2,688
Rent and Telephone	19,164	capital fund	24,000
Fuel and light	9,708		
Cost of entertainment	13,140		
Sundry expences	9,600		

Cost of annual dinner	4,560		
Sundry debtors	7020		
Cash at bank	28,800		
Cash in hand	1,044		
	1,35,510		135,510

2. From the following receipts and payments account for the year ending 31-12-2007 prepare an income and Expenditure account for the period ending 31-12-2007 and a Balance sheet as on that date.

Receipts	Rs	Payments	Rs
To Donations	35,000	By salaries	37,500
To subscriptions	1,15,000	By Help to poor	37,000
To life membership fees	50,000	By Expenses on free	
To Legacy	75,000	dispensary	34,500
To Interest received	4000	By postage & stationery	3,500
		By Furniture	50,000
		By Investments	75,000
		By Cash in hand	41,500
	2,79,000		2,79,000

Additional Information :

- Subscriptions outstanding for the current year Rs 5,000.
 - Salaries unpaid Rs 5,000
 - Help to poor students promised but unpaid Rs 16,000
 - Expenses of dispensary outstanding Rs 3,000
 - Postage and stationery expenses yet to be paid Rs 4,000
3. Prepare Income and Expenditure account and Balance sheet for 2007 from the Balance sheet and Receipts and payments account.

Balance sheet As on 31-12-2007

Liabilites	Amount	Assets	Amount
	Rs		Rs
Capital Fund	13,448	Building	12,000
Subscriptions received		Outstanding subscriptions	152
in advance	240	Outstanding lockers rent	96
Out standing expenses	560	Cash	4000
loan	2,000		
	16,248		16,248

Receipts and Payment Account for the year ended 31-12-2007

	Rs		Rs
To Balance 1-12-2007	4,000	By Expenses 2006	480
		2007	800
To Subscriptions : 2006	80	By Land	1,600
2007	840	By Interest	160
2008	40	By Mic. expenses	800
To Entrance fees	320		
To Lockers rent	280	To Balance c/d	3,320
Misc. Income	1600		
	7,160		7,160

Guntur sports club started on 1-1-2007, Their Receipts and payment A/c for the year 2007 is given below. Receipts		Rs	Payment	Rs
To Donations		50,000	By Buildings	40,000
To Entrance fees		4000	By Tournament expenses	900
To Tournament Fund		10,000	By Furniture	2,100
Revenue receipts			By Revenue Payments	
To Subscriptions By salaries	18,000			
(including Rs.100 for 2008)By cricket expenses	1140 360 600			
To rent By Insurance	18,000			
To other receipts By gardener	3,500			
To Cricket fees By	68,400			
Investments				
	By Balance c/d			

To Subscriptions By salaries (including Rs.100 for	3,200	2008)By cricket expenses	18,000
To rent By Insurance	100		1140
To other receipts By gardener	700		360
To Cricket fees By	400	Investments	600
		By Balance c/d	18,000
			3,500
	68,400		68,400

Additional Information :

- Subscriptions receivable for the year 2007 Rs 300/-
 - Salaries un paid Rs 170/-
 - Entrance fees are to be capitalised
 - Insurance include 9 months premium for 2008.
4. From the following particulars prepare Income and Expenditure account Rs. Fees collected (Including Rs.24,000

on account of last year)	2,24,000	
Fees for the year outstanding	40,000	
Salary paid (including Rs.2,400 on account of last year)	19,200	
Salary outstanding	3,200	
Entertainment expenses	4,000	
Tournament expenses	8,000	
Meeting expenses	16,000	
Travelling & Conveyance	6,400	
Purchase of books	16,000	
Periodicals		8,000
Rents	9,600	
Postage, Telephone and Telegrams	13,600	
Printing and Stationery	4,000	
Donations received	6,400	

(Ans : Surplus Rs.1,56,800)

5. Following is the Receipt and Payments account of Visakapatnam cultural club for the year ended 31-12-2000.

Dr.		Cr.	
Receipts	Rs	Payments	Rs
To Donations	25,000	By Salaries	900
To Life membership	2,000	By Cricket	300

Centre For Distance Education		11.18	Acharya Nagarjuna University	
To Sports competition fund	By	5,000	Tennis	270
To Subscription	By Insurance	1,600	Garden maintenance	180
(including Rs.50 for 2001)	By			85
To Locker rent	By Printing	50	Telephone	15
To Interest on securities	By	200		125
To Cricket	By Investments	150		9,000
To Tennis	By Balance c/d	100		1,825
To Billiards		100		
		34,200		34,200

Subscriptions receivable for 2000 Rs.150, outstanding salaries Rs.100. Half of the donations are to be capitalised, accrued interest Rs.300, Prepaid insurance Rs.30.

Prepare Income and Expenditure Account for the year ended 31-12-2000. (Ans : Surplus Rs.13,155)

6. The Receipts & Payments account of the Hyderabad Friends Club for the period ending 31st December, 2000 is given below.

Receipts	Rs	Payments	Rs
To Donates received	25,000	By Buildings	20,000
To Reserve fund (Being		By Furniture	1,050
life numbers fees received)	2,000	By Tournament Expenses	
quadrangular match fund	5,000	quadrangular matches	450
Revenue Receipts		Revenue payments	
To subscriptions (including		By salaries	900
Rs. 50 for 2001)	1,600	By Cricket	300
To Lockers rent	50	By Tennis	270
To interest on securities	50	By Insurance (Paid up	
To cricket	200	30th September 2001)	180
To sundries	25	By Gardening	85
To Tennis	175	By Printing	15
To Billiards	100	By Telephone	125
		By sundries	75
		By Investments (at cost)	9,000
		By Balance c/d	1,750
	34,200		34,200

Subscription fees outstanding for the year 2000 was Rs. 150. Salaries up paid for 2000 Rs, 85, From the particulars given above prepare an Income and Expenditure account of the club for the year ended 31st December, 2000 and the Balance Sheet as on that date.

(Ans : Excess of income Over Expenditure, Rs. 400, Balance Sheet Total Rs. 32,085)

7. Tarakarama Sports Club's Receipts and Payments amount for the year ending 31st Dec.,20000 is given here under.

Receipts	Rs	Payments	Rs
To Cash in hand	250	By Salary workmen	2,000
To Cash at Bank	2,250	By Grass cutting machine	1,000
To subscriptions	6,750	By Rent	450
To tournament fund	2,500	By Games expenditure	3,500
To Life members fees	1,500	By Tournament expenditure	1,000
To Entrance fees	250	By office expenditure & Postage	2,250
To Donation Pavilion	4,000	By Games equipment	1,500
To sale of glass	200	By Balance c/d	
		Cash in hand	750
		Cash at Bank	5,250
	17,700		17,700

Additional information.

1. Subscriptions receivable for 1999 Rs. 1,000 and for 2,000 Rs. 1,050
2. Games equipment in the beginning was Rs. 250 for 2001.
3. Provide depreciation at 10% on Gras cutting machine.

Prepare Income and Expenditure account for the year ending 31st Dec., 2000 and opening and closing Balance sheet.

(Ans : Excess of Expenditure Over Income Rs.2,550 Capital fund Rs. 4,500 Balance sheet Total Rs. 9,200)

8. Prepare the final a/c of Hyderabad Club from the particulars given below for the year ending 31- 12-2000.

Receipts	Rs	Payments	Rs
To Balance b/d	1,200	By Salaries	6,500
To Subscriptions		By Rent	1,200
(including 400 for 2001)	6,400	By Printing & Stationery	180
To Interest on investment		By postage	50
(Investment cost Rs.40,000)	2,500	By Cycle purchase	800
To Bank interest	50	By Govt. Bands	1,000
To Sale furniture	500	By Balance c/d.	920
	10,650		10,650

Adjustments

Subscriptions received included Rs.200/-of 1999

Rent paid included Rs.100/- for Dec.,1999.

Subscriptions due for 2000 Rs. 300/-

Salaries payable Rs. 600/-

Cost of Furniture sold was Rs.640/-

(Ans : Excess of Income over Expenditure Rs. 80 Capital Fund Rs. 14,940 Balance Sheet Total Rs. 43,020)

9. From the following Receipts and Payments account and other information of City Club, prepare Income and Expenditure account as on 31-12-2000 and Balance Sheet as on that date.

Adjustments :

1. Subscriptions received include Rs. 1,200 - for the year 1999 and Rs.2,400/- for the year 2001.
2. Subscriptions due for the year 2000 - Rs.1,800/-
3. Printing charges payable for 2000 - Rs.240/-
4. Salaries payable for 2000 - Rs. 3,600/-

Receipts & Payment Account on 31-12-2000

Receipts	Rs	Payments	Rs
1.1.2000		By Salaries	39,000
To Balance of		By Rent	7,200
Cash 1800		By printing and stationary	1,080
Bank 5400		By postage	300
	7,200	By Purchase of a cycle	1,800
31-12-2000		By Purchase of Govt. Bonds	9,000
To Subscriptions	38,400	31-12-2000	
To interest on investments	15,000	By Balance C/D	
To Bank interest	300	Cash 180	
To sale of furniture	3,000	Bank 5,340	
(Cost of furniture			5,520
on 1-1-2000 Rs. 3,840)	63,900		63,900

(Ans: Excess of Expenditure over Income - Rs. 360, Capital Fund - Rs 12,240 Balance Sheet Total - Rs. 18,120)

10. From the under mentioned Receipts and Payment account for the year ending 31-12-2000 of French Recreation Club, prepare Income and Expenditure account and Balance Sheet as on that date.

Receipts and Payments Account (For
the year ended 31-12-2000)

Receipts	Rs	Payments	Rs
To Balance b/d (Bank)	25,000	By purchase of furniture (1-4-200	5,000
To subscriptions		By salaries	2,000
1999 1,500		By Telephone expenses	300
2000 10,000		By Electricity charges	600

2001	500	12,000	By postage and stationery	150
To Donations		2,000	By Purchase of books	2,500
To Rent		300	By Entertainment expenses	900
To Interest on bank deposits		450	By Purchase of Govt. Bonds 5%	
To Entrance fee		1,000	(1-7-2000)	8,000
			By Miscellaneous expenses	600
			By Balance c/d :	
			Cash	300
			Bank	20,400
				<u>20,700</u>
		<u>40,750</u>		<u>40,750</u>

The following additional information is available :

- Salaries outstanding Rs, 1,500.
- Entertainment expenses outstanding Rs 500
- Bank interest receivable Rs. 150
- Subscriptions accrued Rs. 400
- 50% of entrance fee is to be capitalised.
- Furniture is to be depreciated at 10% (per annum).

(Ans : Excess of Income over Expenditure - Rs. 7,075 Capital Fund Rs. 26,500, Balance sheet Total Rs. 36,575)

11. The following is the Receipts and payments statement of the Secunderabad sports Club for the year ended 31st December, 2000

Receipts	Rs	Payments	Rs
To Balance 1-1-2000	2,400	By Secretary's salary	3,600
To Entrance fees	500	By Up-keeps of grounds (c)	2,100
To subscriptions (a)	8,700	By Wages of grounding (d)	2,400
To proceeds of		By found rent	150
Concerns	1,500	By Sundry repairs	175
To Interest on (b)		By Printing and postage	200
Investment	500	By Balance 31-12-2000	4,945
	<u>13,600</u>		<u>13,600</u>

a) This item included subscriptions outstanding brought over from previous year, Rs. 300

b) This item includes Rs. 150 in respect of interest accrued in the preceding period.

c) This item includes Rs. 400 applicable to the previous year.

d) This item includes Rs. 200 applicable to the previous year.

Other ledger balance at the commencement of the financial period were :

Capital fund Rs. 40,100 Income and Expenditure account Credit Balance brought forward Rs. 8,900, Club premises and Grounds (as per valuation) Rs. 31,000, Investments Rs. 10,000, Sports material Rs. 2,450, Furniture and Fixtures Rs. 4,000, Books - Rs. 300.

From the above particulars, prepare a Balance sheet at the commencement of the period, and income end Expenditure account for the period, and a Balance Sheet as the close of the period.

Entrance fees are to be capitalised. The outstanding liabilities on 31st December, 2000 were wages Rs. 200 and Printing Rs. 100. Interest occurred and outstanding on investments was Rs 120. Depreciate Club premises by 2 per cent, Furniture by 5 per cent and sports Equipment by 33 1/3 percent.

(Ans : Excess of Income over Expenditure Rs. 428. Balance sheet total Rs. 50,228)

12. The receipts and payments account of the Hyderabad Athlete, Society, for the year ending 31st December, 2000 is given below. In the Society's ledger, the following balance are found on the date.

	Rs.
Capital account (Donations etc.)	30,000
Club House and grounds	18,000
Investments at cost	8,000
Furniture & fittings	4,500
Income & expenditure (Cr.)	2,500

Receipts and payment Account for the year ended 31st December, 2000

Receipts	Rs	Payments	Rs
To Balance 1-1-2000	2,085	By Upkeep of grounds	3,300
To proceeds of		To subscriptions	7,200
and postage	80	By Secretary's salary (c)	2,400
Investment	360	To Entrance fees	320
		By Wages of groundman (d)	2,800
		By ground rent	150
		Lectures	3,500
		By Sundry repairs	140
		To Interest on	By Printing
			and postage
		By Balance 31-12-2000	5,595
	13,465		13,465

a) This item includes Rs 400, in respect of subscriptions brought over from previous year.

b) This item included Rs. 90, by way of interest occurred in the previous year.

c) This included Rs.400 applicable to the previous ear.

d) This item included Rs. 175, which relates to the previous year.

Other adjustments are :

1) Entrance fees are to be capitalised.

2) Charge 10% depreciation on furniture and 2 percent of club house and grounds.

From these particulars, prepare the final accounts of the Society for the yea 2000.

(Ans Excess of Income over Expenditure Rs. 2,465, Balance Sheet Total Rs. 35,285.) 13.

The following particulars related to Cucullate club. Income and Expenditure Account

(For the year ended 31-12-2000)

Receipts	Rs	Payments	Rs
To Salaries	4,800	By Entrance fees	36,000
To subscriptions	6,300	By Subscriptions	42,300
To Advertising	5,400	By Rent	12,000
To Audit fees	900		

To Fire insurance	3,000		
To Depreciation	24,000		
To Excess of Income over Expenditure	45,900		
	90,300		90,300

Receipts and Payment Account
(For the year ended 31-12-2000)

Receipts	Rs	Payments	Rs
To Balance b/d	12,600	By Salaries	3,600
To Entrance fees	36,000	By Printing & Stationery	7,500
To Subscriptions		By Advertising	5,400
1999	1,800	By Fire Insurance	3,600
2000	40,500	By Investments	60,000
2001	1,200	By Balance c/d	22,500
To Rent received	10,500		
	1,02,600		1,02,600

The assets on 1-12-2000 included land and buildings Rs. 1,50,000, sports equipment Rs. 75,000, Furniture Rs. 12,000, Subscriptions in arrears on that date were Rs. 2,400, Subscriptions in arrears on 31-12-2000 amounted to Rs. 1,800.

Prepare Balance sheet as at 31-12-2000.

(Ans Capital fund the being Rs.2,52,000 B/s total Rs. 3,01,200)

14. From the following information given the books of a sports club, prepare the Balance sheet as on 31-12-2000.

Receipts and Payment Account for the year ended 31-12-2000.

Receipts	Rs	Payments	Rs
To Balance b/d	16,800	By Salaries	32,600
To Entrance fees	8,000	By Printing & Stationery	80,000
To Subscriptions		By Advertising	2,000
1999	2,400		7,200
2000	40,500	By printing & Stationery	60,000
2001	1,200	(including Rs.1,200 of the previous year)	22,500
		By Insurance Premium	4,800
		By Balance c/d	10,800
To Interest received	8,000		
	1,36,800		1,36,800

Income and Expenditure Account for the year ended 31-12-2000.

Receipts	Rs	Payments	Rs
To Salaries	33,600	By Subscriptions	1,02,000
To Advertising	2,000	By Entrance fees	8,000
To Printing & Stationery	6,000	By Interest received	8,000
To Audit fees	4,000		
To Insurance premium	4,000		
To Depreciation	24,000		
on sports - equipment	30,000		
Furniture	1,600		
To Excess of over Expenditure	45,900		
	1,18,000		1,18,000

Assets of the club on 1-1-2000 including Sports equipment Rs. 1,00,000, Ground and pavilion Rs. 1,60,000 and Furniture Rs. 16,000. Subscription in arrears on that date was Rs, 3,200 and subscription received in advance was Rs. 1,000.

(Ans : B/s Total Rs 3,37,800; Opening capital fund Rs 2,93,800) 15.

Andhra Cricket club gives you the following information.

Income and Expenditure Account for the year ended 31-12-2000.

Expenses	Amount Rs	Income	Amount Rs
To Remuneration	9,000	By Donation and	
To Salaries and wages	12,000	Subscription	51,000
To Rent	6,000	By Barroom receipts	12,000
To Repairs 5,500 Less expenses Miscellaneous expenses 3,500 By secretary 9,000 By Hire of club To Depreciation on equipment 2,500 To Surplus 12,500		Bank	
		10,000 Interest 1,000 To Honorium to hall 6,000	
		2,000 60,000	
		To	60,000

Balance Sheet as on 31-12-2000.

1999 Rs	Labilities	2000 Rs.	1999 Rs.	Assets	2000 Rs.
	Capital Fund as		12,500	Equipment	10,000

	On 31-12-99	24,000			Outstanding	
	Entrench fee	5,000		3,000	Subscription	4,000
24,000	Surplus	12,500	41,500	2,500	Cash in hand	2,000
	Subscription in			1,250	Cash at bank	5,000
2,000	advance		15,00	10,000	Fixed deposits	25,000
	Outstanding expenses					
750	Miscellaneous		500			
1,000	Salaries and wages		1,500			
	Honorarium to					
1,500	Secretary		1,000			
29,250			46,000	29,250		46,000

Prepare the Receipts and payments Account of the club for the year ended 31-12-2000.

(Donations subscriptions received Rs, 49,500, Salaries and wages paid Rs. 11,500, Misc. expenses paid Rs. 3,750, Honorarium to secretary paid on 9,500).

11.7 SUGGESTED READINGS :

Financial Accountancy	:	Shukla Grewal
Financial Accountancy	:	Jain and Narang
Financial Accountancy	:	R.L. Gupta & V.K. Gupta

LESSON-12

NATURE AND SCOPE OF FINANCIAL ACCOUNTING AND COST ACCOUNTING

OBJECTIVE

The objective of this lesson is to explain Definitions of Financial Accounting and Cost Accounting, Nature and Scope of Cost Accounting, Difference between Financial Accounting and Cost Accounting.

STRUCTURE

- 12.1 Introduction
- 12.2 Meaning and Definition of Accounting
- 12.3 Meaning of Financial Accounting
- 12.4 Limitations of Financial Accounting
- 12.5 Cost Accounting - Costing - Cost Accountancy
- 12.6 Cost
- 12.7 Costing
- 12.8 Cost Accounting
- 12.9 Cost Accountancy
- 12.10 Scope of Cost Accountancy
- 12.11 Objectives of Cost Accounting
- 12.12 Cost Accounting Vs Financial Accounting
- 12.13 Differences between Financial Accounting And Cost Accounting
- 12.14 Self Assessment Questions
- 12.15 Suggested Reading

12.1 INTRODUCTION :

The accounting systems which we find today have developed with the development of institutions of trade, commerce and industry. In earlier days the business was simple and the transactions were few. The business men used to remember the transactions by memorising them. The advent of industrial revolution resulted in large scale production in widening of markets. With the increase in business activity the businessmen were expected to keep a track of their relationship with outsiders and to make a record of their assets and liabilities. The Technological changes have also brought a change in the field of accounting. Accounting is now considered as a managerial tool for planning and control.

12.2 MEANING AND DEFINITION OF ACCOUNTING :

Accounting involves the collection, recording, classification and presentation of financial data for the benefit of management and outside agencies such as shareholders, creditors, bankers and government. According to the committee on Terminology of American Institute of Certified Public Accountants, accounting is “the art of recording, classifying and summarising in a significant manner and in terms of money, transactions and events, which are in part at least, of a financial character and interpreting the results thereof”. The transactions which are measurable in monetary terms only form a part of accounting. The recording of transactions is done in such a way that analysis and interpretation of business activities is possible.

Smith and Ashburne describe it as “Accounting is the science of recording and classifying business transactions and events, primarily of financial character, and the art of making significant summaries, analysis and interpretation of those transactions and events and communicating the results to persons who must make decisions or form judgements”. This definition emphasises financial reporting and decision-making aspect of accounting.

The word ‘ Accounting can be classified in to three categories.

- a) Financial Accounting
- b) Cost Accounting; and
- c) Management Accounting.

12.2 MEANING OF FINANCIAL ACCOUNTING :

Financial Accounting may be defined as the science and art of recording and classifying business transactions and preparing summaries of the same for determining year end profit or loss and the financial position of the concern. It is the part of accounting which is employed to communicate the financial information of a business unit.

Financial Accounting is primarily concerned with record keeping directed towards the preparation of Profit and Loss Account and Balance Sheet. It provides information regarding the profit and loss that the business enterprise is making and also its financial position on a particular date. The information concerning the business enterprise is helpful to management to control in a general way the major functions of a business i.e. finance, administration production and distribution but details regarding operating efficiency of these divisions are lacking.

12.3 LIMITATIONS OF FINANCIAL ACCOUNTING :

The following limitations of financial accounting have lead to the development of cost accounting.

1. Historical Nature : Financial accounting is historical in nature in the sense that it is a record of all those transactions which have taken place in the business during a particular period of time. The impact of future uncertainties has no place in financial accounting. As management needs information for future planning, financial accounting can only give information about what has happened and not about what will happen. It does not suggest it what should be done to increase the efficiency of the concern.

2. Provides the Information About the Concern as a Whole : Financial accounting discloses only the net result of the collective activities of a business as a whole. It does not indicate the profit or loss of each department, job, process or contract. It does not disclose the exact cause of inefficiency.

3. Not Helpful in Price Fixation : Financial accounting is not helpful in fixing prices of products. Price fixation requires information about variable and fixed costs, indirect costs. Indirect expenses are estimated on the basis of past records for price determination. The concern may be required to quote price for the supply of goods in the near future. Financial accounting can not supply all these information. So it is not helpful in price determination.

4) Cost Control Not Possible : Cost control is not possible in financial accounting. The cost figures are known only at the end of a financial period. When the cost has already been incurred then nothing can be done to control it. There is no technique in financial accounting which can help to ascertain whether the cost is more or less while the expenses are being incurred. There is no procedure to assign responsibility for higher costs.

5) Appraisal of Policies Not Possible : It is not possible to evaluate various policies and programmes in financial accounting. There is no technique for comparing actual performance with budgeted targets. Whether the work is going on as per schedule or not cannot be determined. The only criterion for determining efficiency is to see the profits at the end of financial period. The profitability is the only yardstick for evaluating managerial performance. Profits of an enterprise are influenced by a number of outside factors also. So it is not a reliable test for ascertaining efficiency of the management.

6) Only Actual Costs Recorded : Financial accounting records only actual cost figures. The amount paid for purchasing of materials, property or other assets is recorded in account books. The price of goods and assets go on varying from time to time. The present prices of assets may be absolutely different from the recorded costs. Financial accounts do not record price level changes. The recorded costs cannot provide correct information or exact values of assets.

7) Not Helpful in Strategic Decisions : It does not supply useful data to management for comparison with previous period and for taking various financial decisions as introduction of new products, replacement of labour by machines, price in normal or special circumstances, producing a part in the factory or buying it from outside products, investment to be made in new products or not etc.

8) Technical Subject : Financial Accounting is a technical subject. The recording of transactions and making their use requires knowledge of accounting principles and conventions. A person who is not conversant with accounting subject has little utility of financial accounts.

9) Quantitative Information : Financial accounting records only that information which can be quantitatively measured. Anything which cannot be quantitatively measured will not form a part of financial accounting even though it is important for business.

10) Lack of Unanimity About Accounting Principles : Accountants differ on the use of accounting principles and procedures. The use of different accounting methods reduces the usefulness and reliability of accounts.

11) Chances of Manipulation : There are chances of using financial accounts to suit the whims of management. The over valuation or under valuation of inventory may change the figures of profits. More profits may be shown to get more remuneration, issue more dividend or to raise the prices of company's shares. Less profits may be shown to save taxes or for not paying bonus to workers etc. The possibility of manipulating financial accounts reduces their reliability.

12) Inadequate Information for Reports : It does not provide adequate information for reports to outside agencies such as banks, government, insurance companies and trade associations.

13) No Analysis of Losses : It does not provide complete analysis of losses due to defective material, idle time, idle plant and equipment. No distinction is made between avoidable and unavoidable wastage.

12.4 COST ACCOUNTING :

Costing is a specialised branch of accounting. It has been developed because of limitations of financial accounts.

Concepts of Cost, Costing, Cost Accounting and Cost Accountancy.

12.5 COST :

The term 'Cost' has a wide variety of meanings. Different people use this term in different senses for different purposes. For example while buying a book we generally ask "What is the cost of book?" Here it means the price of the book. But in management terminology, the term cost refers to expenditure and not the price. For our purposes cost is not the same as price. The costing terminology of the Institute of cost and works Accountants, London defines cost as "the amount of expenditure (actual or notional) incurred on or attributable to a given thing". Thus, cost refers to something that must be sacrificed to obtain a particular thing.

12.6 COSTING :

Costing is the technique and process of ascertaining costs. It consists of the principles and rules which are used for ascertaining the costs of products and services. Costing is a systematic procedure of determining the unit cost of product / service.

12.7 COST ACCOUNTING :

Cost Accounting is the classifying recording and appropriate allocation of expenditure for the determination of the costs of products or services and for the presentation of suitably arranged data for purposes of control and guidance of management. It includes the ascertainment of the cost of every order, job, contract process, service or unit as may be appropriate. It deals with the cost of production, selling and distribution. It is thus the provision of such analysis and classification of expenditure as will enable the total cost of any particular unit of production or service to be ascertained with reasonable degree of accuracy and at the same time to disclose exactly how such total cost is constituted so as to control and reduce its cost.

12.8 COST ACCOUNTANCY :

Cost Accountancy is the application of costing and Cost Accountancy principles, methods and techniques to the science, art and practice of cost control and the ascertainment of profitability. It includes the presentation of information derived there from for purposes of managerial decision making. Thus, Cost Accountancy is the science, art and practice of a cost accountant. It is a science because it is a body of systematic knowledge having certain principles which a cost accountant should possess for proper discharge of his responsibilities. It is an art as it requires the ability and skill with which a cost accountant is able to apply the principles of cost accountancy to various managerial problems. Practice includes the continuous efforts of a cost accountant in the field of cost accountancy. Such efforts also includes the presentation of information for the purpose of managerial decision making and keeping statistical records.

12.9 SCOPE OF COST ACCOUNTANCY :

The scope of Cost Accountancy is very wide and includes the following :

Cost Ascertainment : It deals with the collection and analysis of expenses, the measurement of production of the different products at the different stages of manufacture and the linking up of production with the expenses. The varying procedures for the collection of expenses give rise to different systems Costing such as Historical or Actual Costs, Estimated Costs, Standard Costs etc. Again the varying procedures for the measurement of production have resulted in different methods of costing such as specific order costing, operation costing etc. For linking up of production with the expenses the different techniques of costing such as Marginal Cost Technique, the Total Cost Technique, Direct Cost Technique etc. All the three i.e. systems, methods and techniques can be used in one concern simultaneously.

Cost Accounting : It is the process of accounting for cost which begins with recording of expenditure and ends with the preparation of statistical data. It is the mechanism by means of which costs of products or services are ascertained and controlled cost accounting is helpful to the management in decision making.

Cost Control : Cost control is the guidance and regulation by an executive action of the costs of operating an undertaking. The cost can be controlled by standard costing, budgetary control, proper presentation and reporting of cost data and cost audit.

12.10 Objectives of Cost Accounting :

The Objectives of cost accounting are ascertainment of Cost, fixation of selling price, proper recording and presentation of cost data to management for measuring efficiency and for cost control. The following are the main objectives of cost accounting :

- 12.10.1 To ascertain the cost per unit of the different products manufactured by a business concern.
- 12.10.2 To provide correct analysis of cost both by process or operations and by different elements of cost.
- 12.10.3 To disclose the sources of wastage whether of material, time or expenses or in the use of machinery, equipment and tools and to prepare reports to control such wastage.
- 12.10.4 To provide requisite data and serve as a guide to price fixing of products manufactured or services rendered.
- 12.10.5 To ascertain the profitability of each of the products and advise management as how these profits can be maximised.
- 12.10.6 To exercise effective control of stocks of raw materials, work in progress, consumable stores and finished goods in order to minimise the capital locked up in these stocks.

- 12.10.7 To supply useful data to management for taking various financial decisions such as introduction of new products, replacement of labour by machine etc.
- 12.10.8 To present and interpret data for management planning, decision making and control.
- 12.10.9 To provide specialised services of cost audit to prevent the errors and frauds and to facilitate prompt and reliable information to management.

12.11 Cost Accounting Vs Financial Accounting :

Both financial and cost accounting are the branches of accounting whose main objective is to provide information by recording the business transactions systematically and scientifically so that it may serve the purpose of the management for policy formulation and controlling to provide necessary protection to outsiders. Both are based on double entry system and their role are supplementary. The ordinary trading account provides valuable information. Financial accounting treats costs very broadly, while cost accounting does this in much greater detail. In order to illustrate this, fact, let us examine the following two statements under Financial Accounting

Trading and Profit and Loss Account

(for the year ending 31st December..)

Dr		Cr	
Particulars	Rs.	Particulars	Rs.
To Material Consumed	20,000	By Sales	75,000
To Wages	16,000		
To Direct Expenses	2,000		
To Manufacturing Expenses	12,000		
To Gross Profit C/d	25,000		
	75,000		75,000
To Office and Administration Expenses	3,000	By Gross Profit B/d	25,000
To Selling and Distribution Expenses	7,000		
To Net Profit 20% on Sales	15,000		
	25,000		25,000

The contents of the above accounts are reproduced by the cost accountant in the following statement, that three products viz., A,B and C are manufactured.

Statement of Cost and Profit

Particulars	Products			
	Total Rs	A Rs	B Rs	C Rs
Direct Materials	20,000	8,000	8,000	4,000
Direct Labour	16,000	6,000	8,000	2,000
Direct Expenses	2,000	1,000	1,000	-
Prime Cost	38,000	15,000	17,000	6,000
Factory Overheads	12,000	4,000	7,000	1,000
Office & Admn Overheads	50,000 3,000	19,000 1,000	24,000 1,500	7,000 500
Selling & Distribution Overheads	53,000 7,000	20,000 3,000	25,500 2,500	7,500 1,500
Total Cost	60,000	23,000	28,000	9,000
Sales	75,000	38,000	23,500	13,500
Profit / Loss	15,000	15,000	- 4,500	4,500
Percentage of Profit on Sales	20 %	39.47 %	-19.15 %	33.33 %

The profit as shown by the financial books is Rs. 15,000 being 20 % profit on sales but the cost accountant shows how this profit has been arrived at. The product 'A' is giving a profit of 39.47 % and product 'C' a profit of 33.33 % on sales while product B is actually giving a loss. This analysis as shown by cost accounting is quite useful and necessary but the financial accounting does not take to this point.

12.12 Differences between Financial Accounting & Cost Accounting :

Basis	Financial Accounting	Cost Accounting
Purpose	It provides information business in general way. It tells about the profit and loss and financial position of the business to owners and other out side parties.	It provides information to the management for proper planning, operation, control and decision making.
Form of accounts	These accounts are kept in such a way to meet the requirements of companies Act and Income Tax Act.	These accounts are kept voluntarily to meet the requirements of the management.
Recording	It records the expenditure in a subjective manner i.e. according to the nature of expenses.	It records the expenditure in an objective manner i.e. according to the purpose for which it is incurred.
Control	It lays emphasis on the recording aspect without giving any importance to control.	It provides a detailed system of control for materials, labour and overheads with the help of standard costing and budgetary control.
Period	It reports operating results and financial position usually at the end of the year.	It gives information through cost reports to management as and when desired.
Analysis of Profit	Financial accounts are the accounts of the whole business. It disclose the net profit or loss of the business as a whole.	Cost accounts are only a part of the financial accounts and disclose the profit or loss of each product, job, or service.
Reporting of Costs	The Costs are reported in aggregate in financial accounts.	The costs are broken down on a unit basis in cost accounts.

Basis	Financial Accounting	Cost Accounting
Nature of transactions	Financial accounts relate to commercial transactions of the business and include all expenses i.e. manufacturing, office, selling and distribution etc. Financial accounts are concerned with external transactions.	Cost accounts relate to transactions connected with the manufacture of goods and services cost accounts are concerned with internal transactions.
Information	It deals with the monetary transactions.	It deals with the monetary and non-monetary transactions.
Figures	Financial accounts deal mainly with actual facts and figures.	Cost accounts deal partly with facts and figures and partly with estimates.
Stock Valuation	Stocks are valued at cost or market price whichever is less.	Stocks are valued at cost.

12.13 Self Assessment Questions

1. Give five limitations of financial accounting.
2. State the differences between financial accounting and cost accounting.
3. Define - i) Cost accounting
ii) Costing
iii) Cost accountancy.
4. State five objectives of Cost Accounting.

12.14 Suggested Reading

Cost & Management Accounting - S.P.Jain & K.L.Narang.

Advanced Management Accounting - Shashi k. Gupta, R.K.Sharma.

Cost Accounting - N.K.Prasad.

P. USHA RANI

LESSON -13**NATURE AND SCOPE OF
MANAGEMENT ACCOUNTING****OBJECTIVE :**

The objective of this lesson is to explain the concepts of Management Accounting, characteristics, Scope, objectives, Functions, Advantages, Differences and limitations of Management Accounting.

STRUCTURE

- 13.1 Introduction**
- 13.2 Meaning of Management Accounting**
- 13.3 Definitions of Management Accounting**
- 13.4 Characteristics of Management Accounting**
- 13.5 Scope of Management Accounting**
- 13.6 Objectives of Management Accounting**
- 13.7 Functions of Management Accounting**
- 13.8 Advantages of Management Accounting**
- 13.9 Financial Accounting Vs Management Accounting**
- 13.10 Cost Accounting Vs Management Accounting**
- 13.11 Limitations of Management Accounting**
- 13.12 Self Assessment Questions**
- 13.13 Suggested Readings / Reference books.**

13.1 INTRODUCTION :

Cost accounting no doubt serves the internal management by directing their attention on inefficient operations and assisting in a day to day control of activities of the enterprise. But even costing information fails to meet informational needs for managerial functions. In actual practice cost accountants are doing the jobs of management accountants. Further, most of the techniques of management accounting are also being used by the cost accountants. That is why, management accounting is treated as extension of cost accounting. Management accounting includes many more aspects of the study besides the cost accounting. Management Accounting has been developed with the limitations of financial and cost accounting.

13.2 Meaning of Management Accounting :

The term Management Accounting is of a recent origin. Management Accounting is comprised of two words 'Management' and 'Accounting'. It is the study of managerial aspect of accounting. Management Accounting is the presentation of accounting information in such a way so as to assist management in the creation of policy and day to day operation of an undertaking. That it relates to the use of accounting data collected with the help of financial accounting and cost accounting for the purpose of policy formulation, planning, control and decision making by the management.

13.3 Definitions of Management Accounting :

“Management Accounting is concerned with accounting information that is useful to management”.

- R.N. Anthony.

“Management Accounting is the term used to describe accounting methods, systems, techniques which coupled with special knowledge and ability, assists management in its task of maximising profits or minimising losses”.

- J. Balty.

From the above it is clear that management accounting uses all techniques of financial accounting, cost accounting and statistics to collect and process data for making it available to management so that it can take decisions in a scientific manner.

13.4 Nature or Characteristics of Management Accounting :

The following are the main characteristics of Management Accounting.

1) Providing Accounting Information : Management accounting involves the presentation of information in a way it suits managerial needs. Management accounting provides necessary information to different levels of management to take various policy decisions.

2) Cause and Effect Analysis : The study of cause and Effect relationship is possible in management accounting. If there is profit or loss, the factors directly influence the profit or loss are studied.

3) Use of Special Techniques and Concepts : Management accounting uses special techniques and concepts to make accounting data are more useful. The techniques usually used include financial planning and analysis, standard costing, budgetary control, marginal costing, project appraisal, control accounting etc.

4) Taking Important Decisions : Management Accounting helps in taking various important decisions. It supplies necessary information to management to take important decisions.

5) Achieving of Objectives : In management accounting, the accounting information is used in such a way that it helps in achieving organisational objectives. In case there are deviations between the standards set and actual performance of various departments corrective measures can be take at once. This is possible with the help of budgetary control and standard costing.

6) No Fixed Norms Followed : No specific rules are followed in management accounting. Though the tools of management accounting are the same but their use differs from concern to concern. Every concern uses the figures in its own way. The presentation of figures will be in the way which suits the concern most. So every concern has its own rules and by-rules for analysing the data.

7) Increase in Efficiency : The purpose of using accounting information is to increase efficiency of the concern. The efficiency can be achieved by setting up of goals for each department. If there is any deviation, an effort is made to take corrective measures so that efficiency is improved.

8) Supplies Information and not Decision : The management accountant supplies information to the management. The decisions are taken by the Top Management. Management Accounting is only to guide and not to supply decisions.

9) Concerned with Fore Casting : The management accounting is concerned with the future. It helps the management in planning and forecasting.

13.5 Scope of Management Accounting :

The scope of management accounting is very wide and broad based. It includes all information which is provided to the management for financial analysis and interpretation of the business operations. The following field of activities are included in the scope of management Accounting :

i) Financial Accounting : Financial Accounting though provides historical data but is very useful for future planning and forecasting. Designing of a proper financial accounting system is a must for obtaining full control and coordination of operations of the business. So management accounting is closely related to financial accounting.

ii) Cost Accounting :It provides various techniques of costing like marginal costing, standard costing, differential and opportunity cost analysis etc., which play a useful role in the operation and control of the business undertakings.

iii) Budgeting and Forecasting : Budgeting means expressing the plans, policies and goals of the enterprise for a definite period in future. Forecasting on the otherhand is a prediction of what will happen as a result of a given set of circumstances. Forecasting is judgement where as budgeting is an organisational object . Both budgeting and forecasting are for management accountant in planning various activities.

iv) Cost Control Procedures : These procedures are integral part of the management accounting process and includes inventory control, cost control, labour control, budgetary control and variance analysis etc.

v) Reporting : The management accountant is required to submit reports to the management on the various aspects of the undertaking. While reporting he may use statistical tools for presentation of information as graphs, charts, pictorial presentation, index numbers and other devices in order to make the information more impressive and intelligent.

vi) Methods and Procedures : It includes in this study all those methods and procedures which help the concern to use its resources in the most efficient and economical manner. It undertakes special cost studies and estimation reports on cost volume profit relationship under changing circumstances.

vii) Tax Accounting : It is an integral part of management accounting and includes preparation of income statement determination of taxable income and filing up the return of income etc.

viii) Internal Audit : Internal Audit helps the management in fixing responsibility of different individuals.

ix) Interpretation of Data : The management accountant interprets various financial statements to the management. These statements give an idea about the financial and earning position of the concern. These statements may be studied in comparison to statements of earlier periods or comparison with statements of similar other concern.

x) Office Services : The management accountant may be required to maintain and control office services in some organisation. This function includes data processing, reporting on best use of mechanical and electronic devices, communications etc.

13.6 OBJECTIVES OF MANAGEMENT ACCOUNTING :

The Primary objective of management accounting is to enable management to maximise profits or minimise losses. This is done through the presentation of statements in such a way that management is able to take correct policy decisions. The following are the important objectives of management accounting.

1) Planning and Policy Formulation : The object of management accounting is to supply necessary data to management for formulating plans.

Helpful in controlling performance: management accounting devices like standard costing and budgetary control are helpful in controlling performance. The management is able to control performance of each and every individual with the help of management accounting devices.

2) Helpful in Organising : Management accounting is connected with the establishment of cost centres, preparation of budgets, preparation of cost control accounts and fixing of responsibility for different functions. All these aspects are helpful in setting up an effective and efficient organisational frame work.

3) Helpful in Interpreting Financial Information : The main object of management accounting is to present financial information to the management in such a way that it is easily understood.

4) Motivating Employees : The objective of management accounting is to help the management in selecting best alternatives of doing the things. Targets are laid down for the employees. They feel motivated in achieving their targets and further incentives may be given for improving their performance.

5) Helpful in Making Decisions : The information provided by the accountant helps the management in selecting a suitable alternative and taking correct decisions.

6) Reporting to Management : One of the primary objectives of management accounting is to keep the management fully informed about the latest position of the concern. This helps management in taking proper and timely decisions.

7) Helpful in coordination : Management accounting provides tools which are helpful in co-ordinating the activities of different sections or departments Management accountant act as a co-ordinator and reconciles the activities of different sections.

8) Helpful in Tax Administration : Management accounting helps in assessing various tax liabilities and depositing correct amount of taxes with the concerned authorities Tax administration is carried on with the advice and guidance of the management accountant.

13.7 FUNCTIONS OF MANAGEMENT ACCOUNTING :

Management accounting is a part of accounting. It has developed out of the need for making more and more use of accounting for taking managerial decisions. Some of the functions of management accounting are given as follows :

i) Planning and Forecasting : One of the important functions of the management accounting is to help management in planning for short-term and long term periods and also in making forecasts for the future.

ii) Modification of Data : Management accounting helps in modifying accounting data. The information is modified in such a way that it becomes useful for the management. Management accountant classifies and modifies information according to the requirements of the management.

iii) Financial Analysis and Interpretation : The management accountant analyses the data and presents it before the management in Non technical language along with his comments and suggestions so that top management can understand it and take decisions with out any difficulty.

iv) Facilitates Managerial Control : Management accounting is very useful in controlling performance. Performance evaluation is possible through standard costing and budgetary control which are an integral part of management accounting.

v) Communication : Management accounting establishes communication with in the organisation and with the outside world. The management accountant prepares reports for the benefit of different levels of management and employees. The activities of the concern, are communicated to outsiders such as bankers, investors, creditors, government agencies etc.

vi) Co-ordinating : Management accountant acts as a co-ordinator among different financial departments through budgeting and financial reports.

vii) Helpful in Taking Strategic Decisions : Management accounting helps in taking strategic decisions. It supplies analytical information regarding various alternatives and the choice of management is made easy. These decisions may be regarding seasonal or temporary stoppage of production, replacement decisions, expansion and diversification of works and a correct decision is taken.

13.8 ADVANTAGES OF MANAGEMENT ACCOUNTING :

The following are the advantages of Management Accounting :

1) Increase Efficiency : Management accounting increases efficiency of business operations. The targets of different departments are fixed in advance and achievements of those goals is a tool for measuring their efficiency.

2) Proper Planning : Management is able to plan various operations with the help of accounting information. The activities of the concerned are planned in a systematic manner.

3) Measurement of Performance : The systems of budgetary control and standard costing enable the measurement of performance. In standard costing, standards are determined and then actual cost is compared with standard cost. It enables the management to find out deviations between standard cost and actual cost. The performance will be good if actual cost does not exceed the standard cost. Budgetary control system too helps in measuring efficiency of all employees.

4) Maximising Profitability : The Thrust of various management techniques is to control cost of production and increase efficiency of each and every individual in the organisation. The profits of enterprise are maximised with the help of management accounting system.

5) Improves Service to Customers : The cost control devices employed in management accounting enable the reduction of prices. The quality of products becomes good because quality standards are predetermined. The customers are supplied good quality goods at reasonable prices.

6) Effective Management Control : The tools and techniques of management accounting are helpful to the management in planning, coordinating and controlling activities of the concern.

13.9 Financial Accounting Vs Management Accounting :

The following are the main distinctions between the financial accounting and management accounting.

Basis	Financial Accounting	Management Accounting
1. Objects	The objective of Financial accounting to measure the business income and provide information to outsiders i.e. creditors, bankers, investors etc.	The objective is to help the internal management.
2. Subject Matter	It deals with all the activities of the business as a whole and reveals over all performance.	It deals with vital and significant activities of the business.
3. Nature	It is objective in nature lays emphasis on the past activities and represents historical records just to show the results of the business.	It is subjective in nature, stresses the future and uses historical costs and data for estimating the future.
4. Compulsion	It is obligatory for Joint stock companies	It is optional.
5. External Parties	Accounts are prepared to meet the requirements of outsiders.	Accounts are maintained to provide information for internal use of management only.
6. Methodology	Financial Accounting records the transactions relating to income, expense, revenue personal accounts and property accounts.	Management accounting reports, costs and revenue by profit centre or responsibility centre.
7. Publication and audit	Statements are to be audited and published for the general use of public.	Statements are not to be published and audited as there are for internal use.
8. Description	In Financial Accounting all the transactions are recorded and can be measured in monetary terms.	Monetary and Non monetary transactions are recorded.
9. Period of reporting	In Financial accounting final accounts are prepared on year to year basis.	It lays emphasis on weekly, fortnightly and monthly reporting.

13.10 Cost Accounting Vs Management Accounting :

Cost Accounting and Management Accounting both have the same objectives of helping the management in planning, control and decision making. Both are internal to the organisation and use common tools and techniques like standard costing, variable costing, budgetary control etc. In spite of these similarities there are certain differences between these two. The main distinctions between cost accounting and management accounting are :

Basis	Cost Accounting	Management Accounting
1. Deals with	It deals with ascertainment, allocation, apportionment and accounting aspect of costs.	It deals with the effect and impact of cost on the business.
2. Base	It provides a base for management accounting.	It is derived from both cost accounting and financial accounting.
3. Role	It is helpful in collecting costing data for management.	It is greater degree of relevance and objectivity as the management accountant has a clear idea of the types of costs and items requiring analysis and state the specific problems of business.
4. Scope	It does not include financial accounting, tax planning and tax accounting.	It includes financial accounting, cost accounting tax planning and tax accounting.
5. Period of Planning	It is concerned with short term planning.	It is concerned with short range and long range planning.
6. Tools and Techniques.	It has standard costing variable costing, break even analysis etc as the basic tools and techniques.	Along with these the management accounting has funds and cash flow statements, ratio analysis etc as his accounting tools and techniques.
7. Assistance	It merely assist the management in its functions.	It assists and evaluates the management performance.
8. Installation	It can be installed with out management accounting.	It needs financial and cost accounting as its base for its installation.

13.11 Limitations of Management Accounting :

- 13.11.1 The management accountant takes into consideration the past records provided by the financial and cost accounting while making decisions for future.
- 13.11.2 Management must have the knowledge of various fields for taking sound decisions but the person who is taking decisions may not have comprehensive knowledge of all the subjects.
- 13.11.3 The Techniques and tools suggested by the management accountant are not alternate or substitute of good administration.
- 13.11.4 There is possibility of personal bias from the collection of data to interpretation stage in financial accounting.
- 13.11.5 The installation of management accounting system is costly.
- 13.11.6 Management accounting has not reached the final stage and is in the process of development.

13.12 Self Assessment Questions :

1. Define Management Accounting.
2. What are the characteristics of Management Accounting ?
3. What is the scope of Management Accounting ?
4. State any five objectives of Management Accounting.
5. State five functions of Management Accounting.
6. What are the Advantages of Management Accounting ?
7. State any five differences between Financial Accounting and Management Accounting.
8. State the differences between Cost Accounting and Management Accounting.
9. What are the limitations of Management Accounting?

13.13 Suggested Readings :

- Cost & Management Accounting - S.P.Jain & K.L.Narang.
- Advanced Management Accounting - Shashi k.Gupta,
R.K.Sharma.
- Cost Accounting - N.K.Prasad.

LESSON -14**COST ACCOUNTING - ADVANTAGES -
LIMITATIONS****OBJECTIVE:**

The objective of this lesson is to explain the advantages and limitations of Cost Accounting System.

STRUCTURE**14.1 Advantages of Cost Accounting****14.2 Limitations of Cost Accounting****14.3 Objections against cost Accounting****14.4 Principles of cost Accounting****14.5 Characteristics of an Ideal Costing System****14.6 Installation of Costing System****14.7 Practical difficulties in installing a Costing System****14.8 Steps to overcome Practical Difficulties****14.9 Self Assessment Questions****14.10 Suggested Readings****14.1 Advantages of Cost Accounting:**

The main advantages of cost accounting are given below :

- (1) Profitable and Unprofitable activities are disclosed and steps can be taken to eliminate or reduce those activities from which little or no benefit is obtained or change the method of production in order to make such activities more profitable.
- (2) It enables a concern to measure the efficiency and then to maintain and improve it. This is done with the help of valuable data made available for the purpose of comparison
- (3) It provides information upon which estimates and tenders are based.
- (4) It guides future production policies.
- (5) It helps in increasing profits by disclosing the sources of loss or waste and by controlling that loss or wastage.
- (6) It enables a periodical determination of profits or losses with out resort to stock taking.
- (7) It furnishes reliable data for comparing costs in different periods.

- (8) The exact cause of a decrease or an increase in profit or loss can be detected.
- (9) Cost Accounting discloses the relative efficiencies of different workers and there by facilitates the introduction of suitable plans of wage to reward efficiency and to provide adequate incentive to less efficient workers.
- (10) It enables the creditors and investors to judge the financial strength and credit worthiness of the business.
- (11) It is helpful to the Government. It facilitates the assessment of Excise duty and Income Tax and the formulation of policies regarding industry, export, import, taxation etc.
- (12) It is helpful to consumers by supplying goods at lower price.
- (13) Costing has a more important role to play in public enterprises than in private enterprises. In public enterprises the primary objective is not to raise profit but it is to serve the society by providing quality goods at cheaper rates. A good system of costing ensures efficient and effective control through a proper analysis of their working.

14.0.1 Costing – An Aid to Management:

Cost accounting helps the management in carrying out efficiently its functions by developing practical cost procedures that provide information useful in controlling the operations of the business enterprise. Cost accounting does this by analysing, recording, standardizing, forecasting, comparing, reporting and recommending. In fact, cost accounting is so closely allied to management that it is difficult to indicate where work of cost accountant ends and managerial control begins.

A good system cost accounting serves management in the following ways.

- a) **Classification and sub division of cost:** Costs are collected and classified by various ways in order to provide information to the management for control purposes and to ascertain the profitability of each area of activity.
- b) **Control of Materials, Labour and Over head Costs:** An efficient check is provided on stores and materials. Stores Ledger and Material Abstracts are maintained which provide an effective check on the stores and material used in the business. Maximum, Minimum, Reordering levels are maintained so that stocks can be arranged in time. An efficient check on labour and machines is provided by giving detailed information about the availability of machine and labour capacity. The work is so planned that no section is over worked and no section remains idle. By having proper classification of overheads into controllable and uncontrollable or fixed and variable, it helps to control the overhead costs.
- c) **Business Policies:** Business policy may require the consideration of alternative methods and procedures and this is facilitated by cost information correctly presented. It helps the management to take vital decisions such as introduction of a new product, selection of a most profitable product mix, utilisation of spare capacity, exploration of additional market, whether to make or buy, problem of limiting factor, replacement of existing assets, appraisal of proposed investment to meet expansion programme etc, with the help of marginal costing techniques and differential cost analysis.

- d) **Budgeting:** It provides the use of budgets and performance reports and enables management to correct inefficiencies before they enter into business. Two important cost accounting tools for helping managers are budgets and performance reports.
- e) **Standards for Measuring Efficiency:** It provides the use of standards to assist management in making estimates and plans for future and to provide the basis of management of efficiency. Actuals are compared with predetermined standards to determine the operating efficiency.
- f) **Best use of limited Resources:** Cost Accounting provides the reliable data of costs with regard to materials, wages and other expenses. These help the management to get maximum output at the minimum cost by indicating where economies may be affected, waste eliminated and inefficiency increased.
- g) **Instrument of Management control:** It provides management with valuable data for planning, budgeting and control of costs. An efficient system of cost accounting is, thus, regarded as an important part in the efforts of any management to secure business stability.
- h) **Cost Audit:** The operation of a system of cost audit in the organisation will assist in prevention of errors and frauds.
- i) **Price Determination:** It helps the management to fix the remunerative selling prices of various items of goods in different circumstances. If prices are fixed without costing information, it is possible, that prices quoted may be too high or too low. In periods of depression, it may become necessary to reduce the prices even below total cost. It is only costing which will guide the business man in this matter.

Expansion:

Management is able to formulate expansion policy on the basis of estimates of cost of production at various levels provided by cost accountant.

14.2 Limitations of Cost Accounting:

The Cost system has the following limitations.

1. The system is based on estimates the results differ from activities.
2. The methods and techniques adopted within the system are several and their applications varying on different plans makes the results unworthy of cost comparison and cost control, e.g;
 - a) Pricing of issue of materials by different methods
 - b) Remunerating labour on different bases
 - c) Apportionment and Absorption of overhead at different bases and by the application of different methods,
 - d) Classification of costs into direct and indirect.
 - e) Classification of overheads into fixed and variable;
 - f) Determination of standard in standard costing
 - g) Charging of depreciation and valuation of stocks at different bases.

3. For getting the benefits of cost accounting many formalities are to be observed. Due to which the establishment and running costs are so much.
4. It has not involved so far any tool for handling inflationary situation.

14.3 Objections against Cost Accounting:

A number of objections are generally raised against the introduction of costing on various grounds. The following are some of the important objections usually raised:

- 1. Cost system is unnecessary:** It has been argued that costing is of recent origin and that industries prospered in the past and are still prospering with out the aid of costing and therefore it is unnecessary expenditure. But the modern industries are running under highly competitive conditions and every manufacturer should know the actual cost of production to decide how far he can reduce the selling price.
- 2. Inapplicability:** It is argued that modern methods of costing are inapplicable to many type of industries. But in many cases some methods of costing can always be devised to suit the requirements of the business.
- 3. The system has failed in many cases:** It is argued that the adoption of costing system failed to produce the desired results in many cases and therefore, the system is defective. But the failure of a system may be due to several causes. So it is hasty to find the fault with the system.
- 4. Cost system is a matter of forms and rulings:** It is argued that after some time, a costing system degenerates in to a matter of forms and rulings. This is not the fault of the system. It is fault of the way in which the system is maintained.
- 5. Cost system is highly expensive:** It is argued that the expenditure incurred on the installation of cost system is quite heavy and the operational part is also expensive. But the cost system is so designed to suit the economy of the business – whether small or big.

14.4 General Principles of Cost Accounting

The following are the main principles of Cost Accounting:

- 1. Cause – effect relationship:** Cause effect relationship should be established for each item of cost. This cost should be shared only by those units which pass through the departments for which such cost has been incurred.
- 2. Charge of cost only after its incurrance:** Unit cost should include only those costs which have been actually incurred.
- 3. Past cost should not form part of future cost:** Past cost should not be recovered from future cost as it will not only affect the true results of future period but will also distort other statements.
- 4. Exclusion of abnormal costs from cost accounts:** All costs incurred because of abnormal reasons (like theft, negligence) should not be taken in to consideration while computing the unit cost. If done, so it will distort the cost figures and mislead the management resulting in wrong decisions.

5. Principle of double entry should be followed preferably: To Lessen the chances of any mistake or error, cost ledgers and cost control accounts, as far as possible should be maintained on double entry principles.

14.5 Characteristics of an Ideal costing system:

The following are the main characteristics which an ideal system of costing system should possess or the points which should be taken into consideration before installing a costing system.

- i) Suitability to the business:** A costing system must be devised according to the nature, conditions, requirements, and size of the business.
- ii) Simplicity :** The system of costing should be simple and plain so that it may be easily understood even by a person of average intelligence.
- iii) Flexibility:** The system of costing must be flexible so that it may be changed according to changed conditions and circumstances.
- iv) Economical:** A costing system should not be expensive and must be adopted according to the financial capacity of the business.
- v) Comparability :** The costing system must be such so that it may provide facts and figures necessary to the management for evaluating the performance by comparing it with the past figures, figures of other concerns or against the industry as a whole or other departments of the same concern.
- vi) Capability of presenting information at the desired time :** The system must provide accurate and timely information so that it may be helpful to the management for taking decisions and suitable action for the purpose of cost control.
- vii) Minimum changes in the existing set up:** The existing system of delegation and division of authority and responsibility must not be disturbed with the costing system.
- viii) Uniformity of forms:** All forms and proformas be necessary to the system should be uniform in size and quality of paper.
- ix) Efficient system of Material control:** There should be an efficient system of stores and stock control as materials usually account for a greater portion of the total cost.
- x) Adequate wage Procedure:** There should be a well defined wage procedure for recording the time spent by workers on different jobs, for preparing the wage sheet and for the payment of wages. Thus the introduction of well defined wage system will help to control the cost of labour.
- xi) Departmentalisation of expenses:** A sound plan should be devised for the collection, allocation, apportionment and absorption of overheads in order to ascertain the cost accurately

xii) Reconciliation of cost and financial accounts: The costing system should be so devised that the two sets of accounts are capable of easy reconciliation.

xiii) Duties and Responsibilities of the cost accountant: Under a good system of cost accounting the duties and responsibilities of the cost accountant should have access to all works and departments.

14.6 Installation of Costing System

The fundamental factors that a cost accountant should consider while introducing a system of costing are:

- i) The existing organisation should be distributed as little possible.
- ii) There should be a gradual and smooth introduction of the system.
- iii) While over – elaboration of records should be avoided.

14.6.1 Steps for Installation:

The steps to be taken in installing a costing system are:

- 1. Objectives to be achieved:** The costing system will be simple if the objective is only to determine cost but it will have to be elaborate if the objective is to have information which will help the management in exercising controlling and taking decisions.
- 2. Studying the Organisation:** In this connection the points to be noted are – the nature of the business and of operations, extent of responsibility and authority attached to the various functionaries, the lay out of the factory, the methods of dealing with wastage of materials, the system of time recording and the methods of computing and paying wages, the system of issuing orders and the amount of fixed, semi variable and variable overheads.
- 3. Deciding the structure of cost accounts:** What system of cost accounting is suitable and the extent of details required can be decided after a thorough study of the manufacturing process and their ancillary services. The designing of the system should be such that there is a gradual build up of the cost at each significance stage of production.
- 4. Determining the cost rates:** This entails a thorough study of factory conditions and decisions are to be made about classification of cost in to direct and indirect, grouping of indirect cost in to production, selling and administration etc, treatment of waste of all kinds, methods of pricing issues, methods of recovering overheads and calculation of overhead rates.
- 5) Introducing the system:** Before the system is put in to effect, the implications of the system should be explained to all indicating to them the benefits that will accrue to each and to the business as a whole.
- 6) Organising the Cost Office:** It is always better that the cost office is situated adjacent to the factory so that delay in routing out documents or in clearing up discrepancies and doubts is avoided. The costing staff must be allowed to have access to the works if they are to perform their duties properly.

7) Relationship of cost office to other departments: The cost department should function independently, the cost accountant being made directly responsible to the General Manager, or Managing Director. The costing system should be designed to serve management at all levels.

14.7 Practical difficulties in installing a costing system:

Practical difficulties apart from technical costing problems which a cost accountant has to face in installing a costing system are:

- 1) Lack of support from Top Management:** In most of the cases the cost accounting system is introduced without the support of the top management in all the functional areas.
- 2) Resistance from the existing accounting staff:** When ever a new system is introduced resistance is natural, as the existing staff may feel that they would lose their importance and may be unsure of their position in the organisation.
- 3) Non cooperation at other levels of organisation:** The foremen, supervisors and other staff may not cooperate with other departments in providing information which is absolutely necessary for the smooth and efficient working of any accounting system.
- 4) Shortage of trained staff:** The work of costing department cannot be handled with out the availability of trained staff.
- 5) Heavy cost of operating system:** The cost of operating system may be heavy unless the costing system is properly designed according to the requirements of each case.

14.8 Steps to overcome Practical Difficulties:

To over come the above difficulties the following steps are suggested.

- 1. Support from top management:** Before the installation or operation of a costing system there must be firm commitment to the system on the part of the top management.
- 2. Utility of system to the existing staff:** The existing accounting staff should be impressed about the need to supplement the existing financial accounting system.
- 3. Workers confidence for cooperation:** The various employees must be properly educated regarding the benefits which can be obtained from such a system.
- 4. Training of existing accounting staff:** The existing staff working in the accounts department must be properly trained in costing methods and techniques with the help of the Institute of cost and works Accountants of India, Calcutta.
- 5. Proper supervision:** There should be proper supervision after installation and continuous efforts on the part of the cost accountant to make the system successful and to achieve the desired goal of cost ascertainment, cost presentation and cost control.

14.9 Self Assessment Questions:

1. State two advantages of cost accounting to:

- i) Management
- ii) Workers
- iii) Creditors
- iv) Government
- v) General Public

2. What are the limitations of Cost Accounting

3. What are the objections against cost Accounting

4. Give five characteristics of an Ideal costing system

5. State the factors which a cost accountant should consider introducing a costing system

6. What are the practical difficulties in installing a costing system.

14.10 Suggested Readings

Cost & Management Accounting - S.P. Jain & K.L. Narang

Cost Accounting - N.K. Prasad.

LESSON -15**COST CONCEPTS - CLASSIFICATION - ANALYSIS****OBJECTIVE :**

The objective of this lesson is to explain the concepts of Cost, classification of Cost, elements of Cost and preparation of Cost Sheet.

STRUCTURE

- 15.1 Cost Concepts**
- 15.2 Classification of Cost**
- 15.3 Elements of Cost**
- 15.4 Cost Sheet / Statement of Cost**
- 15.5 Proforma of Cost Sheet**
- 15.6 Self- Assessment Questions**
- 15.7 Suggested Readings**

15.1 COST CONCEPTS :

Some Cost Concepts which are used in cost accounting are discussed below :

a) COST : It is the amount of resources given up in exchange for some goods and services. The resources given up are expressed in monetary terms. Cost is defined as “the amount of expenditure (actual or notional) incurred on or attributable to a given thing or to ascertain the cost of given thing” (ICMA).

In the ICMA definition cost is the amount of

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

Regarding notional expenditure is one which is conceptual and which is deemed to have been incurred or attributed for instance i) rent of owned factory where rent is charged as cost for purpose of comparison with the cost of undertaking running factory in rented factories although this rent is not actually paid. ii) Interest on owned capital where interest is charged in cost a matter of policy although it is not paid.

The objective for which costs are computed is also important. For example, if the purpose is to fix selling price, the total cost is considered. For valuation of stock cost means cost of production only. If the objective is to measure efficiency, Cost will have to be compiled differently than if the purpose is to quote or value the stock. So the term cost has different interpretations.

A cost must always be studied with reference to its purpose and conditions. For the valuation of work in progress, factory cost is used but for valuation of finished goods cost of production is used. If the purpose of the study of cost is the same, different conditions may lead in variation in cost. The cost per unit of product changes with increase or decrease in volume of output as the amount of fixed expenses to be borne by each unit of output decreases or increases with increase or decrease in units of production. Cost is also different from value as cost is measured in terms of money where as value is measured in terms of usefulness or utility of an article.

b) EXPENSE : Expenses are costs which have been applied against revenue of particular accounting period in accordance with the principle of matching cost to revenue e.g., cost of goods sold, office salaries of the period in which they are incurred.

c) COST CENTRE : A cost centre is the smallest segment of activity or area or responsibility for which costs are accumulated. Typically cost centres are departments but in some instances, a department may contain several cost centres. These cost centres are the departments or sub departments of an organisation with reference to which cost is collected for cost ascertainment and cost control. A cost centre can be a location i.e an area such as department store yard or sales area or an item of equipment, e.g., lathe machine, delivery vehicle or a person, e.g., sales man, foreman.

The determination of a suitable cost centre is very important for ascertainment and control of cost. The manager incharge of a cost centre is held responsible for control of cost of his cost centre. It enables the accumulation of all such costs at one place for which a common base of recovery may be used.

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

The selection of suitable cost centres or cost units for which costs are to be ascertained in an undertaking depends upon the organisation of the factory; condition of incidence of cost; requirements of costing i.e suitability of the unit or cost centre for cost purpose; availability of information; management policy regarding making a particular choice from several alternatives.

15.2 COST CLASSIFICATIONS :

Cost classification is the process of grouping costs according to their common characteristics. It is the placement of like items together according to their common characteristics. A suitable classification of costs is of vital importance in order to identify the cost with cost centres or cost units. The cost may be classified according to their nature i.e material, labour and expenses and a number of other characteristics. The same cost figures are classified according to different ways of costing depending upon the purpose to be achieved and requirements of a particular concern. The important ways of classification are :

1) By Nature or Elements, 2) By Functions, 3) By Direct and Indirect, 4) By Change in activity or volume, 5) By Controllability, 6) By Normality, 7) By Capital and Revenue, 8) By Time, 9) According to planning and control, 10) By Association with product and 11) For Managerial decisions.

1) By Nature or Elements or Analytical Classification : According to this classification, the costs are divided into three categories i.e Material, Labour and Expenses. There can be further sub-classification of each element; for example material into raw material components, spare parts, consumable stores, packing material etc. This classification is important as it helps to find out the total cost, now such total cost is constituted and valuation of work in progress.

2) By Functions (i.e. Functional Classification) : According to this classification costs are divided in the light of the different aspects of basic managerial activities involved in the operation of a business undertaking. It leads to grouping of costs according to the broad division or functions in a business undertaking i.e. production, administration, selling and distribution.

3) By Direct and Indirect : According to this classification, total cost is divided in to Direct costs and Indirect costs.

Direct Costs : Direct costs are those which are incurred for and may be conveniently identified with a particular cost centre or cost unit. Materials used and labour employed in manufacturing an article or in a particular process of production are common examples of direct costs.

Indirect Costs : Indirect costs are those costs which are incurred for the benefit of a number of cost centres or cost units and cannot be conveniently identified with a particular cost centre or cost unit. Examples of indirect costs include rent of building, management salaries, machinery depreciation etc. The nature of the business and the cost unit chosen will determine which costs are direct and which are indirect. The importance of the distinction of costs into direct and indirect lies in the fact that direct costs of a product or activity can be accurately determined while indirect costs have to be apportioned on certain assumptions as regards their incidence.

4) By Changes in Activity or Volume : According to this classification, costs are classified according to their behaviour in relation to changes in the level of activity or volume of production. On this basis, costs are classified in to three groups i.e fixed, variable and semi variable.

i) Fixed Costs : Fixed costs are commonly described as those which remain fixed in total amount with increase or decrease in the volume of output or productive activity for a given period of time. Fixed cost per unit decreases as production increases and increases as production declines. Examples of fixed costs are rent, insurance of factory building, factory manager's salary etc. These fixed cost are constant in total amount but fluctuate per unit as production changes. These costs are known as period costs because these are dependent on time rather than on output.

ii) Variable Costs : Variable costs are those which vary in total indirect proportion to the volume of output. These costs per unit remain relatively constant with changes in production. Thus, variable costs fluctuate in total amount but tend to remain constant per unit as production activity changes. Examples are direct material costs, direct labour costs, power, repairs etc. Such costs are known as product costs because they depend on the quantum of output rather than on time.

iii) Semi Variable Costs : Semi variable costs are those which are partly fixed and partly variable. For example telephone expenses include a fixed portion of monthly charge plus variable according to calls; thus total telephone expenses are semi variable. Other examples of such costs are depreciation, repairs and maintenance of building and plant etc.

5) By Controllability : Under this, costs are classified according to whether or not they are influenced by the action of a given member of the undertaking. On this basis costs are classified in to two categories;

i) Controllable Costs: Controllable Costs are those which can be influenced by the action of a specified member of an undertaking, that is to say costs which are at least partly with in the control of management. An organisation is divided in to a number of responsibility centres and controllable costs incurred in a particular cost centre can be influenced by the action of the manager responsible for the centre. Generally speaking all direct costs including direct materials, direct labour and some of the overhead expenses are controllable by lower level of management.

ii) Un controllable costs: Uncontrollable costs are those which can not be influenced by the action of a specified member of an undertaking, that is to say, which are not with in the control of management. Most of the fixed costs are uncontrollable. For example rent of the building is not controllable and so is managerial salaries. Overhead cost, which is incurred by one service action and is apportioned to another which receives the service is also not controllable by latter.

1. By Normality : Under this costs are classified according to whether these are costs which are normally incurred at a given level of output in the conditions in which that level of activity is normally attained. On this basis, it is classified into two categories:

a) Normal Cost: It is the cost which is normally incurred at a given level of output in the conditions in which that level of output is normally attained. It is a part of cost of production.

b) Abnormal Cost: It is the cost which is not normally incurred at a given level of output in the conditions in which that level of output is normally attained. It is not a part of cost of production and charged to costing Profit and Loss Account.

2. By capital and Revenue : The cost which is incurred in purchasing an assets either to earn income or increasing the earning capacity of the business is called capital cost. For example, the cost of machine. Such cost is incurred at one point of time but the benefits accruing from it are spread over a number of accounting years. If any expenditure is incurred in order to maintain the earning capacity of the concern such as cost of maintaining an asset or running a business it is revenue expenditure e.g., cost of materials used in production, labour charges paid to convert the materials in to production, salaries, depreciation, repairs and maintenance charges, selling and distribution charges. The distinction between capital and revenue items is important in costing as all items of revenue expenditure are taken in to consideration while calculating cost where as capital items are completely ignored.

3. By Time: Cost can be classified in to

- i) Historical cost and ii) predetermined cost

i) Historical Costs: The costs which are ascertained after being incurred are called historical costs. Such costs are available only when the production of a particular thing has already been done.

Basic Characteristics of such Costs are:

- a) They are based on recorded facts

- b) They can be verified because they are always supported by the evidence of their occurrence.
- c) They are mostly objective because they relate to happenings which have already taken place.

ii) predetermined Costs: Such costs are estimated costs i.e., computed in advance of production taking in to consideration the previous period's costs and the factors affecting such costs. Predetermined cost determined on scientific basis becomes standard cost. Such cost which compared with actual costs will give the reasons of variance and will help the management to fix the responsibility and to take remedial action to avoid recurrence in future.

4. According to planning and control: Planning and control are two functions of management. According to this, costs can be classified as budgeted costs and standard costs.

Budgeted Costs: Budgeted costs represent an estimate of expenditure for different phases of business operations such as manufacturing, administration, Sales, research and development etc. Continuous comparison of actual performance (i.e actual cost) with that of budgeted cost is made so as to report the variations from the budgeted cost to the management for corrective action.

Standard Costs: Budgeted Costs are translated in to actual operation through the instrument of standard costs. The Chartered Institute of Management Accountants, London defines Standard Costs as "the predetermined cost based on technical estimate for materials labour and overhead for a selected period of time for a prescribed set of working conditions". Thus standard cost is determination, in advance of production, of what should be the cost.

5. By Association with the Product : Under this classification costs can be product costs and period costs.

Product Costs : Product costs are those cost which are traceable to the product and are included in inventory valuation. They comprise direct materials, direct labour and manufacturing overheads in case of manufacturing concerns. These are used for valuation of inventory and are shown in Balance sheet till they are sold because such costs provide income or benefit only after sale.

Period Costs:Period costs are incurred on the basis of time such as rent, salaries etc. These may relate to administration and selling costs essential to keep the business running. Though these are not associated with production and are necessary to generate revenue but cannot be assigned to a product. These are charged to the period in which these are incurred and treated as expense.

II For Managerial Decisions: On this basis, costs may be classified in to the following costs.

i) Marginal Cost: Marginal cost is the total of variable cost i.e. prime cost plus variable overheads. It is based on the distinction between fixed and variable costs. Fixed costs are ignored and only variable costs are taken in to consideration for determining the cost of products and value of work in progress and finished goods.

ii) Out of Pocket Costs: This is the portion of costs which involves payment to outsiders i.e gives rise to cash expenditure as opposed to such costs as depreciation which do not involve any cash expenditure. Such costs are relevant for price fixation during recession or when make or buy decision is to be made.

iii) Differential Costs : The change in costs due to change in the level of activity or pattern or method of production is known as differential cost. If the change increases the cost it will be called incremental cost. If there is decrease in cost resulting from decrease in output, the difference is known as decremental cost.

iv) Sunk Cost : A sunk cost is an irrecoverable cost and is caused by complete abandonment of a plant. It is written down value of abandoned plant less its salvage value. Such costs are not relevant for decision making and are not affected by increase or decrease in volume. Thus, which has taken place and is irrecoverable in a situation is treated as sunk cost.

v) Imputed or Notional Costs : These costs are notional in nature and do not involve any cash outlay. The chartered Institute notional cost as “the value of a benefit where no actual cost is incurred”. Even though such costs do not involve any cash outlay but are taken into consideration while making managerial decisions. Examples of such costs are: Notional rent charged on business premises owned by the proprietor interest on capital for which no interest has been paid.

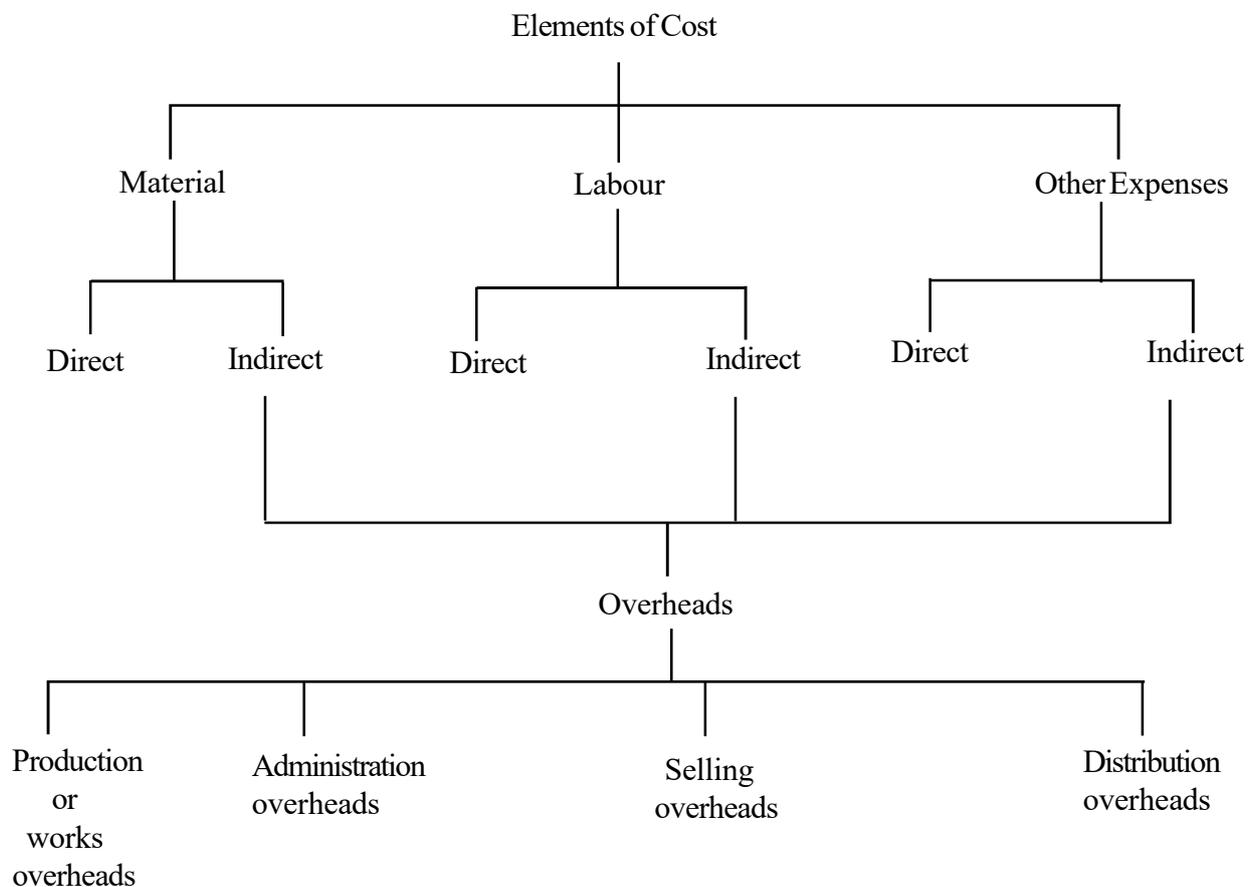
vi) Opportunity Cost : It is the maximum possible alternative earning that might have been earned if the productive capacity or services had been put to some alternative use. For example, if an owned building is proposed to be used for a project the likely rent of the building is the opportunity cost which should be taken into consideration while evaluating the profitability of the project.

vii) Replacement Cost : It is the cost at which there could be purchase of an asset, or material identical to that which is being replaced or revalued. It is the cost of replacement at current market price.

viii) Avoidable and Unavoidable Cost : Avoidable costs are those which can be eliminated if a particular product or department with which they are directly related is discontinued. For example, salary of the clerks employed in a particular department can be eliminated if the department is discontinued. Unavoidable cost is that cost which will not be eliminated with the discontinuation of a product or department. For example salary of factory manager or factory rent can not be eliminated even if product is eliminated.

15.3 ELEMENTS OF COST :

Mere knowledge of total cost cannot satisfy the needs of management. For proper control and managerial decisions, management is to be provided with necessary data to analyse and classify the costs. For this purpose the total cost analysed by elements of cost i.e by the nature of expenses. The elements of costs are three i.e materials, labour and other expenses. The elements of cost further analysed in to different elements as follows :



1. Direct Materials : Direct materials are those materials which can be identified in the product and can be conveniently measured and directly charged to the product. Thus, these materials directly enter the production and form a part of the finished product. For example, timber in furniture making cloth in dress making and bricks in building a house. The following are the Direct Materials.

- i) All raw materials like jute in the manufacture of gunny bags, pig iron in foundry and fruits in canning industry.
- ii) Material specifically purchased for a specific job, process or order like glue for book, binding, starch powder for dressing yarn.
- iii) Parts or components purchased or produced like batteries for transistor radios and tyres for cycles.
- iv) Primary packing materials like cartons, wrappings, card board boxes etc used to protect finished product from climatic conditions or for easy handling inside the factory.

2. Indirect Materials : Indirect materials are those materials which can not be identified in the product and cannot be conveniently measured and not directly charged to the product. Example of indirect materials are : Consumable like cotton waste, lubricants, cleaning materials, materials for repairs and maintenance of fixed assets, diesel used in power generators etc.

Classification of materials into direct and indirect facilitates material control. Direct materials are usually high value items as compared to indirect material and need strict control and critical analysis for reducing their cost.

However in some cases, though the materials is a part of the finished product yet it is not treated as direct material; for example sewing thread in dress making and nails in furniture making.

3. Direct Labour : Direct labour is that labour which can be conveniently identified or attributed wholly to a particular job, product or process or expanded in converting raw materials in to finished goods. Wages of such labour are known as direct wages.

The wages paid to supervisors, inspectors etc though not direct labour can be treated as direct labour if they are directly engaged specific product or process and the hours they spend on it can be directly measured with out much of an effort. Similarly where the cost is not significant like the wages of trainees or apprentices, their labour though directly spent on product is not treated as direct labour.

4. Indirect Labour : Indirect labour is the labour which are not directly engaged in the production of goods and services but which indirectly helps the direct labour engaged in production. The example of indirect labour are supervisors, sweepers, foremen, watchmen, time keeper, cleaners, repairers etc. The cost of indirect labour cannot be conveniently allocated to a particular job, order, process or article.

5. Direct Expenses : Direct expenses are those expenses which are directly incurred in process of production other than direct material and direct labour. For example excise duty, Royalty on production, Architect fees, travelling expenses to site, expenditure on pilot projects, experimental expenditure, planning expenditure.

6. Overheads : Overheads may be defined as the aggregate of the cost of indirect materials, indirect labour and such other expenses including services as cannot conveniently be charged direct to specific cost units. Thus overheads are all expenses other than direct expenses. In general terms, overheads comprise all expenses incurred for or in connection with the general organisation of the whole or part of the undertaking i.e the cost of operating supplies and services used by the undertaking and including the maintenance of capital assets. The main groups in to which overheads may be sub-divided are i) Manufacturing overhead ii) Administration overhead iii) Selling overheads iv) Distribution overheads v) Research and Development overheads.

Expenses Excluded from Costs :

The total cost of a product should include only those items of expenses which are a charge against profit. Items of expenses which are relating to capital assets, capital losses, payments by way of distribution of profits and matters of pure finance should not form a part of the costs

Examples of such expenses are - income tax, dividends, abnormal wastage of material, abnormal idle time, interest on capital given or received, expenses of raising capital, discount on shares and debentures, profit or loss from the sale of asset or investments, excessive depreciation, appropriation of profits, writing off goodwill, preliminary expenses and underwriting commission, cash discount, debentures interest, incomes which are connected with business i.e transfer fees, rent, interest, dividend received and capital expenditure.

15.4 Cost Sheet or Statement of Cost :

Cost sheet is a statement designed to show the output of a particular accounting period along with break-up of costs. There is no fixed form for preparation of a cost sheet but in order to make the cost sheet more useful it is generally presented in columnar form. The main advantages of cost sheet are :

- 15.4.1 It discloses the total cost and the cost per unit of the units produced during the given period.
- 15.4.2 It enables a manufacturer to keep a close watch and control over the cost of production.
- 15.4.3 By providing a comparative study of the various elements of current cost with the past results and standard costs, it is possible to find out the causes of variations in costs and to eliminate the adverse factors and conditions which go to increase the total cost.
- 15.4.4 It acts as a guide to the manufacturer and helps him in formulating a definite useful production policy.
- 15.4.5 It helps in fixing up the selling price more accurately
- 15.4.6 It helps the business man to minimise the cost of production when there is a cut throat competition.
- 15.4.7 It helps the business man to submit quotations with reasonable degree of accuracy against tenders for the supply of goods.

15.5 Proforma of Cost Sheet :

Cost Sheet

Particulars	Rs.	Total Cost Rs.	Cost Per Unit Rs.
Opening stock of Raw Materials	X X X X		
Add : Purchases	X X X X		
Add : Carriage on Purchases	X X X X		
	X X X X		
Less : Closing stock of Raw Materials	X X X X		

Cost Sheet

Particulars	Rs.	Total Cost Rs.	Cost Per Unit Rs.
Cost of Raw Materials Used		x x x x	x x x x
Direct Wages		x x x x	x x x x
Direct Expenses		x x x x	x x x x
<u>Prime Cost</u>		x x x x	x x x x
Add : Factory / Works Overheads	x x x		
Factory Rent Rates & Taxes	x x x		
Fuel & Water	x x x		
Indirect materials	x x x		
Indirect wages	x x x		
Works manager salary	x x x		
Drawing office salaries	x x x		
Works expenses	x x x		
Depreciation on Plant & Machinery	x x x		
Repairs of plant & machinery	x x x		
Insurance on plant & machinery	x x x		
Depreciation on land & Buildings	x x x		
	x x x x		
Less : Scrap value	x x x		
	x x x x		
Add : Opening work in progress	x x x		
	x x x x		
Less : Closing work in progress	x x x		

Cost Sheet

Particulars	Rs.	Total Cost Rs.	Cost Per Unit Rs.
<u>Factory Cost / Works Cost / Cost of Out put</u>		x x x x	x x x x
Add : Administrative or office overheads :	x x x		
Counting office salaries	x x x		
Office manager salary	x x x		
Staff salaries	x x x		
Office rent, taxes, insurance	x x x		
Office lighting & cleaning	x x x		
Directors fees	x x x		
Managing Director Salary	x x x		
Printing & Stationary	x x x		
Postage	x x x		
Telephone expenses	x x x		
Audit Fees	x x x		
Depreciation on office furni- ture and buildings	x x x		
Other expenses	x x x		
<u>Office cost or Cost of Production</u>	x x x x		
Add : Opening stock of finished goods	x x x	x x x x	x x x x
	x x x x		
Less : Closing stock of finished goods	x x x		
<u>Cost of goods sold :</u>		x x x x	x x x x

Cost Sheet

Particulars	Rs.	Total Cost Rs.	Cost Per Unit Rs.
Add : Selling and Distribution overheads			
Sales men salaries & commission	x x x		
Sales manager Salary	x x x		
Advertisement Expenses	x x x		
Show room expenses	x x x		
Samples & free gifts	x x x		
Market research expenses	x x x		
Bad debts	x x x		
Ware house rent & insurance	x x x		
Travelling expenses	x x x		
Carriage outwards	x x x		
Packing expenses	x x x		
Delivery van expenses	x x x		
Depreciation on delivery van	x x x		
<u>Cost of Sales / Total Cost</u>		x x x x	x x x x
<u>Profit / Loss</u>		x x x	x x x x
<u>Sales / Selling Price.</u>		x x x x	x x x x

15.6 Self- Assessment Questions :

1. Prepare a chart showing the different elements of cost.
2. Define i) Cost ii) Cost centre.
3. Define cost classification.
4. Distinguish between Direct and Indirect Cost.
5. Define : i) fixed cost ii) variable cost iii) Semi variable cost.
6. Distinguish between product cost and period cost.
7. Explain the controllable and uncontrollable costs.
8. How the cost is classified for Management decision.

15.7 Suggested Readings

- Cost & Management Accounting - S.P.Jain & K.L.Narang.
Cost Accounting - N.K.Prasad.

LESSON - 16

MARGINAL COSTING

OBJECTIVES :

After studying this unit you should be able to :

- know the meaning and importance of marginal costing
- distinguish between absorption costing and marginal costing
- determine the margin of safety
- understand the benefits and limitations of marginal costing

STRUCTURE :

- 16.1 Introduction
- 16.2 Marginal Costing
- 16.3 Absorption Costing and Marginal Costing
- 16.4 Benefits of Marginal Costing
- 16.5 Limitations of Marginal Costing.
- 16.6 Self Assessment Questions
- 16.7 Exercises
- 16.8 Reference Books

16.1 INTRODUCTION

Marginal Costing is a useful technique which guides management in pricing, decision making and assessment of profitability. It classifies costs into fixed and variable ones. The expenses which vary directly in proportion to the volume of production are termed as 'variable expenses'. The expenses which remain constant or unaffected by the change in output are called 'fixed expenses'. This distinction forms the basis of marginal costing.

Profit is influenced by the changes in fixed expenses and these expenses will remain static and do not affect decision – making. More over they are largely uncontrollable. The theory of marginal costing, therefore, argues that only variable expenses should be taken into account for purposes of product pricing, inventory valuation and other important management decisions.

Marginal Cost:

The Institute of Cost and Works Accountants, London, defined marginal costs as “the amount at any given volume of output by which aggregate costs are changed, if the volume of

output is increased or decreased by one unit of output". It is the additional cost of producing one additional unit. It arises from the production of additional increments of output.

Illu.1: A factory produces plastic cans. The variable cost of the can is Rs.5. The fixed costs are Rs.5,000 per annum. Presently 200 cans are produced annually. The cost sheet of 200 cans would be:

	Rs.
Variable cost (200 × Rs.5)	1,000
Fixed cost	5,000
Total cost	6,000

If production is increased by one plastic can, the cost sheet of 201 can would be:

	Rs.
Variable Cost (201 × 5)	1,005
Fixed Cost	5,000
Total Cost	6,005

Marginal cost per unit is Rs.5 (i.e., the cost of producing one additional unit). Marginal cost, thus consists of prime cost plus total variable overheads. It should also be remembered that marginal cost takes into account only variable cost and excludes the fixed cost. With in the capacity of an organisation, an increase of one unit in production, obviously, will cause an increase in variable costs only. The following illustration will make this clear.

Illu.2: Following information relates to a factory, manufacturing good quality fountain pens:

Total cost Rs.	Production (units)	Direct material Rs.	Labour Rs.	Other variable costs Rs.	Fixed costs Rs.
3,250	500	1,000	750	500	1,000
5,500	1,000	2,000	1,500	1,000	1,000
7,750	1,500	3,000	2,250	1,500	1,000
10,000	2,000	4,000	3,000	2,000	1,000
12,250	2,500	5,000	3,750	2,500	1,000

Calculate marginal cost of production.

Solution:**Marginal Cost of Production**

Production Units	Total Costs (a)		Fixed Costs (b)		Marginal Cost (c) = (a) – (b)	
	Total Rs.	Per Unit Rs.	Total Rs.	Per Unit Rs.	Total Rs.	Per Unit Rs.
500	3,250	6.50	1,000	2.00	2,250	4.50
1,000	5,500	5.50	1,000	1.00	4,450	4.50
1,500	7,750	5.17	1,000	0.67	6,750	4.50
2,000	10,000	5.00	1,000	0.50	9,000	4.50
2,500	12,250	4.90	1,000	0.40	11,250	4.50

The above table shows that with an increase in production the total cost per unit is decreasing. This happens because the fixed overheads which are constant at all levels of output are apportioned over larger outputs. Hence, cost of output per unit goes on declining with every increase in volume of output. It will be seen that while the marginal cost of production per unit remains constant (at Rs.4.50), the fixed cost per unit decreases from Rs.2 to Rs.0.40. Marginal cost has been calculated thus:

Marginal Cost = Direct Material Cost + Direct Labour Cost +
Direct expenses + Variable overheads

OR

Marginal Cost = Total Cost – Fixed Cost

16.2 MARGINAL COSTING

Marginal Costing is a technique where only the variable costs are taken into account while calculating the cost of product. The fixed costs are met against the total fund arising out of excess of selling price over total variable cost. This fund is called **Contribution**. Let us know go through various definitions given for Marginal Costing.

1. **ICMA London:** According to ICMA London, Marginal Costing is a technique where only the variable costs are charged to cost units, the fixed cost attributable being written off in full against the contribution for the period.
2. **D. Joseph:** Marginal Costing is a technique of determining the amount of change in the aggregate cost due to an increase of one unit over the existing level of production.
3. **Horold J. Wheldon:** Other things being equal, the fixed overhead will, in total remain fixed during changes in production achieved and the rate per unit will

consequently vary, where as that variable overhead will remain constant per unit of production and vary in total.



Characteristics of Marginal Costing:

1. It is a technique of analysis and presentation of cost rather than an independent method of costing. It can be applied with any method of costing.
2. Basically it involves differentiation of variable costs from fixed costs. It considers only variable costs in its analysis.
3. It guides pricing and other managerial decisions on the basis of contribution.
4. The stock of finished goods and work-in-progress are valued at marginal cost.
5. Fixed costs are charged against the contribution earned during a period. No portion of fixed cost is carried forward to next period.
6. The difference between the contribution and fixed cost represents either profit or loss, excess of contribution and fixed cost is the profit and the deficiency of contribution to fixed cost is the loss.

16.3 ABSORPTION COSTING AND MARGINAL COSTING

Absorption Costing technique is also known as Traditional or Full Cost Method. In this method, both fixed and variable costs are recovered from production. The variable costs, such as those of direct materials, direct labour etc., are directly charged to the products, while fixed costs are apportioned on a suitable basis over various products manufactured during a period. All costs are, thus, identified with manufactured products.

Illu.3: A Company is manufacturing 3 products A, B and C. The costs of their manufacture are as follows:

	A Rs.	B Rs.	C Rs.
Direct material pre Unit	3	4	5
Direct labour	2	3	4
Selling price	10	15	20
Output (Units)	1,000	1,000	1,000

The total overheads are Rs.12,000 out of which Rs.9,000 are fixed and rest are variable. It is decided to apportion these costs over different products in the ratio of output. You are required to prepare:

- (a) A statement showing cost of each product and profit according to absorption costing and
- (b) A statement of cost and profit according to the Marginal costing technique.

Solution: (A)

**Statement Showing Cost and Profit
(According to Absorption Costing Technique)**

Particulars	A = 1,000		B = 1,000		C = 1,000	
	Per Unit	Total Rs.	Per Unit	Total Rs.	Per Unit	Total Rs.
Direct Material	3	3,000	4	4,000	5	5,000
Direct labour	2	2,000	3	3,000	4	4,000
Prime Cost	5	5,000	7	7,000	9	9,000
Add: Overheads:						
Fixed	3	3,000	3	3,000	3	3,000
Variable	1	1,000	1	1,000	1	1,000
Total Cost	9	9,000	11	11,000	13	13,000
Profit	1	1,000	4	4,000	7	7,000
Sales	10	10,000	15	15,000	20	20,000

Total Profit = Rs.1,000 + Rs.4,000 + Rs.7,000 = Rs.12,000

The system of absorption costing has a number of limitations. It assumes that prices are simply a function of costs. The demand side of the product is thoroughly discounted. Only past costs are considered which arriving at pricing decisions. Further, it does not offer information which helps decision making in a changing environment.

More importantly charging of fixed costs to different products on a suitable basis poses innumerable problems. These costs have to be incurred whether there is production or not. In other words, the cost of a product not only depends on expenses which have been incurred directly but also on the volume of output. For example, if the cost of direct material and direct labour for a product is Rs.2 and Rs.4 respectively and the volume of output is 500 units the total cost of production will be as under:

	Rs.
Costs of Direct material and labour	3,000
Fixed Overheads	1,000
Total Cost	4,000

The cost per unit comes to Rs.8. In case the output is only 400 units the cost of production ($400 \times 6 + 10,000$) would be Rs.3,400 and cost per unit would increase not because prices of materials or labour have gone up, but because of lower level of production. Obviously, the whole exercise seems to be illogical. The technique of marginal costing is employed to overcome this deficiency, by charging, fixed costs against the total fund arising out of excess of selling price over variable cost.

(b) Marginal Cost Statement

Particulars	A = 1,000		B = 1,000		C = 1,000	
	Per Unit	Total Rs.	Per Unit	Total Rs.	Per Unit	Total Rs.
Sales (S)	10	10,000	15	15,000	20	20,000
Less: Marginal Cost:						
Direct Material	3	3,000	4	4,000	5	5,000
Direct Labour	2	2,000	3	3,000	4	4,000
Prime Cost	5	5,000	7	7,000	9	9,000
Variable Overheads	1	1,000	1	1,000	1	1,000
Total Marginal Cost (V)	6	6,000	8	8,000	10	10,000
Contribution (S-V) (C)	4	4,000	7	7,000	10	10,000
Selling Price	10	10,000	15	15,000	20	20,000

Thus, the total contribution from the three products, A, B and C is Rs.21,000. The profit will now be computed as follows:

	Rs.
Total Contribution	21,000
Fixed costs	9,000
Profit	12,000

Differences between Marginal Costing and Absorption Costing:

The difference between absorption costing and marginal costing, as the above illustrations show, is based on the recovery to fixed overheads. In absorption costing both fixed and variable overheads are charged to production. As a result, work in progress and finished goods are valued at 'works cost' and 'total cost of production' respectively, giving effect to fixed overheads. In marginal costing only variable overheads are charged to production, thereby leading to under-recovery of overheads. This obviously leads to undervaluation of closing stock. But this does not result in carrying over of fixed overheads of one period to another, as it happens in absorption costing. The main points of difference between absorption costing and marginal costing are given below:

Differences between Marginal and Absorption Costing

Basis of Difference	Absorption Costing	Marginal Costing
1. Fixed Costs	Fixed overheads are charged to the product to be subsequently released as a part of cost of goods sold i.e., it is included in cost per unit.	Fixed costs are not included while computing cost per unit.

Basis of Difference	Absorption Costing	Marginal Costing
2. Profit	Profit is the difference between sales and cost of goods sold.	Profit in marginal costing is ascertained by establishing the total contribution and then deducting therefrom the total fixed expenses. Contribution is the excess of sales over variable cost.
3. Classification of Costs	Costs are rarely classified into variable and fixed. Although such a classification is possible, it fails to establish a cost – volume profit relationship.	Cost – Volume – Profit relationship is an essential part of marginal costing. Costs have to be classified into fixed costs and variable costs.
4. Valuation of Inventories	If inventories increase during a period, this method will reveal more profit than marginal costing. When inventories decrease, less profits are reported because in this method closing stock is valued at higher figures.	If inventories increase during a period, this method generally reports less income than absorption costing, but when inventories decrease this method reports more net income.
5. Recovery of Overheads	Apportionment of fixed costs is arbitrary and this may result in under recovery of overheads.	There is no arbitrary apportionment of fixed overheads, as fixed costs are excluded.

Contribution:

Contribution represents the difference between sales and variable costs. It may be considered as some sort of fund from out of which all fixed costs are to be met. The difference between contribution and fixed costs represents either profit or loss, as the case may be. Contribution is also called 'Gross Margin'. Contribution can be expressed thus:

Contribution	=	Selling Price – Variable cost
		Or
		Fixed Cost + Profit or Loss
Profit/Los	=	Contribution – Fixed Cost

Marginal Cost Equation:

The algebraic expression of contribution is known as Marginal Cost Equation. It can be expressed as follows:

$$S - V = F + P$$

Where

S = Selling Price

V = Variable Cost

F = Fixed Cost

P = Profit

Illu.4: From the following information find out the amount of profit earned during the year using marginal cost technique.

Fixed cost Rs.5,00,000

Variable cost Rs.10 per unit

Selling price Rs.15 per unit

Output level 1,50,000 units.

Solution:

Sales = 1,50,000 units × 15 = Rs.22, 50,000

Variable cost = Rs.1,50,000 × 10 = Rs.15,00,000

Fixed cost = Rs.5,00,000

$S - V = F + P$

$Rs.22,50,000 - Rs.15,00,000 = 5,00,000 + P$

$Rs.7,50,000 - 5,00,000 = P$

$Rs.2, 50,000 = P$

$P = Rs.2, 50,000$

16.4 BENEFITS OF MARGINAL COSTING

The technique of marginal costing is of immense use to the management in taking various decisions. It helps the management in taking the following decisions:

- 1. Helps in determining level of output:** Marginal costing helps in finding out the output which is most profitable for running a concern. This, in turn, helps in utilising plant capacity in full, and realise maximum profits. By determining the most profitable relationships between cost, price and volume, marginal costing helps a business to determine most competitive prices for its product.
- 2. Help in selection of most suitable product mix:** By applying marginal costing techniques, the most suitable production line could be determined. The profitability

of various products can be compared and the most products which languish behind and which do not seem to be feasible (in view of their inability to recover marginal cost) may be eliminated from the production line by keeping the capacity and resources constraints in mind. It will also serve as a guide in arriving at the price for new products.

3. **Helps in determining Make or Buy decisions:** The marginal cost of producing an article inside the factory serves as a useful guide while arriving at make or buy decisions. The costs of manufacturing can be compared with the costs of buying outside and a suitable decision can be arrived at easily.
4. **Helps in the selection of method of production – Manual or Machine Based:** In case a particular product can be produced by two or more methods, ascertaining the marginal cost of producing the product by each method will help in deciding as to which method should be followed. The same is true in case of decisions to use machine power in place of manual labour.
5. **Helps in decision making during Recessionary period:** In periods of trade depression, marginal costing helps in deciding whether production in the plant should be suspended temporarily or continued in spite of low demand for the firm's product.
6. **Help in product planning:** Marginal costing helps in determining the no-profit no-loss point. The efficiency and economy of various products, plants, departments can also be determined. This helps in profit planning as well as cost control.

16.5 LIMITATIONS OF MARGINAL COSTING

Marginal costing has the following limitations:

1. **Difficulty in Classifications:** In marginal costing, costs are segregated into fixed and variable. In actual practice, this classification scheme proves to be superfluous in that certain costs may be partly fixed and partly variable and certain other costs may have no relation to volume of output or even with the time. In short, the categorization of costs into fixed and variable elements is a difficult and tedious job.
2. **Difficulty in Application:** The marginal costing technique cannot be applied in industries where large stocks in the form of work in progress (job and contracting firms)
3. **Defective Inventory Valuation:** Under marginal costing, fixed costs are not included in the value of stock of finished goods and work in progress. As fixed costs are also incurred, these should form part of the cost of the product. By eliminating fixed costs from

finished stock and work in progress, marginal cost is objectionable because of other reasons also:

- i. In case of loss by fire, full loss cannot be recovered from the insurance company.
- ii. Profits will be lower, than that shown under absorption costing and hence may be objected by taxation authorities.
- iii. Circulating assets will be estimated in the balance sheet.

4. Objectionable basis of Pricing: In marginal costing, sale prices are arrived at on the basis of contribution alone. This is an objectionable practice. For example, in the long run, the selling price should not be fixed on the basis of contribution alone as it may result in losses or low profits. Other important factors such as fixed costs, capital employed should also be taken into account while fixing selling prices. Further, it is also not correct to lay more stress in selling function, as is done in marginal costing and relegate production function to the background.

5. Limited scope: The utility of marginal costing is limited to short run profit planning and decision making. For decisions of far reaching importance, one is interested in special purpose cost rather than variable cost. Important decisions on several occasions, depend on non-cost considerations also, which are thoroughly discounted in marginal costing.

In view of these limitations marginal costing needs to be applied with necessary care and caution. Fruitful results will emerge only when management tries to apply the technique in combination with other useful techniques such as budgetary control and standard costing.

16.6 QUESTIONS

I. Short Questions:

1. Defined the term 'marginal costing'.
2. How can the cost be classified on the basis of variability?
3. What is contribution?

II. Essay type questions:

1. Explain the advantages and disadvantages of marginal costing.
2. Discuss the applications of the marginal costing technique.
3. Define Marginal Costing. Explain the advantages and limitations of Marginal Costing.
4. Define Marginal Costing. Explain the differences between Marginal Costing and absorption costing.
5. What is marginal costing? Explain the advantages and disadvantages of marginal costing.

16.7 EXERCISES

1. What is the amount of Fixed Costs when sales in Rs.2,40,000; Direct Material is Rs.80,000; Direct Labour is Rs.50,000, Variable overheads are Rs.20,000 and profit is Rs.50,000?

[Ans.: Fixed Costs: Rs.40,000]

2. From the following information, calculate margin of safety.

	Rs.
Sales (4,000 units @ Rs.25 each)	1,00,000
Variable cost	72,000
Fixed expenses	16,800

[Ans.: Margin of Safety Rs.40,000]

3. Given, fixed cost of Rs.5,00,000; variable cost as Rs.10 per unit; selling price of Rs.15 per unit and output as 1,50,000 units, find the profit earned.

[Ans.: Profit Rs.2,50,000]

4. Using the information given below, prepare operating statements for the months of June and July, 2007 using.

- (i) Marginal costing technique and (ii) Absorption costing

	Per unit Rs.
Selling price	50
Direct material cost	18
Direct labour cost	4
Variable production overhead	3

Monthly costs:

Fixed production overheads	99,000
Fixed selling expenses	15,000
Fixed administration expenses	25,000

Variable selling costs are 10% of sales revenue and normal production capacity is 11,000 units per month. The other details are:

	Sales (units)	Production (units)
June	10,000	12,000
July	12,000	10,000

[Ans.: Profits: (i) Rs.61,000; Rs.1,01,000; (ii) Rs.81,670; 80,330]

5. The following data are obtained from the records of a factory:

	Rs.	Rs.
Sales 4,000 units at Rs.25 each		1,00,000
Materials consumed	40,000	
Labour charges	20,000	
Variable overheads	12,000	
	72,000	
Fixed overheads	18,000	90,000
Profit		10,000

It is proposed to reduce the selling price by 20%. What extra units should be sold to obtain the same amount of profit as above?

[Ans.: Units sold: (a) 14,000 units; Extra units to be sold: 14,000 - 4,000 = 10,000 units]

6. On the basis of the following data prepare a Marginal cost statement:

Variable Cost	Rs.	Rs.
Direct Material	4,500	
Direct Wages	2,500	
Factory overhead	1,050	
Administration, selling and distribution overhead	1,600	9,650
Fixed Cost		
Factory overhead	400	
Administration, selling and distribution overhead	670	1,070
Total Cost		10,720
Profit		4,280
Sales		15,000

[Ans.: Profit Rs.4,280]

7. Takur Ltd., produces 1 standard type of article. The results of last 4 months of 2007 are as follows.

	September	October	November	December
Output in Units	200	300	400	600

Prime Cost is Rs.10 per unit
 Variable expenses are Rs.2
 per unit Fixed expenses are
 Rs.36,000 p.a. Find out cost
 per unit of each month.

[Ans.: Cost per unit: Oct. Rs.10; Nov. Rs.7.50; Dec. Rs.5]

8. Calculate the fixed cost from the following information:

	2006	2007
Sales (Rs.)	4,00,000	6,00,000
Profit (Rs.)	80,000	2,00,000

[Ans.: Rs.1,60,000]

16.8 REFERENCE BOOKS

1. R.S.N. Pillai, & Bagavathi, Management Accounting, S. Chand & Company Ltd., New Delhi
2. M.A. Sahaf, Management Accounting – Principles & Practice, Vikas Publishing House Pvt. Ltd., New Delhi.
3. Shashi K. Gupta & R.K. Sharma, Management Accounting, Kalyani Publishers,
4. Charles thorn Gaxy Sundem, Introduction to Management Accounting –
5. N. Vinayakam, Tools & Techniques of Management Accounting
6. SP Gupta, Management Accounting
7. Manmohan & Goyal, Management Accounting
8. V. Krishna Kumar, Management Accounting
9. Dr.Kulsreshtha and Gupta, Practical Problems in Management Accounting
10. SP. Jain & KL Narang, Advanced Cost and Management Accounting

LESSON - 17

MARGINAL COSTING – CVP ANALYSIS

OBJECTIVES :

After reading this lesson you should be able to :

- understand the break even analysis and profit/volume ratio
- know the meaning and importance of margin of safety
- prepare break even chart of an organization

STRUCTURE :

- 17.1 Break Even Analysis
- 17.2 Profit/Volume Ratio
- 17.3 Margin of Safety
- 17.4 Break Even chart
- 17.5 Advantages of Break-Even Analysis
- 17.6 Limitations of Break-Even Analysis
- 17.7 Self Assessment Questions
- 17.8 Exercises
- 17.9 Reference Books

17.1 BREAK-EVEN ANALYSIS

Break even analysis is a specific method of presenting and studying the inter relationship between costs, volume and profits. (Hence, it also known as Cost – volume – Profit Analysis – C.V.P Analysis). It is an important tool of financial analysis whereby the impact on profit of the changes in volume, price, costs and mix can be found out with a certain amount of accuracy. A business is said to break even when its total sales are equal to its total costs. Break even point is a point of no profit or no loss. At this point contribution is just sufficient to recover the fixed costs. Break even point can be calculated in units or sales. It can be calculated with the help of any of the following formulae.

1.
$$\text{B.E.P. (in Units)} = \frac{\text{Fixed cost}}{\text{Contribution per unit}}$$
$$= \frac{\text{Fixed cost}}{\text{Selling price per unit} - \text{Variable cost per unit}}$$
2.
$$\text{B.E.P. (Sales)} = \frac{\text{Fixed cost}}{\text{Contribution per unit}} \times \text{Selling price per unit}$$
3.
$$\frac{\text{Fixed cost}}{\text{Total contribution}} \times \text{Total sales (Or)} \frac{F \times S}{S - V}$$

$$4. \quad \frac{\text{Fixed cost}}{1 - \frac{\text{Variable Cost per unit}}{\text{Selling Price per unit}}} = \frac{\text{Fixed cost}}{\text{P/V Ratio}}$$

$$5. \quad \text{B.E.P.} = \frac{\text{Fixed cost}}{\text{Fixed costs} + \text{net profit}} \times \text{Sales}$$

At break-even point the desired profit will be zero. Where the volume of output sales is to be calculated so as to earn a desired amount of profit, the amount of desired profit has to be added to the fixed cost.

$$\text{Units to earn a desired profit:} = \frac{\text{Fixed cost} + \text{Desired Profit}}{\text{Contribution Per Unit}}$$

$$\text{Sales to earn a desired profit:} = \frac{\text{Fixed cost} + \text{Desired Profit}}{\text{P/V Ratio}}$$

Illu.1: From the following particulars calculate the Break-even point in terms of both quantity and value:

Production in units	10,000
Sales price	Rs.5.00 per unit
Variable costs	Rs.20,000
Fixed costs	Rs.12,000

Solution: Calculation of Break-even Point

Break-even Point (in terms of quantity):

$$= \frac{\text{Fixed Expenses}}{\text{Selling Price pr unit} - \text{Variable Cost Per Unit}} = \frac{\text{Rs.12,000}}{5.00 - 2.00} = 4,000 \text{ Units.}$$

Break-even Point in quantity = 4,000 Units

Break-even Point in Value = Break-even Point in Quantity × Selling price per unit

$$= 4,000 \text{ Units} \times \text{Rs.5.00} = \text{Rs.20,000.}$$

Note: Variable Cost per unit = $\frac{\text{Rs.20,000}}{10,000 \text{ units}} = \text{Rs.2.00}$

17.2 PROFIT/VOLUME RATIO

The profitability of business operations could be found out by calculating the profit – volume ratio (P/V Ratio). It is the ratio of contribution to sales. It is also known as **marginal – income ratio, contribution – Sales ratio or variable – profit ratio**. The ratio can be shown in the form of a percentage also.

$$\begin{aligned}
 \text{P/V Ratio} &= \frac{\text{Contribution}}{\text{Sales}} \text{ or } \frac{\text{Sales} - \text{Variable Costs}}{\text{Sales}} \\
 &= \frac{C}{S} \text{ or } \frac{S - V}{S} \text{ or } \frac{F + P}{S} \\
 &= 1 - \frac{\text{Variable Costs}}{\text{Sales}}
 \end{aligned}$$

The ratio can also be shown by comparing the change in contribution to change in sales, or change in profit to change in sales. Any increase in contribution, obviously, would mean increase in profit, as fixed expenses are assumed to be constant at all levels of production.

$$\text{P/V Ratio} = \frac{\text{Change in Contribution}}{\text{Change in Sales}} = \frac{\text{Change in Profit}}{\text{Change in Sales}}$$

The importance of P/V Ratio lies in its use for evaluating the profitability of alternative products or proposals. A higher ratio shows greater profitability. Management should, therefore, try to increase P/V Ratio by widening the gap between the selling price and the variable costs. This can be achieved by increasing sale price, reducing variable costs or switching over to more profitable products.

Illu.2: A Company producing a single article sells at Rs.20 each. The marginal costs of production is Rs.12 each and fixed cost is Rs.8,000 p.a. calculate i) the P/V ratio, ii) sales required to break – even.

Solution:

(i) Calculation of P/V. Ratio:

	Rs.
Fixed Cost	8,000
Selling price per unit	20
Margin cost per unit	12

$$\begin{aligned}
 \text{P/V. Ratio} &= \frac{\text{Sales} - \text{Margin Cost}}{\text{Sales}} \times 100 \\
 &= \frac{20 - 12}{20} \times 100 = 40\% \\
 \text{P/V. Ratio} &= 40\%
 \end{aligned}$$

(ii) Sales Required to Break-even: $\frac{\text{Fixed Cost}}{\text{P.V. Ratio}} = \frac{8,000}{40\%} = 8,000 \times \frac{100}{40} = \text{Rs.20,000}$

Sales Required to Break-even = Rs.20,000.

Illu.3: Calculate margin of safety and the amount of actual sales from the following:

		Rs.
(i)	Profit	10,000
(ii)	PV Ratio	50%
(iii)	BEP Sales	20,000

Solution:

(i) Calculation of Margin of safety and the amount of actual Sales:

$$\text{Margin of Safety} = \frac{\text{Profit}}{\text{P.V. Ratio}} = \frac{10,000}{50\%} = 10,000 \times \frac{100}{50} = \text{Rs.}20,000$$

$$\text{Margin of Safety} = \text{Rs.}20,000$$

(ii) The amount of actual sales:

Margin of Safety	=	Actual Sales – Break-even-Point sales
Rs.20,000	=	Actual Sales – Rs.20,000
Actual Sales	=	Rs.20,000 + 20,000
Actual Sales	=	Rs.40,000

Illu.4: The following figures relating to Sales and profits of a company are of two periods.

	Sales (Rs.)	Profit(Rs.)
Year ending 31-12-2001	1,00,000	15,000
Year ending 31-12-2002	1,20,000	23,000

Calculate (a) P.V. ratio (b) Fixed cost, (c) Break-even point.

Solution:

$$\begin{aligned} \text{i. P.V. Ratio} &= \frac{\text{Change in profit}}{\text{Change in Sales}} \times 100 \\ &= \frac{8,000}{20,000} \times 40\% \end{aligned}$$

$$\begin{aligned} \text{ii. S(P.V.Ratio)} &= F+P; 1,00,000 \left(\frac{40}{100} \right) = F + 15,000; \\ 40,000 &= F + 15,000; 40,000 - 15,000 = F; 25,000 = F, F = \text{Rs.}25,000 \end{aligned}$$

$$\text{iii. BEP Sales} = \frac{F}{\text{P.V. Ratio}} = \frac{25,000}{40\%} = \frac{25,000 \times 100}{40} = \text{Rs.}62,500$$

$$\text{iv. S (P.V. Ratio)} = F + P; 1,25,000 \left(\frac{40}{100} \right) = 25,000 + P;$$

$$50,000 = 25,000 + P = 50,000 - 25,000 = P; 25,000 = P$$

$$P = \text{Rs.}25,000$$

$$S \left(\frac{P.V \text{ Ratio}}{100} \right) = F + P, S \left(\frac{40}{100} \right) = 25,000 + 20,000$$

$$S \left(\frac{40}{100} \right) = 45,000; S = 45,000 \times \frac{100}{40} = \text{Rs.}1,12,500$$

17.3 MARGIN OF SAFETY

Total sales minus the sales at break even point is known as the margin of safety. Lower break – even point means a higher margin of safety. Margin of safety can also be expressed as a percentage of total sales. The formula is:

$$\text{Margin of Safety} = \text{Total Sales} - \text{Sales at BEP}$$

Or

$$\frac{\text{Profit}}{P/V \text{ ratio}}$$

$$\text{Margin of Safety (as a percentage)} = \frac{\text{Margin of safety}}{\text{Total sales}} \times 100$$

Higher margin on safety shows that the business is sound. Even when sales substantially come down the business may earn profit. Lower margin of safety, means that when sales come down slightly profit position may affect adversely. Thus, margin of safety can be used to test the soundness of a business. In order to improve the margin of safety, a business can increase selling prices (without affecting demand, of course) reducing fixed or variable costs and replacing unprofitable products with profitable ones.

Illu.5: From the following information calculate:

- (a) P/V Ratio.
- (b) Break Even Point
- (c) Margin of Safety.

	Rs.
Total Sales	3,60,000
Selling price per unit	100
Variable Cost per unit	50
Fixed Costs	1,00,000

- (d) If selling prices is reduced to Rs.90, by how much is the margin of safety is reduced?

Solution:**(a) Calculation of Break-even-point:**

$$\text{Break-even point} = \frac{\text{Fixed Costs}}{\text{Selling price per unit} - \text{Variable cost per unit}}$$

$$\text{Break-even-Point} = \frac{1,00,000}{100 - 50} = \frac{1,00,000}{50} = 2,000 \text{ units}$$

$$\text{Break even Sales} = 2,000 \text{ units @ Rs.100 per unit}$$

$$= \text{Rs.2,00,000}$$

$$\text{(b) P.V. Ratio} = \frac{S - V}{S} \times 100$$

$$= \frac{3,60,000 - (3,600 \times 50)}{3,60,000} \times 100$$

$$= \frac{1,80,000}{3,60,000} \times 100$$

$$\text{P.V. Ratio} = 50\%$$

$$\text{(c) Margin of Safety} = \text{Actual Sales} - \text{Break even sales}$$

$$= \text{Rs.3,60,000} - 2,00,000 = \text{Rs.1,60,000}$$

(d) If Selling price is reduced to Rs.90, the Margin of safety is reduced by:

$$\text{Margin of Safety} = \text{Actual Sales} - \text{Break even sales}$$

$$= \text{Rs.3,60,000} - (2,500 \text{ Units} \times 90)$$

$$= \text{Rs.3,60,000} - 2,25,000 = \text{Rs.1,35,000}$$

Illu.6: A manufacture has supplied the following information relating to one of his product.

Total variable costs	Rs.30,000
Total sales	Rs.60,000
Units sold	20,000
Total Fixed Costs	Rs.18,000

Calculate:

- a. Contribution per unit
- b. Break-even point
- c. Margin of Safety
- d. Profit
- e. Volume of sales to earn a profit of Rs.24,000

Solution:

a. **Contribution = S-V; C = 60,000 – 30,000 = Rs.30,000**

$$\text{Contribution per unit} = \frac{30,000}{20,000 \text{ units}} = 1.50 \text{ p.}$$

b. **BEP Sales = $\frac{F \times S}{S - V}$; $\frac{18,000 \times 60,000}{60,000 - 30,000} = \text{Rs.36,000}$**

c. **Margin of Safety = Actual Sales – BEP Sales.**
 = 60,000 – 36,000 = Rs.24,000

d. **Profit = S-V = F+P; 60,000 – 30,000 = 18,000+P;**
 = 30,000 = 18,000 + P; 30,000 – 18,000 = P.
 = 12,000 = P; P = Rs.12,000

e. **Volume of Sales to earn a profit of Rs.24,000**

$$\text{P.V. Ratio} = \frac{C}{S} \times 100; \frac{30,000}{60,000} \times 100 = 50\%.$$

$$S \left(\frac{50}{100} \right) = 18,000 + 24,000$$

$$S \left(\frac{50}{100} \right) = 42,000; S = 42,000 \times \frac{100}{50} = \text{Rs.84,000}$$

$$\text{Units} = \frac{\text{Sales Amount}}{\text{Selling Price}} = \frac{84,000}{\text{Rs.3}} = 28,000 \text{ units.}$$

Illu.7: In 2006, Srikanth Ltd., sold its products worth Rs.40 lakhs and made a profit of Rs.4 lakhs. But in 2002, the sales dipped to Rs.30 lakhs due to competition in the market and the profit is reduced to 3 lakhs. Calculate Break – even points and profit volume ratios in 2006 and 2007.

Solution:

$$\text{Profit/Volume Ratio} = \frac{\text{Change in Profit}}{\text{Change in Sales}} \times 100$$

$$\text{Change in Profit} = \text{Rs.1,00,000}$$

$$\text{Change in Sales} = \text{Rs.10,00,000}$$

$$\text{P.V. Ratio} = \frac{1,00,000}{10,00,000} \times 100 = 10\%$$

$$\text{Fixed Expenses: Sales (P/V ratio)} = F + P$$

2001: When profit and sales of 2001 are taken:

$$40,00,000 \times \frac{10}{100} = F + 4,00,000$$

$$4,00,000 = F + 4,00,000$$

$$4,00,000 - 4,00,000 = F$$

$$F = 0$$

$$\text{Break-even Point} = \frac{F}{\text{P.V. Ratio}} = \frac{0}{\frac{10}{100}} = \frac{0}{10} = 0$$

2002: When Profit and sale of 2002 are taken.

$$S(\text{P/V Ratio}) = F + P$$

$$30,00,000 \times \frac{10}{100} = F + 3,00,000$$

$$3,00,000 = F + 3,00,000$$

$$3,00,000 - 3,00,000 = F$$

$$F = 0$$

$$\text{B.E. Point} = \frac{F}{\text{P.V. Ratio}} = \frac{0}{10\%} = 0 \times \frac{100}{10} = 0$$

Illu.8: The sales and profits during two periods are as under:

Period I : Sales Rs.20 lakhs; profit Rs.2 lakhs

Period II: Sales Rs.30 lakhs; Profit Rs.4 lakhs.

Calculate: (a) P/V Ratio (b) Break even point (c) Sales required to earn a profit of Rs.5 lakhs (d) Profit when sales are Rs.50 lakhs, and (e) Margin of safety at a profit of Rs.2.5 lakhs.

Solution:

a.
$$\text{P/V Ratio} = \frac{\text{Change in Profit}}{\text{Change in Sales}} \times 100$$

$$= \frac{2,00,000}{10,00,000} \times 100 = 20\%$$

$$\text{Fixed Expenses} = S \times \text{P.V. Ratio} = F + P$$

$$\text{Rs.}20,00,000 \times 20\% = F + \text{Rs.}2,00,000$$

$$\text{Rs.}4,00,000 = F + \text{Rs.}2,00,000$$

$$\text{Rs.}4,00,000 - \text{Rs.}2,00,000 = F$$

$$F = \text{Rs.}2,00,000$$

b.
$$\text{Break-even Point} = \frac{F}{\text{P.V. Ratio}}$$

$$= \frac{2,00,000}{20\%} = \text{Rs.}10,00,000$$

c.
$$\text{Sales (P/V Ratio)} = F + P$$

$$S \times \frac{20}{100} = \text{Rs.}2,00,000 + \text{Rs.}5,00,000$$

$$S \times \frac{20}{100} = \text{Rs.}7,00,000$$

$$S = \text{Rs.}7,00,000 \times \frac{100}{20} = \text{Rs.}35,00,000$$

- d. $\text{Sales} \times \text{P.V. Ratio} = F + P$
 $S \times \frac{20}{100} = \text{Rs.}2,00,000 + P$
 $\text{Rs.}50,00,000 \times \frac{20}{100} = \text{Rs.}2,00,000 + P$
 $\text{Rs.}10,00,000 = \text{Rs.}2,00,000 + P$
 $\text{Rs.}10,00,000 - \text{Rs.}2,00,000 = P$
 $P = \text{Rs.}8,00,000$
- e. $\text{Margin of Safety} = \frac{\text{Profit}}{\text{P.V. Ratio}}$
 $= \frac{2,50,000}{20\%} = \text{Rs.}2,50,000 \times \frac{100}{20} = \text{Rs.}12,50,000$

Illu.9: The following information was extracted from the books of Giridhar Mft. Co. Ltd.

	Rs.
Sales	1,80,000
Less: Variable Costs	1,44,000
Contribution	36,000
Less: Fixed costs	24,000
Net Profit	12,000

Calculate the following (a) P/V ratio (b) Break-even point (c) Net profit earned at sales of Rs.2,70,000 (d) Sales required to earn a profit of Rs.24,000.

Solution:

- (a) $\text{P.V. Ratio} = \frac{C}{S} \times 100 = \frac{36,000}{1,80,000} \times 100 = 20\%$
- (b) $\text{B.E.P} = \frac{F}{\text{P.V. Ratio}} = \frac{24,000}{20\%} = \frac{24,000}{20} \times 100 = 1,20,000$
- (c) $\text{S} \times \text{P/V Ratio} = F + P$
 $\text{Rs.}2,70,000 \times \frac{20}{100} = \text{Rs.}24,000 + P$
 $\text{Rs.}54,000 = \text{Rs.}24,000 + P$
 $\text{Rs.}54,000 - \text{Rs.}24,000 = P$
 $P = \text{Rs.}30,000$
- (d) $\text{S} \times \text{P/V. Ratio} = F + P$
 $S \times \frac{20}{100} = \text{Rs.}24,000 + \text{Rs.}24,000$

$$S \times \frac{20}{100} = \text{Rs.}48,000$$

$$S = \text{Rs.}48,000 \times \frac{100}{20} = \text{Rs.}2,40,000$$

Illu.10: The price structure of a cycle made by the Cycle Company Ltd., is as follows.

	Per Cycle Rs.
Materials	60
Labour	20
Variable Overhead	20
	100
Fixed Overheads	50
Profit	50
Selling Price	200

This is based on the manufacture of one lakh cycles per annum.

The company expects that due to competition they will have to reduce selling prices, but they want to keep the total profits intact. What level of production will have to be reduced i.e., how many cycles will have to be made to get the same amount of profit if:

- a. The Selling price is reduced by 10%
- b. The selling price is reduced by 20%

Solution:

(a)	If Selling price is reduced by 10%	Rs.
	Selling Price	200
	Less: Price	20
	Present Selling Price	180

$$V = 100 (60+20+20); P = 50;$$

$$P.V. \text{ Ratio} = \frac{C}{S} \times 100 = \frac{80}{180} \times 100 = 44.44\%$$

Sales to get the same level of profit Rs.50,00,000.

$$S (P.V. \text{ Ratio}) = E + P$$

$$S \left(\frac{44.44}{100} \right) = 50,00,000 + 50,00,000$$

$$S \left(\frac{44.44}{100} \right) = 1,00,00,000$$

$$S = 1,00,00,000 \times \frac{100}{44.44} = 22502250$$

$$\text{Selling Units} = \frac{\text{Sales Amount}}{\text{Selling Price Per unit}} = \frac{22502250}{180} = 1,25,013 \text{ units}$$

If Selling Price is reduced by 20%	Rs.
Selling Price	200
Less: 20% reduction	<u>40</u>
Present Selling Price	160

V = Rs.100; P = Rs.50;

$$\text{P.V. Ratio} = \frac{C}{S} \times 100 = \frac{60}{160} \times 100 = 37.5\%$$

Sales to get the same level of profit Rs.50,00,000.

$$S(\text{P.V. Ratio}) = E + P$$

$$S\left(\frac{37.5}{100}\right) = \text{Rs.}50,00,000 + 50,00,000$$

$$S\left(\frac{37.5}{100}\right) = \text{Rs.}1,00,00,000$$

$$S = 1,00,00,000 \times \frac{100}{37.5} = 26666666$$

$$\text{Selling Units} = \frac{\text{Sales Amount}}{\text{Selling Price Per unit}} = \frac{26666666}{160} = 1,66,667 \text{ units.}$$

Ilu.11: Find P/V Ratio and Margin of Safety – when sales, variable cost, fixed costs are Rs.Ten lakhs, Four lakhs, Four lakhs respectively.

Solution:

(i)	P.V. Ratio	=	$\frac{S - V}{S} \times 100$
		=	$\frac{10 \text{ lakhs} - 4 \text{ lakhs}}{10 \text{ lakhs}} \times 100$
		=	$\frac{10 - 4}{10} \times 100 = \frac{6}{10} \times 100 = 60\%$
	P.V. Ratio	=	60%
(ii)	Margin of Safety	=	$\frac{\text{Profit}}{\text{P.V. Ratio}} = \frac{?}{60\%}$
	Profit	=	Contribution – Fixed cost
	Profit	=	(Sales – Variable Cost) – Fixed Cost
		=	(Rs.10 lakhs – Rs.4. lakhs) – Rs.4 lakhs
		=	Rs.2 lakhs
	Margin of Safety	=	$\frac{2 \text{ Lakhs}}{60\%} = \text{Rs.}3,33,333.33$

Illu.12: Fixed expenses Rs.1,50,000 percentage of variable expenses on sales is $66\frac{2}{3}\%$. Normal sales at 100% capacity is Rs.9,00,000.

Calculate,

- P/V Ratio**
- Break even point at what percentage of sales**
- Profit at 80% of sales capacity.**

Solution:

$$a. \text{ P/V Ratio} = \frac{S - V}{S} \times 100 = \frac{\text{Rs.9,00,000} - \text{Rs.6,00,000}}{\text{Rs.9,00,000}} \times 100 = 33\frac{1}{3} \text{ or } \frac{1}{3}$$

$$b. \text{ B.E. Point} = \frac{\text{Fixed Expenses}}{\text{Sales} - \text{Variable Costs}} = \frac{1,50,000}{9,00,000 - 6,00,000} = 50\%$$

c. Profit at 80% sales capacity:

$$\begin{aligned} \text{Profit} &= \text{Contribution} - \text{Fixed Expenses} \\ &= (\text{Sales} - \text{Variable cost}) - \text{Fixed Expenses} \\ &= (\text{Rs.7,20,000} - \text{Rs.4,80,000}) - \text{Rs.1,50,000} = \text{Rs.90,000} \end{aligned}$$

Note: Sales = $9,00,000 \times \frac{80}{100} = \text{Rs.7,20,000}$; Variable Costs = $7,20,000 \times \frac{2}{3} = \text{Rs.4,80,000}$

Illu.13: Sri Sai Ram Limited furnishes you the following information relating to the half year ended 30th June 1996:

	Rs.
Fixed expenses	45,000
Sales value	1,50,000
Profit	30,000

During the second half of the year, the company has projected a loss of Rs.10,000.

Calculate:

- The Break-even point and Margin of safety for six months ending 30th June 1996.**
- Expected sales volume for second half of the year assuming that P/V ratio and fixed expenses remain constant in the second half year also.**
- The Break-even point and Margin of safety for the whole year 1996.**

Solution:

(a) P.V. Ratio	=	$\frac{\text{Fixed Expenses} + \text{Profit}}{\text{Sales}} \times 100$
	=	$\frac{\text{Rs.45,000} + \text{Rs.30,000}}{1,50,000} \times 100 = 50\%$
Break-Even Point	=	$\frac{\text{Fixed Cost}}{\text{P.V. Ratio}} = \frac{\text{Rs.45,000}}{50\%} = \text{Rs.90,000}$
Margin of Safety	=	$\text{Actual Sales} - \text{Break-Even sales}$ $\text{Rs.1,50,000} - \text{Rs.90,000} =$ Rs.60,000
Alternatively		
Margin of Safety	=	$\frac{\text{Profit}}{\text{P.V. Ratio}}$
	=	$\frac{\text{Rs.30,000}}{50\%} = \text{Rs.60,000}$

(b) Expected Sales volume for second half year:

Expected Sales Volume	=	$\frac{\text{Contribution}}{\text{P.V. Ratio}} = \frac{\text{Fixed Cost} + \text{Profit}}{\text{P.V. Ratio}} \text{ or}$
	=	$\frac{\text{Fixed Cost} - \text{Loss}}{\text{P.V. Ratio}} = \frac{\text{Rs.45,000} - 10,000}{50\%}$
	=	Rs.70,000

(c) Break-even Point and Margin of Safety for the whole year 1996:

$$\text{Break-even Point} = \frac{\text{Fixed Expenses}}{\text{P.V. Ratio}} = \frac{\text{Rs.45,000} + \text{Rs.45,000}}{50\%} = \text{Rs.1,80,000}$$

$$\text{Margin of Safety} = \frac{\text{Profit}}{\text{P.V. Ratio}} = \frac{\text{Rs.30,000} - 10,000}{50\%} = \text{Rs.40,000}$$

Alternatively:

$$\text{Margin of Safety} = \text{Actual Sales} - \text{Break Even Sales}$$

$$= (\text{Rs.1,50,000} + 70,000) - \text{Rs.1,80,000} = \text{Rs.40,000}$$

Illu.14: The following figures relate to a company manufacturing a varied range of products.

	Total Sales Rs.	Total Cost Rs.
Year ended 31 st March, 2001	22,23,000	19,83,600
Year ended 31 st March, 2002	24,51,000	21,43,200

Assuming stability in prices, with variable costs carefully controlled to reflect predetermined relationships, and an unvarying figure for fixed costs, calculate:

- the profit/volume ratio, to reflect the rates of growth for profit and sales; and
- any other cost figures to be deduced from the data.

Solution:

	Sales Rs.	Cost Rs.
2001	22,23,000	19,83,600
2002	24,51,000	21,43,200
Difference	2,28,000	1,59,600

$$\text{Variable cost (\% of sales)} = \frac{1,59,600}{2,28,000} \times 100 = 70\%$$

(or in other words, variable cost is 70 paise per Re.1.00 of sales)

$$\text{Variable cost for the year 2001} = 22,23,000 \times \frac{70}{100} = \text{Rs.}15,56,100$$

$$\text{Variable cost for the year 2002} = 24,51,000 \times \frac{70}{100} = \text{Rs.}17,15,700$$

$$\text{a. P/V ratio} = \left(\frac{S - V}{S} \right) \times 100$$

$$2001 = \frac{6,66,900}{22,23,000} \times 100 = 30\%$$

$$2002 = \frac{7,35,300}{24,51,000} \times 100 = 30\%$$

b. Other cost figures:

i) Fixed Cost (Total Cost – Variable cost):

$$2001 = \text{Rs.}19,83,600 - 15,56,100 = \text{Rs.}4,27,500$$

$$2002 = \text{Rs.}21,43,200 - 17,15,700 = \text{Rs.}4,27,500$$

ii) Fixed cost % of sales:

$$2001 = \frac{4,27,500}{22,23,000} \times 100 = 19\% \text{ (approx.)}$$

$$2002 = \frac{4,27,500}{24,51,000} \times 100 = 17\% \text{ (approx.)}$$

$$\text{iii) Break-even point} = \frac{F}{\text{P.V. Ratio}} = \text{Rs.} \frac{4,27,500}{30\%} = \text{Rs.}14,25,000$$

iv) Margin of safety:

$$2001 = 22,23,000 - 14,25,000 = \text{Rs.}7,98,000$$

$$2002 = 24,51,000 - 14,25,000 = \text{Rs.}10,26,000$$

Illu.15: From the following data calculate:

- i) **P/V ratio**
 - ii) **Profit when sales are Rs.20,000**
 - iii) **New Break-even point if selling price is reduced by 20%.**
- Fixed expenses Rs.4,000**
Break-even point Rs.10,000

Solution:

- i. Break-even sales = $\frac{\text{Fixed expenses}}{\text{P/V Ratio}}$

$$\text{P/V Ratio} = \frac{\text{Fixed expenses}}{\text{Break - even sales}} = \frac{4,000}{10,000} = 40\%$$
- ii. Profit when sales are Rs.20,000

$$\begin{aligned} \text{Profit} &= \text{Sales} \times \text{P/V ratio} - \text{Fixed expenses} \\ &= \text{Rs.20,000} \times 40\% - \text{Rs.4,000} \\ &= \text{Rs.8,000} - \text{Rs.4,000} = \text{Rs.4,000} \end{aligned}$$
- iii. New break-even point if selling price is reduced by 20%. If the selling price Rs.100, now it will be Rs.80. Variable cost per unit Rs.60 (i.e., 100 – 40% old P/V ratio)

$$\text{New P/V Ratio} = \frac{80 - 60}{80} = 25\%$$

$$\text{Break-even point will be} = \frac{4,000}{25\%} = \text{Rs.16,000}$$

17.4 BREAK-EVEN CHART

The break even point can also be shown graphically through the break even chart. The break even chart shows the profitability or otherwise of an undertaking at various levels of activity and as a result indicate the point at which neither profit nor loss is made. It shows the relationship, through a graph between cost, volume and profit. The break even point lies at the point of intersection between the total cost line and the total sales line in the chart.

In a nutshell break – even charts are often used to depict the following.

1. Cost volume profit relationships and break-even point.
2. Profit volume ratio and margin of safety
3. The impact of change in the level of sales on likely costs and profit.
4. Profit appropriations and expense analysis.
5. For controlling profits and level of activity by comparing the budgeted with actual sales and profit.
6. For deriving the figures of optimum output.

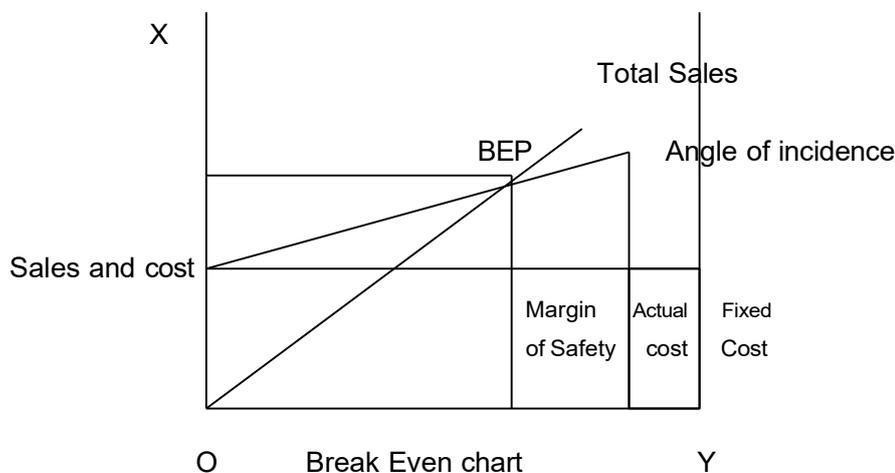
Preparation of break – even Charts:

These charts are shown on the graph paper by drawing lines at the point which are to be plotted. The sales in units are depicted on the horizontal line i.e., X-X' and costs and revenue on the vertical line i.e., Y-Y'. Both are expressed in monetary values.

First of all a line is drawn parallel to X-axis showing the fixed costs. Then the total cost line is drawn and inserted upon the fixe cost line. Thereafter the sales line is drawn diagonally touching the zero at the orgin point and the highest point on the vertical scale. The point at which this sales line interests the total cost line, is the break even point. The right sector of this point shows the profits and the left sector shows the loss. This is a simple break even chart. Suitable description regarding variable costs, fixed costs, profit or loss and break-even point are usually written on this chart.

Angle of Incidence:

It is an angle at which sales line cuts the total costs line. A high angle denotes high rate of profit while a low angle reflects poor rate of return. Obviously management must plan for high angle of incidence which can only be when variable costs bear a low proportion of cost of sales.



If the angle is large, the firm is said to be making profits at a high rate or vice versa. A large angle of incidence together with a high margin of safety indicate sound business conditions. Therefore, the management's aim will be to have as large an angle as possible; because this shows a high rate of profit once the fixed costs are met. A narrow angle, on the other hand would show that even after absorbing the fixed costs the rate of profit is comparatively low. In other words, it indicates that the variable costs form a large part of the total costs.

Illu.16 : From the following information draw up a chart to show break-even points.

	Rs.
Fixed costs (Total)	40,000
Variable costs (per unit)	2
Selling price (per unit)	3

Solution:

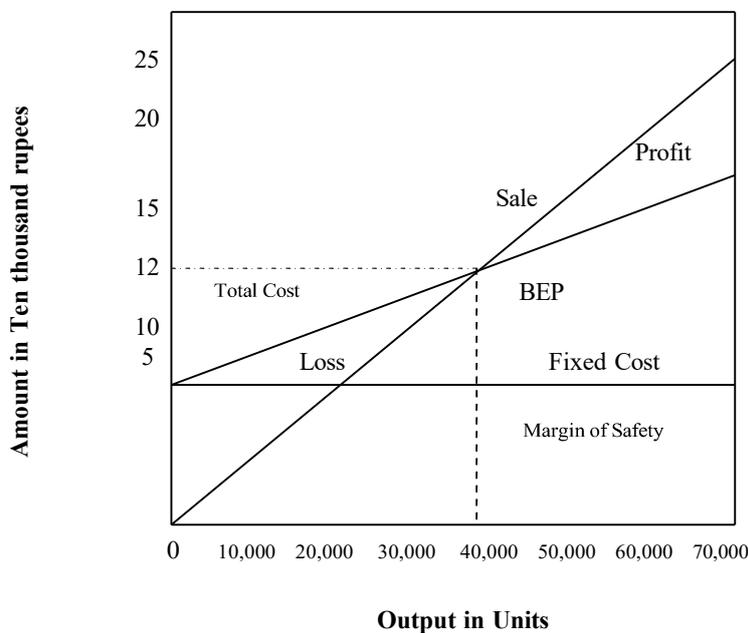
Contribution = Selling price – Variable cost per unit

Rs.3 – 2 = Rs.1

$$\text{BEP} = \frac{\text{Fixed costs}}{\text{Contribution}} = \frac{40,000}{1} = 40,000 \text{ units.}$$

40,000 units × selling price per unit i.e., Rs.3 = Rs.1,20,000 when output is 40,000 units.
Total cost and Total sales will be Rs.1,20,000.

In the graph given below the horizontal scale OX shows volume of production expressed in units. The vertical scale OY shows sales and cost in Rs.10,000. In the chart three lines are drawn. The first line shows fixed cost which is parallel to the base scale and has not relation with the output.



The sales line (total sales) is drawn from the point where there are no sales (zero intersection of horizontal and vertical scales).

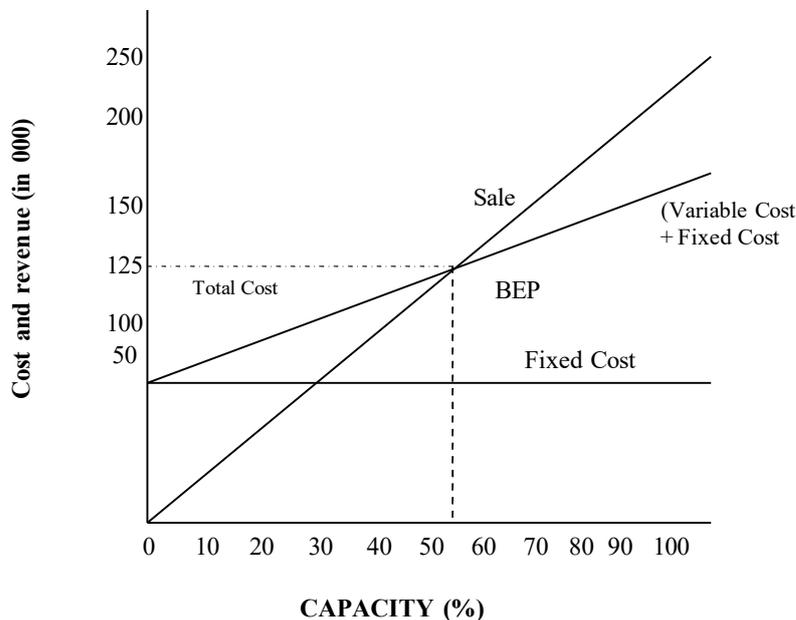
The total cost line (variable costs + fixed costs) is drawn from the point of fixed costs. The total costs and total sales lines intersect each other at point "P" which is a B.E.P. from this point perpendicular is drawn which touches out put at R (40,000 units) and Revenue at Q (Rs.1,20,000). If the output is below 40,000 units there will be a loss. If output exceeds 40,000 units there will be a profit. Output in excess of 40,000 units i.e., RX shows margin of safety.

Illu.17: The following figures relate to one year's working at 100% capacity level in a manufacturing business.

	Rs.
Fixed Overheads	30,000
Variable Overheads	50,000
Direct Wages	40,000
Direct Materials	1,00,000
Sales	2,50,000

Represent that above figures on a break-even chart and determine from the chart the break-even point. Verify your result by calculations.

Solution:



Verification:

$$\text{BEP} = \frac{F}{\text{P/V Ratio}}$$

$$F = \text{Rs.}30,000$$

$$\text{P/V Ratio} = \frac{C}{S} = \frac{S - V}{S} = \frac{2,50,000 - 1,90,000}{2,50,000}$$

$$= \frac{60,000}{2,50,000} = \frac{6}{25}$$

$$BEP \text{ Sales} = \frac{30,000}{6} \times 25 = \text{Rs. } 1,25,000$$

Cash Break-Even Chart:

This chart is prepared to show the cash needs of a concern. Fixed expenses are to be classified as those involving cash payments and those not involving cash payments like depreciation. As the cash break even chart is designed to include only actual payments and not expenses incurred, any time lag in the payment of items included under variable cost must be taken into account. Equal care must be shown on the period of credit allowed to the debtor for the purpose of calculating the amount of cash to be received from them, during a particular period. Cash break-even point is used to assess the liquidity position of the firm. It can be calculated as under:

$$\text{Cash Break-even Point} = \frac{\text{Cash Fixed Costs}}{\text{Cash contribution per unit}}$$

Assumptions of Break even Analysis:

Break even analysis is based on the following assumptions.

- i Fixed cost remains constant at all levels of output.
- ii Variable costs fluctuate in direct proportion to volume of output.
- iii Selling prices do not change as volume changes.
- iv There is only one product and in the case of multiple products, the sales mix remains constant.
- v There will be no change in general price level.
- vi Productivity per worker will remain unchanged.
- vii There is synchronization between productions and sales, i.e., whatever is produced is sold out.

17.5 ADVANTAGES OF BREAK EVEN ANALYSIS

The break even analysis is a simple tool employed to graphically represent accounting data. The data revealed by financial statements and reports are difficult to understand and interpret. But when the same are presented through break even charts, it becomes easy to understand them. Break even charts help in:

1. Determining total cost, variable cost and fixed cost at a given level of activity;
2. Finding out break even output or sales;

3. Understanding the cost, volume, profit relationship;
4. Making inter-firm comparisons;
5. Forecasting profits;
6. Selecting the best product mix; and
7. Enforcing cost control.

Thus, the break even analysis can be used to find out the effect of all these changes which influence total revenue and total cost and thereby the profitability of a business. The marginal cost approach, which is better termed as relevant cost approach, is vital for making a choice out of various alternatives. But to make all decision on the basis of marginal cost would be wrong. Normal prices for example are based on full costs and not marginal cost.

17.6 LIMITATIONS OF BREAK EVEN ANALYSIS

On the negative side, break even analysis suffers from the following limitations.

1. **Difficulty in segregation of Costs:** It is very difficult, if not impossible, to segregate costs into fixed and variable components. Further, fixed costs do not always remain constant. They have a tendency to rise to some extent after production reaches certain level. Like wise, variable costs do not always vary proportionately.
2. **Complicated Calculations:** The application of break even analysis to a multi-product firm is very difficult. A lot of complications are involved.
3. **Limited Importance:** The break even point has limited importance. At best it would help management to indulge in cost reduction in times of dull business. Normally, it is not the objective of business to break even, because no business is carried on in order to break even. Thus, the BEP 'Provides neither a standard of performance nor a guide for executive decisions.
4. **Limitations application in long-range planning:** Break even analysis is a short run concept, and it has a limited application in the long range planning.

Despite these limitations, break even analysis has some practical utility in that it helps management in profit planning. According to Wheldon, "if the limitations are accepted, and the chart is considered as being an instantaneous photograph of the present position and possible trends, there are some very importance conclusions to be drawn from such a chart".

Illu.18: A factory engaged in manufacturing plastic buckets is working at 40% capacity and produces 10,000 buckets for annum.

The present cost break-up for one bucket is as under:

	Rs.
Material	10
Labour Cost	3
Overheads	5(60% fixed)
The selling price is Rs.20 per bucket.	

If it is decided to work the factory at 50% capacity, the selling price falls by 3%. At 90% capacity the selling price falls by 5% accompanied by a similar fall in the prices of material.

You are required to calculate the profit at 50% and 90% capacities and also the break-even points for the same capacity productions.

Solution:

Statement showing profit and break-even point at different capacity levels

Capacity level Production (Units)	50% 12,500		90% 22,500	
	Per Unit Rs.	Total Rs.	Per Unit Rs.	Total Rs.
a) Sales	19.40	2,42,500	19.00	4,27,500
Variable cost material	10.00	1,25,000	9.50	2,13,750
Wages	3.00	37,500	3.00	67,500
Variable overhead	2.00	25,000	2.00	45,000
b) Total variable cost	15.00	1,87,500	14.50	3,26,250
c) Contribution (S-V)				
Or (a-b)	4.40	55,000	4.50	1,01,250
Less: Fixed cost		30,000		30,000
Net profit		25,000		71,250
Break-even point at		50%		90%

$$\text{Units} = \frac{\text{Fixed cost}}{\text{Contribution per unit}} = \frac{30,000}{4.40} = 6,818 \text{ units} \quad \frac{30,000}{4.50} = 6,667 \text{ units}$$

Sales value

Rs.1,32,269

Rs.1,26,673

Illu.19 : From the following data calculate:

i) P/V ratio

ii) Profit when sales are Rs.20,000

iii) New Break-even point if selling price is reduced by 20%.

Fixed expenses	Rs.4,000
Break-even point	Rs.10,000

Solution:

- i. **Break-even sales** = $\frac{\text{Fixed expenses}}{\text{P/V Ratio}}$
- $$\text{P/V Ratio} = \frac{\text{Fixed expenses}}{\text{Break - even sales}} = \frac{4,000}{10,000} \times 100 = 40\%$$
- ii. Profit when sales are Rs.20,000
- $$\begin{aligned} \text{Profit} &= \text{Sales} \times \text{P/V ratio} - \text{Fixed expenses.} \\ &= \text{Rs.20,000} \times 40\% - \text{Rs.4,000} \\ &= \text{Rs.8,000} - \text{Rs.4,000} = \text{Rs.4,000} \end{aligned}$$
- iii. New break-even point if selling price is reduced by 20%. If the selling price Rs.100, now it will be Rs.80. Variable cost per unit Rs.60 (i.e. 100-40% old P/V ratio)
- $$\text{New P/V Ratio} = \frac{80 - 60}{80} = 25\%$$
- $$\text{Break-even point will be} = \frac{4,000}{25\%} = \text{Rs.16,000}$$

Illu.20: The sales and profit during the years were as follows.

	Sales Rs.	Profit Rs.
2001	1,50,000	20,000
2002	1,70,000	25,000

You are required to calculate

- P/V Ratio**
- Break even level**
- Sales required to earn a profit of Rs.40,000**
- Margin of Safety at a profit of Rs.2,50,000**
- Profit made when sales are Rs.50,000**
- Variable Cost in the two periods.**

Solution:

$$\begin{aligned} \text{a) P.V. Ratio} &= \frac{\text{Change in Profit in 2 periods}}{\text{Change in Sales in 2 periods}} \times 100 \\ &= \frac{\text{Rs.25,000} - 20,000}{\text{Rs.1,70,000} - 1,50,000} \times 100 = \frac{5,000}{20,000} \times 100 = 25\% \end{aligned}$$

$$\text{b) Break Even Level} = \frac{\text{Fixed Cost}}{\text{P.V. Ratio}}$$

$$\begin{aligned}
 \text{Fixed Cost} &= \text{Contribution} - \text{Profit} \\
 \text{Fixed Cost} &= (\text{Sales} \times \text{P.V. Ratio}) - \text{Profit} \\
 &= (1,50,000 \times \frac{25}{100}) - 20,000 = \text{Rs. } 17,500 \\
 \text{Break Even Level} &= \frac{\text{Rs. } 17,500}{25\%} = \text{Rs. } 70,000
 \end{aligned}$$

c) Sales required to earn a profit of Rs.40,000

$$\begin{aligned}
 &= \frac{\text{Fixed expenses} + \text{Required Profit}}{\text{P.V. Ratio}} = \frac{\text{Rs. } 17,500 + 40,000}{25\%} \\
 &= \text{Rs. } 57,500 \times \frac{100}{25} = \text{Rs. } 2,30,000
 \end{aligned}$$

d) Margin of Safety at a profit of Rs.2,50,000

$$\text{Margin of Safety} = \frac{\text{Profit}}{\text{P.V. Ratio}} = \frac{2,50,000}{25\%} = \text{Rs. } 10,00,000$$

e) Profit when sales are Rs.2,50,000

$$\begin{aligned}
 \text{Profit} &= \text{Contribution} - \text{Fixed Cost} \\
 &= (\text{Sales} \times \text{P.V. Ratio}) - \text{Fixed Cost} \\
 &= (\text{Rs. } 2,50,000 \times \frac{25}{100}) - \text{Rs. } 17,500 = \text{Rs. } 45,000
 \end{aligned}$$

f) Variable Cost in the two periods:

$$\begin{aligned}
 \text{Variable Cost} &= \text{Sales} - \text{Profit} - \text{Fixed Cost} \\
 2001 &= \text{Rs. } 1,50,000 - 20,000 - 17,500 = \text{Rs. } 1,12,500 \\
 2002 &= \text{Rs. } 1,70,000 - 25,000 - 17,500 = \text{Rs. } 1,27,500
 \end{aligned}$$

Illu.21: Assuming that the cost structure and selling prices remain the same in periods I and II find out:

(a) Profit volume ratio, (b) Profit when sales are Rs.1,00,000.

Periods	Sales Rs.	Profit Rs.
I	1,20,000	9,000
II	1,40,000	13,000

Solution:

$$\text{a. P/V Ratio} = \frac{\text{Change in Profit}}{\text{Change in sales}} \times 100; \frac{4,000}{20,000} \times 100 = 20\%$$

Calculation of Fixed Expenses:

$$\text{S (P/V Ratio)} = \text{F} + \text{P}; 1,20,000 \left(\frac{20}{100} \right) = \text{F} + 9,000; 24,000 = \text{F} + 9,000; 24,000 - 9,000 = \text{F}; 15,000 = \text{F}; \text{F} = \text{Rs.15,000}$$

$$\text{b. S (P/V Ratio)} = \text{F} + \text{P}; 1,00,000 \left(\frac{20}{100} \right) = 15,000 + \text{P}; 20,000 = 15,000 + \text{P}; 20,000 - 15,000 = \text{P}; 5,000 = \text{P}; \text{P} = \text{Rs.5,000}$$

17.7 SELF ASSESSMENT QUESTIONS

I. Short Questions:

1. What is break-even point?
2. What is margin of safety?
3. What is profit-volume ratio?
4. What is contribution?
5. What is angle of incidence?
6. What is Cash break-even point?

II. Essay type questions:

1. Explain cost-volume profit analysis.
2. Explain the ways by which profit-volume ratio can be improved.
3. Explain the uses of break-even analysis in profit planning.
4. What assumption are made to construct a simple Break-even Chart?
5. Explain the utility of Break-even Analysis in Managerial Decisions
6. What do you meant by Break-even level of output?
7. What are the limitations of the break-even charts?
8. What are the managerial uses of break-even analysis?
9. What is Profit volume ratio and Profit Volume graph? How is Profit-volume graph technique helpful to management.
10. What is C.V.P.? Analyse and state its uses and applications.
11. Explain 'Break-Even Analysis'. Discuss the assumptions that underline the technique and the practical usefulness of Break-even analysis.
12. Define Break-even-Point and explain its advantage and limitations.
13. What do you mean by P/V Ratio? What are its uses?
14. What are the assumptions of Break-even-Analysis?
15. Explain the concepts of marginal costing and Break-even analysis.
16. Explain about Break-even Analysis. What are its applications?

17.8 EXERCISES

1. From the following particulars calculate the Break-even point in terms of both quantity and value:

Production in units	10,000
Sales price	Rs.5,00 per unit
Variable costs	Rs.20,000
Fixed costs	Rs.12,000

[Ans.: (a) 4,000 units; (b) Rs.20,000]

3. What is the break-even-point when sales is Rs.6.0 lakhs; Fixed expenses are Rs.1.5 lakhs and Variable costs are Rs.4.0 lakhs?

[Ans.: Rs.4.5 lakhs]

4. Find P/V Ratio and Margin of Safety – when sales, variable cost, fixed costs are Rs. Ten lakhs, Four lakhs, Four lakhs respectively.

[Ans.: P.V. Ratio = 60%; MOS = Rs.3,33,333]

5. The following information is extracted from the books of Harish Ltd.

Year	Sales Rs.	Cost Rs.
2006	2,00,000	1,40,000
2007	2,40,000	1,60,000
Calculate B.E.P.		

[Ans.: BEP Rs.80,000; P.V. Ratio = 50%; Fixed Cost Rs.40,000]

6. A company estimates that next year it will earn a profit of Rs.50,000. The budgeted fixed costs and sales are Rs.2,50,000 and Rs.9,93,000 respectively. Find out Break-Even point.

[Ans.: Rs.8,27,500]

7. From the following information, calculate margin of safety.

	Rs.
Sales (4,000 units @ Rs.25 each)	1,00,000
Variable cost	72,000
Fixed expenses	16,800

[Ans.: Margin of Safety Rs.40,000]

8. From the following details calculate BEP, Margin of safety:

	Rs.
Sales	4,20,000
Fixed cost	90,000
Variable cost ratio	55% of sales

[Ans.: BEP Rs.2,00,000; Margin of Safety Rs.2,20,000]

9. From the following particulars calculate the margin of safety Sales units: 15,000; Fixed costs Rs.34,000; Selling price per unit Rs.10; Variable cost per unit Rs.6.

[Ans.: Margin of Safety Rs.65,000]

10. From the following information calculate:

- Break-even point
- Turnover required to earn a profit of Rs.36,000.
- Margin of safety for Rs.36,000 profit. Fixed overhead Rs.1,80,000 Variable cost per unit Rs.2 Selling price per unit Rs.20.

[Ans.: (a) Rs.10,000 units; Value Rs.2,00,000; (b) 12,000 units; Value Rs.2,40,000; (c) Rs.40,000]

11. Sri Sai Ram Limited furnishes you the following information relating to the half year ended 30th June 2007:

	Rs.
Fixed expenses	45,000
Sales value	1,50,000
Profit	30,000

During the second half of the year, the company has projected a loss of Rs.10,000.
Calculate:

- (a) The Break-even point and Margin of safety for six months ending 30th June 2007.
 (b) Expected sales volume for second half of the year assuming that P/V ratio and fixed expenses remain constant in the second half year also.
 (c) The Break-even point and Margin of safety for the whole year 2007.

[Ans.: (a) BEP Rs.90,000; MOS Rs.60,000; (c) BEP Rs.1,80,000; MOS Rs.40,000]

12. You are given the following data for the year of a company.

	Rs.	%
Variable costs	6,00,000	60
Fixed costs	3,00,000	30
Net profit	1,00,000	10
	10,00,000	100

Find out

- (a) Break even point
 (b) P/V Ratio.
 (c) Margin of safety.

[Ans.: (a) Rs.7,50,000; (b) 40%; (c) Rs.2,50,000]

13. The following information relates to an article produced by EM EM Ltd:

	Rs.
Total fixed costs	18,000
Total variable costs	30,000
Total sales	60,000
Units sold	20,000

From the above information find out (a) Per unit contribution (b) Break-even-point (c) Safety margin and (d) Sales required to earn a profit of Rs.24,000.

[Ans.: (a) Rs.1.50 (b) 12,000 units Rs.36,000; (c) 8,000 units – Rs.24,000; (d) 28,000 units value Rs.84,000]

14. From the following figures, calculate P/V ratio, BEP, profit on estimated sales of Rs.1,25,000 and sales required to earn a profit of Rs.20,000:

	Sales Rs.	Profit Rs.
Period I	1,00,000	15,000
Period II	1,20,000	23,000

[Ans.: P.V. Ratio = 40%; BEP Rs.62,500; Profit Rs.25,000; Sales required Rs.1,12,500]

15. The following data are obtained from the records of a factory:

	Rs.	Rs.
Sales 4,000 units at Rs.25 each		1,00,000
Materials consumed	40,000	
Labour charges	20,000	
Variable overheads	12,000	
	72,000	
Fixed overheads	18,000	90,000
Profit		10,000

It is proposed to reduce the selling price by 20%. What extra units should be sold to obtain the same amount of profit as above?

[Ans.: Units sold: (a) 14,000 units; Extra units to be sold: 14,000 - 4,000 = 10,000 units]

16. From the following particulars calculate:

- Contribution
- P/V Ratio
- Break-even in units and in Rupees
- What will be the selling price per unit if the break-even is brought down to 25,000 units?

	Rs.
Fixed Expenses:	1,50,000
Variable cost per unit	10
Selling price per unit	15

[Ans.: (a) Rs.5; (b) $33\frac{1}{3}$ or $\frac{1}{3}$ (c) 30,000 units; Rs.4,50,000; and (d) Rs.16]

17. Bhargavi Ltd. incurred a total cost of Rs.40,000 on a sales of Rs.45,000 in the 1st half year and Rs.43,000 cost on sales of Rs.50,000 in the 2nd half year. Assuming that costs and prices remained the same, calculate for the entire year:

- (i) P.V. Ratio (ii) Fixed Expenses
 (iii) Break-even sales (iv) % of margin of safety.

[Ans.: (i) 40%; (ii) Rs.26,000; (iii) Rs.65,000; (iv) Rs.30,000 and 31.58%]

18. The sales and profit during two years are as follows:

Year	Sales Rs.	Profit Rs.
2006	3,00,000	30,000
2007	4,00,000	50,000

You are required to calculate (i) p/v ratio (ii) Break even sales (iii) Margin of Safety at a Profits of Rs.40,000.

[Ans.: (i) 20% or $\frac{1}{5}$; (ii) Rs.1,50,000 (iii) Rs.2,00,000]

19. From the following data, determine the net profits, if actual sales are 10% and 15% above the Break-Even volume:

Selling Price per unit	:	Rs.10
Trade discount	:	5%
Fixed overheads	:	Rs.10,000
Variable cost per unit	:	Rs.7

[Ans.: B.E.P = 4,000 Units; Net Profit = Rs.1,000; Rs.1,500]

20. The following figures are available from the records of Sindhu enterprises as at 31st December:

	2006 Rs. in lakhs	2007 Rs. in lakhs
Sales	150	200
Profit	30	50

Calculate:

- (a) The p/v ratio and total fixed expenses.
 (b) The break-even level of sales.
 (c) Sales required to earn a profit of Rs.90 lakhs.
 (d) Profit or loss that would arise if the sales were Rs.280 lakhs.

[Ans.: (a) 40% & Rs.30,00,000; (b) Rs.75,00,000 (c) Rs.3,00,00,000 (d) 82,00,000]

21. Calculate the Break-even point from the following particulars:

Budgeted output 70,000 units

Fixed cost (Rs.) 4,00,000

Variable cost per unit (Rs.) 12

Selling price per unit (Rs.) 22

If the selling price is reduced to (Rs.) 20 per unit what will be the revised Break-even point?

[Ans.: BEP = 40,000 units Value Rs.8,80,000; Revised BEP = 50,000 units Value Rs.10,00,000]

22. From the following data, determine the net profits, if actual sales are 10% and 15% above the Break-Even Volume:-

Selling price per unit:	Rs.10
Trade discount:	5%
Fixed overheads:	Rs.10,000
Variable cost per unit	Rs.7

[Ans.: BEP = 400 Units: Profits Rs.(i) Rs.1,000; (ii) Rs.1,500]

23. Sales of a product amount to 200 units per month at Rs.10 per unit. Fixed overhead is Rs.400 per month and variable cost Rs.6 per unit. There is a proposal to reduce prices by 10%. Calculate present and future P/V ratio, how many units must be sold to maintain total profit.

[Ans.: Present and future P/V ratios 40% and $33\frac{1}{3}\%$, Units to maintain total Profit = 267]

24. From the following particulars calculate the P/V ratio Break-even sales and Fixed Costs. Profit Rs.2,000 which represents 10% of sales Margin of safety = Rs.10,000.

[Ans.: P/V ratio = $\frac{1}{5}$; Break-even sales Rs.10,000; Fixed cost Rs.2,000]

25. From the following particulars calculate (a) Fixed costs (b) Break Eve Sales (c) Total Sales and (d) Profit.

Margin of Safety = Rs.10,000 (which represents 40% of sales) P/V Ratio = 50%.

[Ans.: (a) Rs.7,500; (b) 15,000; (c) Rs.25,000; (d) Rs.5,000.]

26. Given:

Sales 10,000 units
 Variable cost Rs.1,00,000
 Sales value Rs.2,00,000
 Fixed cost Rs.40,000
 Selling Price per unit Rs.20

You are required to calculate:

(a) P/V Ratio (b) Break-even point (c) Margin of safety (d) Sales to earn a profit of Rs.30,000.

[Ans.: (a) 50% (b) Rs.80,000 (c) Rs.1,20,000 (d) Rs.1,40,000]

27. Assuming that the cost structure and selling prices remain the same in Periods I and II, find out:

- (a) Profit Volume Ratio;
- (b) Fixed Cost;
- (c) Break Even Point for Sales;
- (d) Profit when Sales are of Rs.1,00,000;
- (e) Sales required to earn a Profit of Rs.20,000; and
- (f) Margin of Safety at a profit of Rs.15,000;
- (g) Variable cost in Period II

Period	Sales Rs.	Profit Rs.
I	1,20,000	9,000
II	1,40,000	13,000

[Ans.: (a) 20% (b) Rs.15,000 (c) Rs.75,000 (d) Rs.5,000 (e) Rs.1,75,000 (f) Rs.75,000 (g) Rs.1,12,000]

28. The sales turnover and profit of M/s Sreenivasa & Co. Ltd. during the two years 2006 and 2007 were as follows:

	Sales (Rs.)	Profit (Rs.)
2006	4,50,000	60,000
2007	5,10,000	75,000

You are required to calculate:

1. Profit-volume ratio.
2. Break-even point.
3. The sales required to earn a profit of Rs.1,20,000.

4. The profit made when sales are Rs.7,50,000.
5. Margin of safety at a profit of Rs.1,50,000.
6. Variable costs of the two periods.

[Ans.: (1) 25% (2) Rs.2,10,000 (3) Rs.6,90,000 (4) Rs.1,35,000 (5) Rs.6,00,000 (6) 1989 = Rs.3,37,500; 1990 = Rs.3,82,500]

29. Following are the particulars of Pennar Tubes Ltd:
Sales Rs.30,00,000; Fixed costs Rs.9,00,000; Variable costs Rs.15,00,000. Calculate (a) P/V ratio, (b) Break-even point (c) Margins of safety and (d) Margin of safety ratio.

[Ans.: (a) 50% (b) Rs.18,00,000 (c) Rs.12,00,000 (d) 40%]

30. M Ltd., manufacturing and selling industrial boxes. It is proposed to decrease the prices due to heavy competition. By decreasing the selling prices by 10% and 15%, how many units to be sold to maintain the current level of profit. The additional information is given:

Current sales 30,000 units		Rs.3,00,000
Variable cost 30,000 units	1,80,000	
Fixed cost	70,000	<u>2,50,000</u>
Net profit		50,000

[Ans.: Sale of Units at 10% reduction in selling price 40,000; Sale of Units at 15% reduction in selling price 48,000]

31. From the following details calculate:
- (a) P/V Ratio
 - (b) BE Point
 - (c) Margin of safety
 - (d) Effect of 10% increase in SP on BEP.
 - (e) Effect of 10% decrease in SP on BEP.

	Rs.
Sales	60,000
Variable Cost	30,000
Fixed Cost	15,000

[Ans.: (a) 50, (b) Rs.30,000; (c) Rs.30,000; (d) BEP Rs.27,500; (e) Rs.33,750]

32. From the following particulars find

(i) Contribution, (ii) P/V Ratio:

Variable cost per unit Rs.20; Selling price per unit Rs.40; Fixed expenses Rs.1,00,000; Output 5,000 units.

[Ans.: Contribution per unit Rs.20; P.V. Ratio: 50%]

33. Ramachandra sells a line of Men's footwears for Rs.18 a pair. Each pair that is sold contributes Rs.6 to the recovery of fixed costs and to profits. His fixed costs amounts to Rs.84,000 a year.

You are asked to (a) show how many pairs must be sold in a year to Break Even. (b) Break Even sales revenue at the Break Even Point. (c) Desired sales to earn a profit of Rs.54,000.

[Ans.: (a) 14,000 units (b) Rs.2,52,000 (c) Rs.4,14,000]

34. From the following details, compute: (i) P.V. Ratio (ii) Profit

Fixed Costs Rs.50,000

Sales Rs.3,00,000

Variable costs $66\frac{2}{3}\%$ of sales.

[Ans.: (i) $33\frac{1}{3}\%$ (ii) Rs.50,000]

35. From the following details compute: (a) Variable Costs; (b) P/V Ratio.

	Rs.
Sales	3,00,000
Fixed Costs	70,000
Profit	80,000

[Ans.: (a) Rs.1,50,000 (b) Rs.50%]

36. From the following data, you are required to calculate

a. P/V Ratio

b. Break even sales with the help of P/V ratio

c. Sales required to earn a profit of Rs.4,50,000

Fixed expenses Rs.90,000

Variable cost per unit:

Direct material = Rs.5

Direct Labour = Rs.2

Direct overheads = 100 per cent of direct labour

Selling price per unit = Rs.12

[Ans.: (a) 25% (b) 3,60,000 (c) Rs.21,60,000]

37. From the following information pertaining to the years, calculate:
- P/V ratio
 - Amount of sales to earn profit of Rs.40,000
 - Profit on sales Rs.1,20,000

Years	Sales Rs.	Profit Rs.
2006	1,40,000	15,000
2007	1,60,000	20,000

[Ans.: (a) 25% (b) Rs.2,40,000 (c) Rs.10,000]

38. From the following data relating to a company, calculate:
- The break-even sales; and
 - Sales required to earn a profit of Rs.6,000 per period.

Period Rs.	Total Sales Rs.	Total Cost
1.	42,500	38,700
2.	39,200	36,852

[Ans.: (i) Rs.33,863.64 (ii) Rs.47,500]

39. The following information was extracted from the books of Giridhar Mft. Co. Ltd.

	Rs.
Sales	1,80,000
Less: Variable Costs	<u>1,44,000</u>
Contribution	36,000
Less: Fixed costs	<u>24,000</u>
Net Profit	12,000

Calculate the following (a) P/V ratio (b) Break-even point (c) Net profit earned at sales of Rs.2,70,000 (d) Sales required to earn a profit of Rs.24,000.

[Ans.: (a) 20% (b) Rs.1,20,000 (c) Rs.30,000 (d) Rs.2,40,000]

40. By making and selling 7,000 units of its product, a company would lose Rs.10,000; whereas in the case of 9,000 units it would make a profit of Rs.10,000 instead. Calculate:

- The amount of fixed expenses.

- (b) Number of units of Break-Even.
- (c) Profit or Loss for 10,000 units.
- (d) Number of units to earn a profit of Rs.40,000.

[Ans.: P.V. Ratio = 10%; (a) 80,000 (b) 8,000 units (c) Rs.20,000 (d) 12,000 units]

41. M/s Haripriya Ltd., sold its products worth Rs.180 lakhs and made a profit of Rs.18 lakhs in 2006. But in 2007, the sales came down to Rs.140 lakhs due to severe competition in the market. The fall in profit was Rs.4 lakhs. Calculate break-even points and profit volume ratios in 2006 and 2007.

[Ans.: BEP = 0; P.V. Ratio : 2001 – 10%; 2002 – 10%]

42. Two competing companies P Ltd. and Q Ltd. produce and sell the same type of product in the same market. For the year ended March 2008, their forecasted profit and loss accounts are as follows:

	Rs.	P. Ltd. Rs.	Rs.	Q. Ltd. Rs.
Sales		3,00,000		3,00,000
Selling Price Expenses	2,00,000		2,25,000	
Fixed Cost	50,000	2,50,000	25,000	2,50,000
		50,000		50,000

You are required to calculate the following:

- (a) Profit volume ratio, Break-even Point and Margin of Safety of each business.
- (b) Sales volume at which each business will earn a profit of Rs.30,000.
- (c) Explain, giving reasons which business is likely to earn greater profits in conditions of (i) heavy demand for the product, (ii) low demand for the product.

[Ans.: (a) P.V. Ratio : P Ltd. 33.33%; Q Ltd. 25%; BEP Sales : P Ltd., Rs.1,50,015; Q Ltd., Rs.1,00,000; Margin of safety : P Ltd. Rs.1,50,015; Q Ltd., Rs.2,00,000; (b) P Ltd. Rs.2,40,024; Q Ltd. Rs.3,00,000 (c) (i) In case of heavy demand the product of P Ltd., is more profitable, because P.V. ratio of P Ltd., is greater than Q Ltd. (ii) In case of low demand, the product Q Ltd., is more preferable since it provides more profit. It is because BEP of Q Ltd., is lower than the BEP of P Ltd.]

43. Following information has been obtained from the revenue account of Balaji Ltd. for the year ended 31st December, 2007:

	Rs.	Rs.
Sales		6,00,000
Direct materials	1,80,000	
Direct wages	1,20,000	
Variable overheads	48,000	
Fixed overheads	1,72,000	5,20,000
Profit		80,000

It is proposed to reduce the selling price by 5%. What would be the sales volume if the present level of Profit is to be maintained. Assume no change in cost structure.

[Ans.: Old P.V. Ratio : 42%; New P.V. Ratio : 38.95%; Sales Volume at present level of profit Rs.6,46,938]

17.9 REFERENCE BOOKS :

1. R.S.N. Pillai, & Bagavathi, Management Accounting, S. Chand & Company Ltd., New Delhi
2. M.A. Sahaf, Management Accounting – Principles & Practice, Vikas Publishing House Pvt. Ltd., New Delhi.
3. Shashi K. Gupta & R.K. Sharma, Management Accounting, Kalyani Publishers,
4. Charles thorn Gaxy Sundem, Introduction to Management Accounting –
5. N. Vinayakam, Tools & Techniques of Management Accounting
6. SP Gupta, Management Accounting
7. Manmohan & Goyal, Management Accounting
8. V. Krishna Kumar, Management Accounting
9. Dr.Kulsreshtha and Gupta, Practical Problems in Management Accounting
10. SP. Jain & KL Narang, Advanced Cost and Management Accounting

LESSON- 18

MARGINAL COSTING - MANAGERIAL DECISIONS

OBJECTIVES

After studying this chapter you should be able to

- understand the uses of marginal costing and taking various managerial decisions
- explain the problems relating to profit planning, introduction of new product, planning the level of activity. Key factor, suitable product mix, pricing decisions etc.

STRUCTURE :

18.1 Marginal Costing and Decision making

18.2 Buy or Make Decisions

18.3 Self Assessment Questions

18.4 Exercises

18.5 Reference Books

18.1. MARGINAL COSTING AND DECISION MAKING

Marginal costing techniques may be applied in various fields to aid management in arriving at many important policy decisions. These include:

1. Profit planning
2. Introduction of new product
3. Planning of level of activity
4. Key factor
5. Determination of suitable product – mix
6. Pricing Decisions
7. Foreign Market offer
8. Make or buy decisions

Profit Planning:

Profit planning is the planning of future operations so as to attain maximum profit. The contribution ratio shows the relative profitability of various sectors of the business whenever there is a change in selling price, variable costs or product mix. There are four important ways to improve the profit performance of a business.

- (i) By increasing volume
- (ii) By increasing selling price
- (iii) By reducing variable costs, and
- (iv) By reducing fixed costs.

Illu.1: The following are the budgeted data relating to AB Ltd., and CD Ltd., producing identical products.

	Rs.	Rs.	Rs.	Rs.
Sales		1,50,000		1,50,000
Less: Variable cost	1,20,000		1,00,000	
Fixed Cost	15,000	1,35,000	35,000	1,35,000
Net Profit		15,000		15,000

- a. Calculate break-even points, P/V ratio and margin of safety of each company:
- b. State which company is likely to earn greater profits in conditions of (i) heavy demand and (ii) low demand of the product.

Solution:

a.(i) B.E.P. Sales	=	$\frac{F \times S}{S - V}$	
AB Ltd.	=	$\frac{15,000 \times 1,50,000}{1,50,000 - 1,20,000}$	= Rs.75,000
CD Ltd.	=	$\frac{35,000 \times 1,50,000}{1,50,000 - 1,00,000}$	= Rs.1,05,000
ii. P.V. Ratio	=	$\frac{S - V}{S} \times 100$	
AB Ltd.	=	$\frac{1,50,000 - 1,20,000}{1,50,000} \times 100$	= 20%
CD Ltd.	=	$\frac{1,50,000 - 1,00,000}{1,50,000} \times 100$	= 33.33%
iii. Margin of Safety	=	$\frac{\text{Actual Sales} - \text{BEP Sales}}{\text{Actual Sales}}$	
AB Ltd.	=	$\frac{\text{Rs.1,50,000} - 75,000}{\text{Rs.1,50,000}}$	= Rs.75,000
CD Ltd.	=	$\frac{\text{Rs.1,50,000} - 1,05,000}{\text{Rs.1,50,000}}$	= Rs.45,000

- (b) In case of heavy demand, CD Ltd., will earn higher profit since the P/V Ratio is higher for the company. In case of low demand, AB Ltd., may earn higher profit since its break even point is low and margin of safety is higher.

Introduction of New Product:

Sometime, a product may be added to the existing lines of products with a view to utilise idle facilities to capture new market or for any other purpose. The profitability of this new product has to be found out initially. Usually, the new product will be manufactured if it is capable of contributing something towards fixed costs and profit after meeting its variable costs.

Illu.2: A firm manufacturing Product X has provided the following information.

	Rs.
Sales	75,000
Direct materials	30,000
Direct labour	10,000
Variable overhead	10,000
Fixed overhead	15,000

In order to increase its sales by Rs.25,000, the firm wants to introduce the Product Y, and estimates the costs in connection therewith as under:

	Rs.
Direct materials	10,000
Direct labour	8,000
Variable overhead	5,000
Fixed overhead	Nil

Advise whether the Product Y will be profitable or not.

Solution:

Marginal Cost Statement

	X Rs.	Y Rs.	Total Rs.
Sales	75,000	25,000	1,00,000
Less: Material cost:			
Direct materials	30,000	10,000	40,000
Direct labour	10,000	8,000	18,000
Variable overhead	10,000	5,000	15,000
	50,000	23,000	73,000
Contribution	25,000	2,000	27,000
Fixed Costs			15,000
Profit			12,000

Commentary: If product Y is introduced, the profitability of product X is not affected in any manner. On the other hand, product Y provides a contribution of Rs.2,000 towards fixed cost and profit. Therefore, Product Y should be introduced.

Planning the Level of Activity:

Marginal costing is of great help while planning the level of activity. Maximum contribution at a particular the level of activity will show the position of maximum profitability.

Illu.3: Excellent company is currently working at 50% capacity and produces 10,000 units.

At 60% capacity, raw material cost increases by 2% and selling price falls by 2%. At 80% working, raw material cost increase by 5% and selling price falls by 5%. At 50% capacity working, the product costs Rs.180 per unit and is sold at Rs.2.00 per unit.

The unit cost of Rs.180 is made up as follows.

Materials	Rs.100
Wages	Rs.30
Factory overheads	Rs.30(40% fixed)
Administrative overheads	Rs.20 (50% fixed)

You are required to work out the material cost, fixed cost, total cost and profit for three capacity levels.

Solution:

Statement Showing Material Cost, Fixed Cost, Total cost and Profit at three Capacity Levels

Output Capacity		50%	60%	70%
Sales	(A)	20,00,000	23,52,000	30,40,000
Marginal Cost:				
Material Cost		10,00,000	12,24,000	16,80,000
Wages		3,00,000	3,60,000	4,80,000
Factory Overheads		1,80,000	2,16,000	2,88,000
Administrative Overheads		1,00,000	1,20,000	1,60,000
Total Marginal Cost	(B)	15,80,000	19,20,000	26,08,000
Contribution (A-B)	(C)	4,20,000	4,32,000	4,32,000
Less: Fixed Expenses:				
Factory Overheads		1,20,000	1,20,000	1,20,000
Administrative Overheads		1,00,000	1,00,000	1,00,000
Total Fixed Expenses	(D)	2,20,000	2,20,000	2,20,000
Total Cost (B+D)	(E)	18,00,000	21,40,000	28,28,000
Profit/Loss (C-D)	(F)	2,00,000	2,12,000	2,12,000

Note: Statement showing material cost, fixed cost, total cost; and profit per unit at three capacity levels.

Output Capacity		50%	60%	70%
Selling Price	(A)	200	196	190
Marginal Cost:				
Materials		100	102	105
Wages		30	30	30
Factory Overheads		18	18	18
Administrative Overheads		10	10	10
Total Marginal Cost	(B)	158	160	163
Contribution (A-B)	(C)	42	36	27
Less: Fixed Expenses:				
Factory Overheads		12	10	7.50
Administrative Overheads		10	8.33	6.25
Total Fixed Expenses	(D)	22	18.33	13.75
Profit/Loss (C-D)	(E)	20	17.67	13.25

Illu.4: Two companies which have the following operating details decide to merge:

	Company I	Company II
Capacity utilisation	90%	60%
Sales (Rs.Lakhs)	540	300
Variables cost (Rs.Lakhs)	396	225
Fixed cost (Rs.Lakhs)	80	50

Assuming proposal is implemented, calculate:

- Break-even sales of the merged plant and the capacity utilisation at that stage.
- Profitability of the merged plant at 80% capacity utilisation.
- Sales turnover of the merged plant to earn a profit of Rs.75 lakhs.

Solution:

Statement of the merged company at 100% and 80% Capacity

Capacity	Company A		Company B		Merged Company	
	90%	100%	90%	100%	100%	80%
Sales	540	600	300	500	1,100	880
Variable Cost	396	440	225	375	815	652
Contribution (S-V)	144	160	75	125	285	228
Fixed Cost	80	80	50	50	130	130
Profit	64	80	25	75	155	98

a. BEP of merged Plant:

$$\text{P.V. Ratio} = \frac{C}{S} \times 100; \frac{285}{1,100} \times 100 = 25.91\%$$

$$\text{BEP Sales} = \frac{F}{\text{P.V. Ratio}} = \frac{130}{25.91\%} = \text{Rs.501.75 lakhs.}$$

$$\text{Capacity Utilisation} = \frac{100}{1,100} \times \text{Rs.501.75 lakhs} = 45.6\%$$

b. Profitability of the merged company at 80% capacity utilisation.

$$= \frac{\text{Profit}}{\text{Sales}} \times 100; = \frac{98}{880} \times 100 = 11.14\%$$

c. Sales required to earn a profit of Rs.75 lakhs.

Desired Profit = Rs.75 lakhs. Fixed Cost of merged Co. = Rs.130 lakhs

Desired Contribution = 75 + 130 = Rs.205 lakhs.

$$\text{Sales to earn Rs.205 lakhs contribution} = \frac{205}{25.91\%} = \text{Rs.791.23 lakhs.}$$

Key Factor:

A concern would produce and sell only those products which offer maximum profit. This is based on the assumption that it is possible to produce any quantity without any difficulty and sell like wise. However, in actual practice, this seems to be unrealistic as several constraints come in the way of manufacturing as well as selling. Such constraints that come in the way of management's efforts to produce and sell in unlimited quantities are called 'Key factors' or 'limiting factors'.

The limiting factors may be materials, labour, plant capacity, or demand. Management must ascertain the extent of influence of the key factor for ensuring maximisation of profit. Normally, when contribution and key factors are known, the relative profitability of different products or processes can be measured with the help of the following formula.

$$\text{Profitability} = \frac{\text{Contribution}}{\text{Key factor}}$$

Illu.5: From the following data, which product would you recommend to be manufactured in a factory, time being the key factor?

	Per unit of product X Rs.	Per unit of product Y Rs.
Direct material	24	14
Direct labour at Re.1 per hour	2	3
Variable overhead at Rs.2 per hour	4	6
Selling price	100	110
Standard time to produce	2 hours	3 hours

Solution:

		Product X Per unit		Product Y Per unit
	Rs.	Rs.	Rs.	Rs.
Selling price		100		110
Less: Marginal cost:				
Direct materials	24		14	
Direct labour	2		3	
Variable overhead	4	30	6	23
Contribution		70		87
Standard time to produce		2 hours		3 hours
Contribution per hour		$\frac{70}{2} =$ Rs.35		$\frac{87}{3} =$ Rs.29

Contribution per hour of product X is more than that of product Y by Rs.6. Therefore, product X is more profitable and is recommended for manufacturing.

Suitable Product Mix:

Normally, a business concern will select the product mix which gives maximum profit. Product mix is the ratio in which various products are produced and sold. The marginal costing technique helps management in taking appropriate decisions regarding the produce mix, i.e., in changing the ratio of product mix so as to maximise profits. The technique not only helps in dropping unprofitable products from the mix but also helps in dropping unprofitable departments, activities etc.,

Illu.6: Present the following information to show to the management: a) the marginal product cost and the contribution per unit; b) the total contribution and profits resulting from each of the following sales mixtures:

	Product	Per Unit
		Rs.
Direct materials	A	10
	B	9
Direct wages	A	3
	B	2
Fixed expenses Rs.800		

Variable expenses are allocated to products as 100% of direct wages.

		Rs.
Sales Price	A	20
	B	15

Sales mixtures:

- i) 1000 units of product A and 2000 units of B
- ii) 1500 units of product A and 1500 units of B
- iii) 2000 units of product A and 1000 units of B

Solution:

a) Marginal Cost Statement	A	B
	Rs.	Rs.
Direct materials	10	9
Direct wages	3	2
Variable overheads (100%)	3	2
Marginal Cost	16	13
Sales Price	20	15
Contribution	4	2

(b) Product mix choice	1000 A + 2000 B (i)	1500 A + 1500 B (ii)	2000 A + 1000 B (iii)
	Rs.	Rs.	Rs.
Total Sales	$(1000 \times 20 + 2000 \times 15)$ = 50,000	$(1500 \times 20 + 1500 \times 15)$ = 52,500	$(2000 \times 20 + 1000 \times 15)$ = 55,000
	$(1000 \times 16 + 2000 \times 13)$ = 42,000	$(1500 \times 16 + 1500 \times 13)$ = 43,500	$(2000 \times 16 + 1000 \times 13)$ = 45,000
Less: Marginal Cost			
Contribution	8,000	9,000	10,000
Less: Fixed Costs	800	800	800
Profit	7,200	8,200	9,200

Therefore, sales mixture (iii) will give the highest profit; and as such mixture (iii) can be adopted.

Pricing Decisions:

Marginal costing techniques helps a firm to decide about the prices of various products in a fairly easy manner. Let's examine the following cases.

(i) Fixation of Selling Price.

Illu.7: P/V ratio is 60% and the marginal cost of the product is Rs.50. What will be the selling price?

$$\text{Solution: P/V Ratio} = \frac{S-V}{S} = 1 - \frac{V}{S} = \frac{C}{S}$$

$$\frac{\text{Variable cost}}{\text{Sales}} = 40\% \text{ or } \frac{40}{100}$$

$$\text{Selling price} = \frac{50}{40\%} = \frac{50 \times 100}{40} = \text{Rs.125}$$

ii. Pricing during Recession:

Illu.8: Hindustan Engineering Company is working well below normal capacity due to recession. The directors of the company have been approached with an enquiry for special job. The costing department estimated the following in respect of the job.

Direct materials – Rs.10,000

Direct labour – 500 Hours @ Rs.2 per hour.

Overhead costs : Normal recovery rates.

Variable – Re. 0.50 per hour

Fixed – Rs.1.00 per hour.

The directors ask you to advise them on the minimum price to be charged. Assume that there are no production difficulties regarding the job.

Solution:

Calculation of Marginal Cost:

	Rs.
Direct materials	10,000
Direct labour	1,000
Variable overhead @ Re.0.50 per hour	250
Marginal cost	Rs.11,250

Commentary: Here the minimum price to be quoted is Rs.11,250, which is the marginal cost. By quoting so, the company is sacrificing the recovery of the profit and the fixed costs. The fixed costs will continue to be incurred even if the company does not accept the offer. So any price above Rs.11,250 is welcome.

(iii) Selling below marginal cost:

Selling below marginal cost, normally, is not feasible. However, under the following circumstances this can be practised.

1. when a new product is introduced.
2. when competitors have to be edged out of the market.
3. when company deals with perishable products.,
4. when the product is used as a loss leader.
5. when labour engaged cannot be retrenched.
6. when foreign market is to be explored to earn foreign exchange.
7. when there is cut-throat competition.
8. when the plant has to be kept in a running condition.

Foreign Market Offer:

The acceptance or rejection of an offer from a foreign market depends upon the incremental cost and incremental revenue.

Illu.9: Chola Pen Co. Ltd. produces and markets Micro tipped pens. The selling price per pen is Rs.5.50 made up as follows:

	Rs.
Direct materials	2.00
Direct labour	1.50
Variable overheads	0.50
Fixed overheads (Rs.90,000 ÷ 1,20,000)	0.75
Total cost	4.75
Profit	0.75
Selling price	5.50

The installed capacity is 1,50,000 pens per month. At present, it is producing and selling, on an average, 1,20,000 pens per month. The company has received an export order for 30,000 pens per month for two years but at a price of Rs.4.50. the management is hesitant to accept this order because it does not cover the total cost. There are no government subsidies to meet the deficit. It is unlikely that the domestic market will expand in the next two years. Advise them with necessary supporting data.

Solution:**Marginal Cost per unit:**

	Rs.
Direct material	2.00
Direct labour	1.50
Variable overheads	0.50
Total Variable Cost	4.00

Selling price of the export order Rs.4.50

If the foreign order is accepted for each unit the firm gets a profit. of Rs.0.50 (Rs.4.50 – 4.00). The total profit if the foreign order is accepted = Rs.15,000 (30,000 × 0.50). So it is better to accept foreign order.

18.2 MAKE OR BUY DECISIONS

A company might be having unused capacity which may be utilised for making component parts or similar items instead of buying them from the market. In arriving at such a 'make or buy' decision, the cost of manufacturing component parts should be compared with price quoted in the market. If the variable costs are lower than the purchase price, the component parts should be manufactured in the factory itself.

Fixed costs are excluded on the assumption that they have been already incurred, and the manufacturing of components involves only variable cost. However, if there is an increase in fixed costs and any limiting factor is operating they should also be taken into account. Consider the following illustration, throwing light on these aspects.

Illu.10: A manufacturing company finds that while the cost of making a component part is Rs.10, the same is available in the market at Rs.9 with an assurance of continuous supply. Give your suggestion whether to make or buy this part. Give also your views in case the supplier reduces price from Rs.9 to Rs.8.

The cost information is as follows:

	Particulars	Rs.
1.	Material	3.50
2.	Direct Labour	4.00
3.	Other Variable expenses	1.00
4.	Fixed expenses	1.50
		10.00

Solution:

Make or Buy Decision Statement		
Purchasing Price	(A)	9
Manufacturing Cost:		
Material		3.50
Direct Labour		4.00
Variable Expenses		1.00
Total Manufacturing Cost	(B)	8.50
Saving in Manufacturing (A-B)	(C)	0.50

Advise:

1. It is better to manufacture rather than buying from outside Market.
2. If the component is supplied at Rs.8 it is better to purchase it rather than manufacturing it. By purchasing, the profit will increase by Rs.0.50 (Rs.8.50 – 8.00) per unit.

Illu.11: A company engaged in the manufacturing radios incurs Rs.6.25 per piece for producing part A. But the same part is available for at Rs.5.75 only per piece in the market. Its supply will also be alright. Particulars of expenses are as follows:

	Rs.
Material per piece	2.75
Labour per piece	1.75
Other variable expenses per piece	0.50
Depreciation and fixed overheads per piece	1.25
	6.25

- (a) Do you manufacture that part or purchase it in the market?
- (b) In case the supplier offers the same at Rs.4.85 only per piece, what is your decision?

Solution:**Make or Buy Statement for Part A**

		Rs.
Buying Price	(A)	5.75
Manufacturing Cost:		
Material		2.75
Labour		1.75
Variable Expenses		0.50
Total Manufacturing Cost	(B)	5.00
Saving in Manufacture (A-B)	(C)	0.75

Advise:

- a. It is better to manufacture rather than buying this. It is because the buying price per unit is Rs.5.75 and manufacturing price is Rs.5.00. In manufacturing the product the firm has a saving of Rs.0.75 per product.
- b. If the computer supply price is Rs.4.85 then it is better to purchase it rather than manufacturing it due to a saving of Rs.0.15 per unit.

Illu.12: ABC company has just been formed. A company has a special process which will enable it to produce a unique product, the demand for which is uncertain. Their estimated costs are:

Material per unit Rs.2

Labour per unit Rs.6

Variable manufacturing expenses per unit Rs.3

Variable selling expenses per unit Re.1

Fixed manufacturing expenses Rs.24,000

Fixed Administrative and selling expenses Rs.72,000.

(a) If the selling price is Rs.20, how many units they have to sell to (i) break even (ii) make a profit of Rs.32,000 (iii) make a profit of 20 per cent of sale?

(b) If the demand for the product is 10,000 units, what price must they charge in order to (i) break-even (ii) make a profit of Rs.24,000 (iii) make a profit of 20 per cent of sales?

Solution:

Total variable Expenses = 2 + 3 + 6 + 1 = Rs.12

Total Fixed Expenses = Rs.24,000 + Rs.72,000 = Rs.96,000

Sales Price Rs.20

$$(a) (i) \text{ B.E.P.} = \frac{F}{S - V} = \frac{96,000}{20 - 12} = \frac{96,000}{8} = 12,000 \text{ units.}$$

$$(ii) \text{ Sales required to get a profit of Rs.32,000}$$

$$\frac{F + P}{S - V} = \frac{96,000 + 32,000}{20 - 12} = \frac{1,28,000}{8} = 16,000 \text{ units}$$

(iii) Required sales amount to get a profit of 20% on Sales. Sales units is assumed as S.

$$\text{Total Sales} = 20S; \text{ Estimated profit } 20\% S; 20S \times \frac{20}{100} = 4S$$

$$S = \frac{F + P}{S - V} = \frac{96,000 + 4S}{20 - 12} = 8S = 96,000 + 4S = 8S - 4S = 96,000$$

$$4S = 96,000S = \frac{96,000}{4} = 24,000 \text{ Units}$$

(b) (i) B.E.P. 10,000 units. Selling Price is assumed as S.

$$10,000 = \frac{96,000}{S-12} = 10,000S - 1,20,000 = 96,000;$$

$$10,000S = 96,000 + 1,20,000 ; 10,000S = 2,16,000;$$

$$S = \frac{2,16,000}{10,000} = 21.60; S = \text{Rs.}21.60.$$

(ii) Selling price to get a profit of Rs.24,000

$$10,000 = \frac{96,000 + 24,000}{S-12} = 10,000S - 1,20,000 = 1,20,000$$

$$10,000S = 1,20,000 + 1,20,000 = 10,000S = 2,40,000; S = \frac{2,40,000}{10,000} = S = \text{Rs.}24$$

(iii) Selling Price to get profit of 20% on Sales.

Total Sales amount for 10,000 Units = 10,000S

$$\text{On } 10,000S; 20\% \text{ Profit} = 10,000S \times \frac{20}{100} = 2,000S$$

$$10,000 = \frac{96,000 + 2,000S}{S-12} = 10,000S - 1,20,000 = 96,000 + 2,000S \text{ or}$$

$$8,000S = 2,16,000; S = \text{Rs.}27.$$

Illu.13: A firm is selling X product, whose variable cost per unit is Rs.10 and fixed cost is Rs.6,000. It has sold 1,000 articles during one month at Rs.20 per unit. Market research shows that there is a great demand for the product if the price can be reduced. If the price can be reduced to Rs.12.50 per unit, it is expected that 5,000 articles can be sold in the expanded market. The firm has to take a decision whether to produce and sell 1,000 units at the rate of Rs.20 or to produce and sell for the growing demand of 5,000 units at the rate of Rs.12.50. Give your advice to the management in taking the decision.

Solution:

		1,000 units	5,000 units
Selling Price	(A)	20	12.50
Less: Variable cost	(B)	10	10.00
Contribution per unit (A-B)	(C)	10	2.50
Total Contribution		10,000	12,500
Less: Fixed Cost		6,000	6,000
Profit		4,000	6,500

The management may be advised to reduce the selling price to Rs.12.50. It is also advised

to produce and sell, 5,000 units because it gives an additional profit of Rs.2,500 (Rs.6,500 - 4,000)

Illu.14: A Toy manufacturer earns an average net profit of Rs.3 per piece in a selling price of Rs.15 by producing and selling 60,000 pieces at 60% of the potential capacity. Composition of cost of sales is as follows:

	Rs.
Direct Materials	4.00
Direct Wages	1.00
Factory overhead	6.00
	(50% Fixed)
Sales overhead	1.00
	(25% varying)

During the current year, he intends to produce the same number of toys but anticipates that:

- (a) His fixed charges will go up by 10%.
- (b) Rates of Direct labour will increase by 20%
- (c) Rates of Direct Material will increase by 5%
- (d) Selling price cannot be increased.

Under these circumstances, he obtains an order for a further 20% of his capacity. What minimum price will you recommend for accepting the order to ensure the manufacturer an overall profit of Rs.1,80,500.

Solution:

Calculation of Current year Marginal Cost Statement:

		Rs.
Selling Price	(A)	15.00
Less: Marginal Cost:		
Direct Material $[4 + (4 \times \frac{5}{100})]$		4.20
Direct Wages $[1 + (1 \times \frac{20}{100})]$		1.20
Factory Overheads $(6 \times \frac{50}{100})$		3.00
Sales Overheads $(1 \times \frac{25}{100})$		0.25
Total Marginal Cost	(B)	8.65
Contribution per unit (A-B)	(C)	6.35

Total Contribution for 60,000 units = $60,000 \times 6.35 = \text{Rs.}3,81,000$

Calculation of Total Fixed Cost:

	Rs.
Fixed factory overheads per unit	3.00
Fixed sales overheads per unit	0.75
Total fixed cost per unit	3.75

Total fixed cost for 60,000 units = 60,000 units × 3.75 = Rs.2,25,000

Current year total fixed cost = $2,25,000 \times \frac{10}{100} + 2,25,000 = \text{Rs.}2,47,500$

Current year profit for 60,000 units = Total contribution – Fixed expenses
= 3,81,000 – 2,47,500 = Rs.1,33,500

Calculation of New Selling Price for 20% Capacity:

	Rs.
Given required Profit	1,80,500
Less: Profit earned for 60,000 units	1,33,500
Profit to be acquired for 20% capacity	47,000

When the firm is at 60% capacity the output is 60,000 units.

For additional 20% capacity the required units 20,000

New Selling Price is assumed at 'S' per unit.

For 20,000 units sales amount = 20,000 units × S = 20,000 S

Variable Cost per unit = 8 – 65

Total Variable Cost = 20,000 units × Rs.8-65 = Rs.1,73,000

$$S - V = F + P$$

20,000S – 1,73,000 = Nil + 47,000

20,000S – 1,73,000 + 47,000

20,000S = 2,20,000

$$S = \frac{2,20,000}{20,000} = \text{Rs.}11$$

The minimum recommended Selling Price to the company to accept the order is Rs.11.

Illu.15: Budgeted Results to X Ltd. include the following.

Sales	Amount (Rs. Lakhs)	Variable cost as % of sales value
A	5.0	60%
B	4.0	50%
C	8.0	65%
D	3.0	80%
E	6.0	75%
	26.0	65.17%

Fixed cost for the period are Rs.9.1 lakhs. You are required to (a) Produce a statement showing the amount of loss expected and (b) Recommend a change in sales volume of each product which will eliminate the expected loss that sales of only one product can be increased at a time.

Solution:

(a) **Statement of Profit/Loss Expected**

					(Amount in lakhs)	
Product	Sales	Variable Cost Ratio	Variable Cost	P.V. Ratio (or) C%	Contribution	
A	5	60	3.0	40	2.0	
B	4	50	2.0	50	2.0	
C	8	65	5.2	35	2.8	
D	3	80	2.4	20	0.6	
E	6	75	4.5	25	1.5	
			17.1		8.9	

Calculation of Expected loss:

Total Contribution	8.9
Less: Fixed Expenses	9.1
Expected loss	0.2

b. Assume only one product can be increased at a time. The amount of sales of each product to be increased as follows.

$$\text{Sales required} = \frac{\text{Under recovery of fixed costs}}{\text{P.V. Ratio}}$$

			Rs.
Product A	$\frac{20,000}{40\%}$	$20,000 \times \frac{100}{40}$	50,000
Product B	$\frac{20,000}{50\%}$	$20,000 \times \frac{100}{50}$	40,000
Product C	$\frac{20,000}{35\%}$	$20,000 \times \frac{100}{35}$	57,143
Product D	$\frac{20,000}{20\%}$	$20,000 \times \frac{100}{20}$	1,00,000
Product E	$\frac{20,000}{25\%}$	$20,000 \times \frac{100}{25}$	80,000

Note: For (a)

- i. Variable cost = Sales $\times \frac{\text{Variable Cost Ratio}}{100} = 5 \times \frac{60}{100} = \text{Rs.}3$
- ii. P.V. ratio = 100 – Variable Cost Ratio = 100 – 60 = 40
- iii. Contribution = Sales $\times \text{P.V. Ratio} = 5 \times \frac{40}{100} = 2$

Note: For (b)

Under recovery of fixed expenses = Expected loss = Rs.20,000

Illu.16: The following figures are extracted from the records of a company.

	Departments				Total
	A	B	C	D	
	Rs.	Rs.	Rs.	Rs.	Rs.
Sales	200	400	600	800	2,000
Costs:					
Direct Material	80	200	360	580	1,220
Direct Labour	40	150	180	140	510
Direct Expenses	4	6	8	10	28
Prime Cost	124	356	548	730	1,758
Overheads:					
Variable	20	30	24	20	94
Fixed	10	20	10	8	48
	30	50	34	28	142
Total cost	154	406	582	758	1,900
Profit/Loss	46	(-) 6	18	42	100

On the basis of the above information, the management is inclined to discontinue department B. What will be your advice to management?

Solution:

Comparative Statement of Profitability

	With Dept. B Total Rs.	Without Dept. B Total Rs.
Sales	2,000	1,600
Less: Variable cost	1,852	1,466
Contribution	148	134
Less: Fixed expenses	48	48
Profit	100	86

Advise: If Department B is discontinued we have a total profit of Rs.86. If it is continued the total profit is Rs.100. Hence it is better to continue will be Department B.

Note: It is assumed that the total fixed costs remains the same.

Illu.17: Hindustan Limited is engaged in manufacturing and selling industrial boxes. It is proposed to reduce the prices due to heavy competition. By decreasing the selling

price by 10% and 15%, how many units are to be sold to maintain the current level of profit?

	Rs.	Rs.
Current Sales (15,000 units)		1,50,000
Variable Cost (15,000 units)	90,000	
Fixed Costs	35,000	1,25,000
Net Profit		25,000

Solution:

**Calculation of Selling Price per unit, Variable Cost per unit
and Contribution Per unit**

	Total	Per unit
Current Sales (15,000 units)	1,50,000	Rs.10
Variable Cost (15,000 units)	90,000	Rs.6
Contribution per unit	60,000	Rs.4

Calculation of required sales in units to earn a profit of Rs.25,000 when selling price is reduced by 10% and 15%.

		10% Decrease		15% Decrease
New Selling Price per unit	$(10 \times \frac{9}{100})$	Rs.9	$(10 \times \frac{15}{100})$	8.50
Variable Cost Per unit		6		6
Contribution per unit		3		2.50
Required sales to earn profit of Rs.25,000				
$\frac{(F + \text{Desired Profit})}{\text{Contribution per unit}}$	$(\frac{35,000 + 25,000}{3})$	20,000	$(\frac{25,000 + 30,000}{2.50})$	24,000
		Units		Units

Illu.18: Assume you are the Management Consultant of XYZ Co. Ltd. The Managing Director of the company seeks your advice on the following problem:

The XYZ Ltd., produces a variety of products each having a number of component parts. Product "B" takes 5 hours to produce on machine No.99 working at full capacity. "B" has a selling price of Rs.50 and a marginal costs of Rs.30 per unit. "A-10" a component part could be made on the same machine in 2 hrs. for marginal cost of Rs.5 per unit. The supplier's price is Rs.12.50 per unit. Should the company make or buy "A-10"?

Assume that machine hour is the limiting factor.

Solution:

In this problem the cost of new product plus contribution lost during the time for manufacturing "A-10" should be compared with the supplier's price to arrive at a decision.

	Rs.
B- Selling Price	50.00
Less: Marginal Cost	<u>30.00</u>
Contribution	20.00

It takes 5 hours to produce one unit of "B"

Contribution earned per hour on Machine No.99 is Rs. $\frac{20}{5} = \text{Rs.}4$

"A-10" takes two hours to be manufactured on machine which is producing "B".

If "A-10" is produced, contribution lost will be = 2 hours \times Rs.4 = Rs.8

Real cost of "A-10" to the company = Marginal cost of "A-10" plus contribution lost for using the machine for "A-10".

$$\text{Rs.}5 + \text{Rs.}8 = \text{Rs.}13$$

This is more than the seller's price of Rs.12.50 and so it is advisable for the company to buy the product from outside.

18.3 SELF ASSESSMENT QUESTIONS

1. Explain the specific decision-making areas where the principles of marginal costing could be applied.
2. What is the signification of Contribution of marginal costing? State its uses in managerial decision making.
3. What is Marginal Costing? How is it useful to the manufacturing organization?
4. Bring out the significance of imputed costs and out pocket costs for managerial decision making.

18.4 EXERCISES

1. A company is considering expansion. Fixed costs amount to Rs.4,20,000 and are expected to increase by Rs.1,25,000 when plant expansion is completed. The present plant capacity is 80,000 units a year. Capacity will increase by 50 per cent with the expansion. Variable costs are currently Rs.6.80 per unit and are expected to go down by Rs.0.40 per unit with the expansion. The current selling price is Rs.16 per unit and is expected to remain same under either alternative. What are the break-even points under either alternative? Which alternative is better and why?

[Ans.: It is better to go for expansion because the profit will double]

2. Arjun Electronic decided to effect a 10% reduction in the price of its product because it is felt that such a step may lead to a greater volume of sales. It is anticipated that there are no prospects of a change in total fixed costs and variable cost per unit. The director wish to maintain net profits at the present level.

The following information has been obtained from its books.

Sales : 10,000 units Rs.2,00,000

Variable Costs: Rs.15 per unit

Fixed Costs Rs.40,000

How would management proceed to implement this decision?

[Ans.: Sales Rs.3,00,000]

3. Vimala Company produced and sold 10,000 units under the following Cost structure during the year 2006:

- (a) Prime Cost Rs.80 per unit.
- (b) Variable Overheads Rs.10 per unit.
- (c) Fixed expenses Rs.1,50,000.
- (d) Advertising Rs.25,000.
- (e) Selling Price Rs.150 per unit.

For the year 2007 the following changes are proposed to be made:

- (i) Advertising to be discontinued.
- (ii) Reduction in direct labour cost by Rs.3 per unit.
- (iii) Reduction in variable administration expenses by Rs.3 per unit.
- (iv) New selling price: Rs.120 per unit.
- (v) Increase in production and sales by 100%.

You are required to find out (1) The P/V ratio (2) The Break-even point and (3) The amount of profit for the year 2007, taking into account the proposed changes.

[Ans.: (1) 30% (2) Rs.5,00,000 (3) Rs.5,70,000]

4. The cost of manufacturing of 8,000 units of 'X' product is given below:
Direct materials Rs.8,000; labour Rs.64,000; Variable overheads Rs.32,000; Fixed overheads Rs.40,000; Fixed overhead is included Rs.24,000, that continues regardless of the decision. The same product is available in the market for Rs.16 per unit. Should the company make or buy the product?

[Ans.: Manufacturing is more profitable than purchase because due to manufacture the profit is more by Rs.32,000]

- 5.. The management of Pioneer Products Corporation Limited requests assistance from you in arriving at a decision whether to continue manufacturing a certain part of an assembly or to buy it from an outside supplier who had been quoting a price of Rs.8 per unit.

The Corporation's annual requirements is 5,000 units and the costs accumulated for their special manufacture are:

	Rs.
Direct Materials	17,500
Direct labour	28,000
Indirect Labour	6,000
Power (Electricity)	300
Others	640

If the parts are purchased from outside, the present machinery used to make the parts could be sold and its value would be realised. This step would reduce the total machinery depreciation by Rs.2,000 and property taxes and insurance by Rs.1,000.

If the parts are purchased from the outside supplier, the following additional costs would be incurred:

Freight Rs.0.50 per unit and material received charges @ Rs.1 per unit.

From the above information you are required to prepare a statement comparing the costs of manufacturing the parts, with the costs of purchasing them from the outside supplier and guide management for a make or buy decision.

[Ans.: It is better to purchase 5,000 units instead of manufacturing it due to the saving of Rs.7,440]

6. A company produces variety of products and components. Following components with relevant manufacturing costs are under consideration for purchase outside:

Component	Direct Material Rs.	Direct Labour Rs.	Variable overheads Rs.	Fixed Costs Rs.	Bought out price Rs.
XY	600	200	100	300	800
PR	200	800	200	1,000	2,300
MN	100	300	200	500	1,200

Select the components which should be bought from outside, indicating the reasons for choice.

[Ans.: (a) It is better to purchase XY Product (b) It is better to manufacture PR product (c) It is better to manufacture MN Product.]

7. A manufacturer has planned his level of operation at 50% of his plant capacity of 30,000 units. His expenses are estimated as follows, if 50% of the plant capacity is utilised.

	Rs.
(i) Director materials	8,280
(ii) Direct wages	11,160
(iii) Variable and other manufacturing expenses	3,960
(iv) Total fixed expenses irrespective of capacity utilisation	6,000

The expected selling price in the domestic market is Rs.2 per unit. Recently the manufacturer has received a trade enquiry from an overseas organisation interested in purchasing 6,000 units at a price of Rs.1.45 per unit.

As a professional management accountant, what would be your suggestion regarding acceptance or rejection of the offer? Support your suggestion with suitable quantitative information.

[Ans.: 15,000 units: Profit Rs.600; 6,000 units : Loss Rs.660; Total 21,000 units : Loss Rs.60; It is not profitable to accept the foreign offer.]

8. A company currently operating at 80% capacity has the following particulars.

	Rs.
Sales	32,00,000
Direct materials	10,00,000
Direct labour	4,00,000
Variable overheads	2,00,000
Fixed overheads	13,00,000

An export order has received that would utilise half the capacity of the factory. The order cannot be split, i.e., it has either to be taken in full and executed at 10% below the normal domestic prices are rejected totally.

The alternative available to the management are:

1. Reject the order and continue with the domestic sales only; (at as present); or
2. Accept the order, split capacity between overseas and domestic sales and turn away excess domestic demand; or
3. Increase capacity to accept the export order and maintain the present domestic sales by:

- (a) buying an equipment that will increase capacity by 10%. This will result in an increase of Rs.1,00,000 in fixed costs; and
- (b) Work overtime to meet balance of required capacity. In that case, labour will be paid at one and half times the normal wage rate.

Prepare a comparative statement of profitability and suggest the best alternative.

[Ans.: Profit I Rs.3,00,000; II Rs.5,00,000; III Rs.9,50,000. Alternative III is the best because it results in the highest amount of profit.]

9. Prestige company private limited, manufacturing pressure cookers has drawn up the following budget for the year 2006-07.

	Rs.
Raw materials	20,00,000
Labour, stores, power and other variable costs	6,00,000
Manufacturing overheads	7,00,000
Variable distribution costs	4,00,000
General overheads including selling	<u>3,00,000</u>
Total	40,00,000
Income from sales	<u>50,00,000</u>
Budgeted profits	10,00,000

The General Manager suggests to reduce selling price by 5% and expects to achieve an additional volume of 50%. There is sufficient manufacturing capacity. More intensive manufacturing programme will involve additional costs of Rs.50,000 for production planning. It will also be necessary to open an additional sales office at the cost of Rs.1,00,000 per annum.

The Sales Manager, on the other hand, suggests to increase selling price by 10%, which it is estimated will reduce sales volume by 10%. At the same time saving in manufacturing overheads and general overheads at Rs.50,000 and Rs.1,00,000 per annum respectively is expected on this reduced volume.
Which of these two proposals would you accept and why?

[Ans.: Proposal I : Profit Rs.14,75,000; Proposal II Rs.14,00,000; Proposal I is acceptable as it gives higher profit.]

10. The following production/sales mix are capable of achievement in a factory.

- i. 2,000 units of Product A and 2,000 units of product C.
- ii. 4,000 units of product B.
- iii. 1,000 units of product A, 2,000 units of product B and 1,600 units of product C.

Cost per unit is as follows.

	A Rs.	B Rs.	C Rs.
Direct material	20	16	40
Direct wages	8	10	20

Fixed cost is Rs.20,000 and variable overheads per unit of A, B and C are Rs.2, Rs.4 and Rs.4 and Rs.8 respectively. Selling prices of A, B and C are Rs.36, Rs.40 and Rs.100 per unit respectively. Determine the marginal contribution per unit of A, B and C and the profits resulting from product mixed (i), (ii) and (iii).

[Ans.: Marginal Contribution per unit; A Rs.6; B Rs.10; C Rs.32; Sales mix (iii) is profitable as it yields the highest amount of contribution and profit.]

18.5 REFERENCE BOOKS :

1. R.S.N. Pillai, & Bagavathi, Management Accounting, S. Chand & Company Ltd., New Delhi
2. M.A. Sahaf, Management Accounting – Principles & Practice, Vikas Publishing House Pvt. Ltd., New Delhi.
3. Shashi K. Gupta & R.K. Sharma, Management Accounting, Kalyani Publishers,
4. Charles thorn Gaxy Sundem, Introduction to Management Accounting –
5. N. Vinayakam, Tools & Techniques of Management Accounting
6. SP Gupta, Management Accounting
7. Manmohan & Goyal, Management Accounting
8. V. Krishna Kumar, Management Accounting
9. Dr.Kulsreshtha and Gupta, Practical Problems in Management Accounting
10. SP. Jain & KL Narang, Advanced Cost and Management Accounting