

HOSPITAL ACCOUNTING AND HOSPITAL LAWS

Paper - V

P.G. Diploma in Hospital and Health Care Management

PART - I

Lesson writers :

Dr. V. Narasimha Rao, M.Com., MBA, M.Phil., PGDPM, Ph.D.
Reader & Head,
P.G. Dept. of Business Administration
Akkineni Nageswara Rao College
Gudivada

Sri P. Sriram, M.Com., M.Phil., B.L., PGDFM, MBA
Lecturer, Dept. of Business Administration
Siddhartha Arts & Science College
Vijayawada

Academic Co-ordinator :

Prof. G.N. Brahmanandam, M.Com., Ph.D..
Dean, Faculty of Commerce and Management Studies
Acharya Nagarjuna University

Director

Dr. Sumanth Kumar Kunda

M.F.Sc., Ph.D.

Associate Professor

Department of Zoology and Aquaculture

**CENTRE FOR DISTANCE EDUCATION
ACHARYA NAGARJUNA UNIVERSITY
NAGARJUNA NAGAR – 522510**

Ph.No. : 0863-2293299, 2293356, 08645-211023

www.anucde.ac.in, www.anucde.info

email : info@anucde.ac.in

PGTHHM - HOSPITAL ACCOUNTING AND MANAGEMENT LAWS PART - I

Edition : 2020

No. of Copies : 73

(C) Acharya Nagarjuna University

This book is exclusively prepared for the use of students of PGDIM.,
Centre for Distance Education, Acharya Nagarjuna University and this book is meant for limited
circulation only.

Published by

Dr. Sumanth Kumar Kunda

M.F.Sc., Ph.D.

Director

Centre for Distance Education

Acharya Nagarjuna University

Printed at :

M/s.Romith Technologies

Guntur

FOREWORD

Acharya Nagarjuna University, since its establishment in 1976, has been moving ahead in the path of academic excellence, offering a variety of courses and research contributions. The University achieved recognition as one of the eminent universities in the country by gaining A grade from the NAAC 2016. At present Acharya Nagarjuna University is offering educational opportunities at the UG, PG levels to students of 447 affiliated colleges spread over the two districts of Guntur and Prakasam.

The University had started the Centre for Distance Education in 2003-04 with the aim to bring Higher education within the reach of all. The Centre has been extending services to those who cannot join in colleges, cannot afford the exorbitant fees as regular students, and to housewives desirous of pursuing higher studies to study B.A., B.Com, and B.Sc., Courses at the Degree level and M.A., M.Com., M.Sc, M.B.A. and LL.M. courses at the PG level.

For better understanding by students, self-instruction materials have been prepared by eminent and experienced teachers. The lessons have been prepared with care and expertise. However constructive ideas and scholarly suggestions are welcome from students and teachers. Such ideas will be incorporated for the greater efficacy of the distance mode of education. For clarification of doubts and feedback, Weekly classes and contact classes are arranged at UG and PG levels respectively.

I wish the students who pursue higher education through Centre for Distance Education will not only be personally benefited by improving their qualifications but also strive for nation's growth by being a member in Knowledge society. I hope that in the years to come, the Centre for Distance Education will grow in strength by introducing new courses, catering to the needs of people. I congratulate all the Directors, Academic coordinators, Editors, Lesson - Writers, and Academic Counsellors and Non-teaching staff of the Centre who have been extending their services in these endeavours.

Prof. Raja Sekhar P.
Vice - Chancellor (FAC)
Acharya Nagarjuna University

Paper - V : Hospital Accounting and Hospital Laws

Syllabus

UNIT - I

Bookkeeping - Scope of Accounting - Accounting Concepts and Principles - Double Entry Bookkeeping - Journal - Ledger - Subsidiary Books - Cash Book - Trial Balance - Trading Account - Profit & Loss Account - Balance Sheet - Bank Reconciliation Statement.

UNIT - II

Materials Management - Concepts - Organizing the Materials Management - Materials Handling - Problems - Storekeeping and Warehousing Management - Material Records - Lab Control.

UNIT - III

Inventory Management - Raw Materials - Finished Goods - Norms of Inventory - Ordering Costs - Inventory Carrying Costs - Economic Order Quantity (EOQ) - Economic Purchase Quantity (EPQ) - ABC Analysis - Control Ratios - Determination Stock Levels.

UNIT - IV -

Hospital Laws - Law of Contract Applicable to Doctors - Liability Risks - Medico Legal Issues - Consumer Protection Act - Company Law - Taxation - Mercantile Law.

REFERENCE BOOKS :

- 01) Prasad, G & Chandrasekhara Rao, V, "Accounting for Managers" Jai Bharat Publishers Guntur.
- 02) Ramachandran, N & Ramkumar Kakani, "Financial Accounting for Management" Tata McGraw Hill Publishing Company Limited, New Delhi.
- 03) Siddiqui, S.A. and Siddiqui, A.S., "Managerial Economics and Financial Analysis", New Age International (P) Ltd., Publishers, New Delhi.
- 04) Mishra, R.K. and Naveen, B, "Readings in Management Economics Accounting & Financial Analysis" B.S.Publications, Hyderabad.
- 05) Gopalakrishnan, P and Sundaresan, M, "Materials Management" - An Integral Approach", Prentice-Hall of India Private Limited, New Delhi.
- 06) Bulchandani, K.R. "Business Law for Management", Himalaya Publishing House, Mumbai.
- 07) Avathar Singh, Law of Contract and Specific Relief, Eastern Book Company, Lucknow
- 08) Gulshan SS, Kapoor GK, Business Law including Company Law, New age International Publishers, New Delhi.

CONTENTS

Unit - I

1. Book Keeping : Scope of Accounting - Accounting Concepts and Principles 1.1 - 1.10
2. Double Entry Book - Keeping - Journal - Ledger 2.1 - 2.9
3. Subsidiary Books - Cash Book - Trial Balance - Trading Account - Profit and Loss Account 3.1 - 3.10
4. Balance Sheet - Bank Reconciliation Statement 4.1 - 4.7

Unit - II

5. Materials Management : An Introduction Concepts - organizing the materials Management 5.1 - 5.7
6. Purchasing Function - Purchasing Cycle - Materials Handling 6.1 - 6.10
7. Materials Handling - Store Keeping and Warehousing Management 7.1 - 7.8
8. Materials Records Management 8.1 - 8.11

UNIT - I

Lesson - 1

BOOK KEEPING : SCOPE OF ACCOUNTING - ACCOUNTING CONCEPTS AND PRINCIPLES

Learning Objectives:

After studying this lesson, you should be able to understand the

- ☆ Nature, scope and functions of accounting;
- ☆ Advantages, Limitations and Users of accounting information
- ☆ Accounting Principles, Concepts and standards.

Content Structure :

- 1.1 Introduction
- 1.2 Book-Keeping
- 1.3 Scope of Accounting
- 1.4 Role and Activities of an Accountant
- 1.5 Nature of Accounting Function
- 1.6 Users of Accounting Information
- 1.7 Advantages of Accounting
- 1.8 Limitations of Accounting
- 1.9 Classification of Accounting
- 1.10 Accounting Concepts
- 1.11 Summary
- 1.12 Technical Terms
- 1.13 Model Questions
- 1.14 Reference Books

1.1 Introduction : The main aim of a business is to earn profit. Every businessman will be interested at the end of the year to know the profit earned or less incurred and the financial position on a particular date. Moreover in big business enterprises information is required for planning, control, evaluation of performance and decision-making. This information can be provided only when business transactions are recorded, classified and summarised properly. In order to achieve the above purpose it would be necessary to record business transactions according to a well devised system. The number of transactions in an organization depends upon the size of the organisation. In small organisations, the transactions generally will be in thousands and in big organisations they may be in lakhs. As such it is humanly impossible to remember all these transactions. Further, it may not be possible to find out the final result of the business without proper recording and analysing these transactions. Accounting came into practice as an aid to human memory by maintaining a systematic record of business transactions.

Accounting is often called the language of business. As the basic function of any language is to

serve as a means of communication, the purpose of accounting is to communicate or report the results of business operations and its various aspects.

Meaning and Definition of Accounting : The main purpose of accounting is to ascertain profit or loss during a specified period, to show financial condition of the business on a particular date and to have control over the firm's property. Accounting is the art and science of recording, classifying and summarising of financial transactions and interpreting the results thereof.

Accounting has been variously defined, some of the commonly accepted definitions are as follows.

American Institute of Certified Public Accountants (AICPA) : "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 atleast of financial character and interpreting the results thereof".

R.N. Anthony : "Accounting system is a means of collecting, summarising, analysing and reporting in monetary terms, the information about the business".

Development of Accounting : Accounting is as old as civilisation itself. The accounting system 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 and the businessmen used to remember the transactions by memorising them. 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. Over a period of time new dimensions have been added to the discipline of accounting.

The accounting systems are believed to have existed as early as 4500 B.C. in the ancient civilisations of Babylonia and Assyria. The Double Entry System of today was propounded first in Genoa (Italy) in 1340, but it developed in a proper form only at the end of 15th century. Though the system of accounting was developed first in Italy, it was in England and Ireland that it grew to its full stature.

1.2 Book-Keeping : The terms book keeping, accounting and accountancy are often used interchangeably, but they are different from each other. Book-keeping is an activity concerned with the recording of financial data relating to business operations in a significant and orderly manner. Book-keeping is the record-making phase of accounting. Accounting is based on a careful and an efficient book-keeping system. At the end of the accounting period, the owner wants to know how much profit has been earned or loss has been incurred during the course of the period. For this, a lot of information is needed which can be gathered from the record of the transactions, which have been properly kept. So book-keeping is inevitable for any business.

The following are the main objectives of accounting:

1. To maintain permanent record of each transaction of the business and to reveal its financial effect to the business.
2. To ascertain the combined effect of all the transactions made during an accounting period upon the financial position of the business as a whole.

Objects of Book-keeping at a glance

Primary objects	Sub-objects	Ancillary objects
To know Profit / Loss	To know creditors	To review the progress
To know financial position	To know debtors	To prevent errors and frauds
To have a systematic record	To know capital invested	To keep a check on property
	To know cash and stock	To provide information for decision-making

1.3 Scope of Accounting : Accounting involves a series of activities linked with each other. Beginning with the collecting, recording, analysing and evaluating the data, and finally communicating information to its users.

The scope of accounting includes the following main aspects.

Data Creation and Collection : After the data has been collected, it is recorded in accordance with generally accepted accounting theory. The data collected is 'historic' in the sense that it refers to events which have already taken place. The recording and processing may be manual, mechanical or electronic. Computers are widely used in modern business for doing this job.

Data Evaluation : It is the most important activity of accounting. It included controlling the activities of business, evaluating the performance of business and analysing accounting information for decision-making purposes.

Analysis and Interpretation : This work of accounting may be for internal or external uses and may range from snap answers to elaborate reports produced by extensive research.

Data Reporting : It consists of two parts - external and internal. External reporting refers to the Communication of financial information viz., earnings, financial and funds position about the business to outside parties, e.g., shareholders, government agencies and regulatory bodies of the government. Internal reporting is concerned with the communication of results of financial analysis and evaluation to management for decision-making purposes.

1.4 Role and Activities of an Accountant : The role and activities of an accountant involves the following aspects of accounting work.

- 1. Designing Work :** It includes the designing of the accounting system, basis for identification and classification of financial transactions and events, methods etc.,
- 2. Recording Work :** The financial transactions are identified, classified and recorded in appropriate books of accounts according to principles. This is known as 'book-keeping'.
- 3. Summarising Work :** The recorded transactions are summarised into significant form according to generally accepted accounting principles. This phase is called 'preparation of final accounts'.

4. **Analysis and Interpretation Work** : The financial statements are analysed by using funds flow and cashflow analysis, ratio analysis and break-even analysis.
5. **Reporting Work** : The summarised statements along with analysis and interpretation are communicated to the interested parties.
6. **Taxation Work** : The accountant has to prepare various statements and returns pertaining to income-tax, sales tax etc., and file the returns with the authorities concerned.

1.5 Nature of Accounting function / Functions of Accounting :

The main functions of accounting can be stated as follows :

- i) It keeps a systematic and permanent record of all financial transactions of the business.
- ii) It keeps a record of incomes and expenses 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.
- 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 control on expenses in order to maintain the same.
- vi) It communicates the results of the business to owners, investors, creditors, employees, management, government, etc.,
- vii) It provides information for meeting various legal requirements as income tax returns, sales tax returns, etc.,

Thus accounting is useful in all types of organizations. Business executives, public accountants, hospital administrators, educational institutions administrators and politicians are better equipped to perform their duties when they have an understanding of accounting data.

1.6 Users of Accounting Information : Different categories of users need different kinds of accounting information for making decisions. The users of accounting can be divided into two groups - (1) Internal users and (2) External users.

1) Internal Users : Managers at the top, middle and lower levels require accounting information of different categories for making decisions.

Accounting reports are important to managers for evaluating the results of their decisions. Accounting reports for managers are prepared much more frequently than external reports. Accounting information also helps the managers in appraising the performance of sub-ordinates.

2) External Users :

- 1) **Investors** : Those who are interested in buying the shares of a company are naturally interested in the financial statements to know how safe is the investment.
- 2) **Creditors** : Lenders are interested to know whether their loan, principal and interest, will be paid when due. Suppliers and other creditors are also interested to know the ability of the firm to pay their dues in time.
- 3) **Workers** : In an organization the workers are entitled to payment of bonus which depend on the size of the profit earned. The knowledge of accountant also helps them in conducting negotiations for wages.

- 4) **Customers** : Concerned with the stability and profitability of the enterprise, customers are interested in knowing the financial strength of the company to take further decisions relating to purchase of goods.
- 5) **Government** : All over the world, governments are using financial statements which help in compiling national accounts. The financial statements are useful for tax authorities to calculate taxes.
- 6) **Researchers** : The financial statements is of great interest to scholars undertaking research in accounting theory as well as business affairs and practices.

1.7 Advantages of Accounting : The history of accounting indicates the evolutionary pattern which reflects socio-economic conditions and the enlarged purposes to which accounting is applied. Accounting as a social science can be viewed as an information system since it has all the features of the system. There are several groups of people who have a stake in a business organization - managers, shareholders, creditors, employees, customers, etc., Additionally, community at large has economic and social interest in the activities of such organizations. The following are the advantages of accounting.

- 1) **Provides for systematic records** : Since all the financial transactions are recorded in the books, any information required is readily available from these records.
- 2) **Facilitates the preparation of financial statements** : The two basic financial statements, profit & loss account and balance sheet can be easily prepared with the help of the information in the records. This enables to know the net result of business operations and the financial position of the business.
- 3) **Provides control over assets** : Book-keeping provides information regarding cash, stock, accounts receivables and the amounts invested in various assets. Then it is possible to have control over them.
- 4) **Provides required information** : Interested parties such as owners, lenders, creditors etc., get necessary information.
- 5) **Comparative study** : One can compare the present performance of the organization with that of its past. This enables the managers to draw useful conclusions and make proper decisions.
- 6) **Reduce the scope for fraud or theft** : As the accounting work is divided among many persons, there will be check and counter check. The books of accounts are periodically balanced, so it is difficult for fraud or theft.
- 7) **Calculation of tax** : Properly maintained book keeping records will help in the settlement of all tax matters with the tax authorities.
- 8) **Ascertaining the value of business** : The accounting records will help in ascertaining the correct value of the business. This helps in the event of sale or purchase of business.
- 9) **Helpful to management** : Accounting is useful to the management in various ways, i.e., to assess the achievement of performance, identify the weakness of the business.

1.8 Limitations of Accounting

The following are the main limitations of accounting.

- 1) **Records only monetary transactions** : Only the transactions of a financial character will be recorded under book-keeping. It does not record the quality of human resources, efficiency of

management as they cannot be measured into monetary terms.

- 2) **Does not reflect current values** : The data available under accounting is historical in nature. So they do not reflect current values. For instance, we record the value of fixed assets at acquisition price but the current values may be much more than what is recorded in the balance sheet.
- 3) **Personal judgement of the accountant** : Accounting statements are influenced by the personal judgement of the accountant. He may select any method of depreciation, valuation of stock. These estimates are based on personal judgement and hence sometimes may not be correct.
- 4) **Inadequate information of costs and profits** : Accounting provides information about the overall profitability of the business. No information is given about the cost and profitability of different activities or products.
- 5) **No real test of managerial performance** : Profit earned during an accounting period is the test of managerial performance. Profit may be shown in excess by manipulation of accounts through which the real idea of managerial performance may not be available.

1.9 Classification of Accounting : The history of accounting indicates the evolutionary pattern which reflects changing socio-economic conditions and the enlarged purposes to which accounting is applied. The accounting can be classified into the following main categories.

- 1) **Financial Accounting** : The main purpose of this type of accounting is to record business transactions in the books of accounts in such a way that operating result and financial position for a particular period can be known. The importance attached to financial accounting statements can be traced to the need of the society to mobilise the savings and channel them into profitable investments.
- 2) **Cost Accounting** : Cost accounting relates to the collection, classification, ascertainment of cost and cost control of the various elements of cost. It enables the ascertainment of the total cost of any particular unit of production or service with reasonable degree of accuracy. Costing techniques were developed as guides to management actions.
- 3) **Management Accounting** : It relates to the use of account data collected with the help of financial accounting and cost accounting for planning, control and decision-making by the management. It is through the techniques of management accounting that the managers are supplied with information which they need for achieving objectives for which they are accountable.

1.10 Accounting Concepts : Accounting statements are prepared in conformity with the Generally Accepted Accounting Principles (GAAP). The American Institute of Certified Public Accountants (AICPA) states as follows : Financial statements are the product of a process in which a large volume of data about aspects of the economic activities of an enterprise are accumulated, analysed and reported. The process should be carried out with generally accepted accounting principles. The word 'principle' is used to mean a 'general law' or 'guide to action'.

Accounting principles are man-made. They are accepted because they are believed to be useful. The general acceptance of an accounting principle usually depends on how well it meets the three criteria of 'relevance', 'objectivity' and 'feasibility'.

Classification of Accounting Principles : Accounting principles can be classified into two categories : 1) Accounting Concepts and 2) Accounting conventions

Accounting Principles**Accounting Concepts**

1. Business Entity Concept
2. Money Measurement Concept
3. Continuity Concept
4. Accrual Concept
5. Accounting period Concept
6. Dual aspect Concept
7. Matching Concept
8. Historical Record Concept
9. Objective evidence Concept

Accounting Conventions

1. Disclosure
2. Materiality
3. Consistency
4. Conservatism

1) **Business Entity Concept** : In accounting a distinction is made between business and the owner. All the records are kept from the view point of the business rather than from that of the owner. As such, transactions of the business and those of the owners should be accounted for and reported separately. The owner's personal and household expenses (e.g., expenditure on food, clothing, housing, entertainment, debts, mortgages etc.,) will not appear in the books of account. Accounts are to be prepared from this view point and even the capital is a liability which the business owes to its proprietor.

2) **Money Measurement Concept** : Money has been adopted by the accounting system as its basic unit of measurement. We do not record the transactions in terms of kilograms, quintals, meters, litres etc. Since money is the medium of exchange and the standard of economic value, those transactions alone that are capable of being measured in terms of money are only to be recorded in the books of accounts. Several facts though vital to the business, cannot be recorded in the books of account because they cannot be expressed in money terms. For example, the state of health of the Managing Director of a Company who has been the key contributor to the success of business is not recorded in the books.

3) **Continuity Concept** : Accounting assumes that the business will continue to operate for a long time in the future. The enterprise is viewed as a 'going concern'. This assumption is of considerable importance for it means that the business is viewed as a mechanism for adding value to resources it uses. With this assumption fixed assets are recorded in the books at their original cost. Prepaid expenses are not treated as the expenses of the year in which they are incurred.

4) **Accrual Concept** : The accrual concept makes a distinction between the receipt of cash and the right to receive it, and the payment of cash and the legal obligation to pay it. The accrual concept is an accounting system which recognises revenues and expenses as they are earned or incurred without regard to the date of receipt or payment. This concept requires proper apportionment of expenses to time periods by the inclusion of prepayments and accruals in a Balance Sheet.

5) **Accounting Period Concept** : This concept requires that a profit and loss account and a Balance Sheet should be prepared at regular intervals to ascertain information about the business for all sorts of purposes. These time periods in actual practice vary. Some firms adopt calendar year,

some others financial year. The custom of using twelve-month period is applied only for external reporting. The firms usually adopt a shorter span of interval, say one month or three months, for internal reporting purposes.

6) Dual Aspect Concept : As per this concept each transaction has two fold effect - the receiving of the benefit and giving of the benefit. The receiving aspect is termed as debit, where as the giving aspect as 'credit'. Therefore, for every debit, there will be corresponding credit. There is another implication of the dual aspect concept. A contribution to the business increases its resources but also its obligations correspondingly. So the total assets become equal to total liabilities. This is called balance sheet equation or accounting equation.

$$\text{Liabilities (Equities) = Assets}$$

(or)

$$\text{Capital + Liabilities = Assets}$$

7) Matching Concept : According to this principle, the expenses incurred in an accounting period should be matched with the revenues recognised in that period. In determining net income from business operations, all costs which are applicable to revenue of the period should be charged against that revenue.

8) Historical Record Concept : Historical cost refers to the cost at the time of acquisition. It is a fundamental concept of accounting which is based on a historical record of the transactions. When the real worth of an asset changes with the passage of time, for various reasons, accounting records are changed to reflect changes in market value by revaluation of assets.

9) Objective Evidence Concept : According to this concept all accounting transactions should be evidenced and supported by objective documents. The documents included invoices, receipts, cash memos, etc., Accounting records are unbiased. This is needed because most of the users of financial statements are external to the business enterprise.

Accounting Conventions : Conventions are the customs or traditions guiding the preparation of accounting statements.

- 1) **Full Disclosure Concept :** This concept deals with the convention that all information which is of material importance should be disclosed in accounting statements. The Companies Act, 1956 makes it compulsory to provide all information in the prescribed form. The accounting reports should disclose full and fair information to the proprietors, creditors, investors and others.
- 2) **Materiality Concept :** In the accounting sense, an item is only recorded when it is considered to be useful or important to an user of a financial statement. Thus accountants do not record those transactions which are insignificant. Where to draw the line between material and immaterial events is a matter of judgment and common sense. There are no hard and fast rules in this respect.
- 3) **Consistency Concept :** The consistency concept requires that once a company has decided on one method and has used it for some time, it should continue to follow the same method or procedure for all the subsequent events of the same character unless it has a sound reason to do otherwise. It means that there should be consistency in the methods or principles followed.

- 4) **Conservatism Concept** : This convention warns that not to take unrealised income into account. This means an accountant should follow a cautious approach. He should record lowest possible value for assets and revenues, and the highest possible value for liabilities and expenses. This is the policy of "playing safe".

1.11 Summary : Accounting as a field of study in its developmental process has evolved a theoretical framework consisting of principles or concepts over a period of time. Accounting is often called the language of business. The purpose of accounting is to communicate or report the results of business operations and its various aspects. Accounting is an important service activity in business and is concerned with the collecting, recording evaluating and communicating the results of past events.

With the emergence of management accounting, the focus of accounting has been shifting from mere recording of transactions to helping the management in decision-making. Accounting can be perceived as an information system which has its inputs, processing methods and outputs. The organisational setting for accounting and finance function may vary in different organisations, depending upon their peculiarities, nature and size. Accounting helps in the process of guiding actions of the organisation into desired directions.

1.12 Technical terms :

Accounting Frame Work : It includes Generally Accepted Accounting Principles (GAAP) on the basis of which accounting data is processed, analysed and reported.

Entity : Concept separates the business from owner(s) from the stand point of accounting.

Historical cost : It refers to the cost at the time of acquisition of an asset.

Going Concern : This concept refers to the expectation that the organisation will have indefinite life.

Materiality : According this concept events of relatively small importance need not be given a detailed or theoretically correct treatment.

Money measurement : As per this concept intangibles like employee loyalty and customer satisfaction are ignored as they cannot be expressed in money terms.

Accrual Concept : It makes a distinction between the receipt of cash and the right to receive it, and the payment of cash and the legal obligation to pay it.

1.13 Model questions :

1. Examine the role of accounting concepts in the preparation of financial statements.
2. Define Accounting. Explain the uses of accounting.
3. What is the scope and importance of accounting ?
4. What conventions are followed in preparation of financial statements ?
5. Explain classification of accounting.

6. State how accounting is useful to different types of users ?
7. Discuss Historical Cost Concept, Entity Concept, Money Measurement Concept as applied in Financial Accounting.

1.14 Reference Books :

1. R.L. Gupta - Introduction to Accountancy
2. G. Prasad, Chandrasekhara Rao - Accounting for Managers
3. S.P. Jain, K.L. Narang - Financial Accounting
4. IGNOU - MS-4 - Accounting for Managers

Lesson - 2

DOUBLE ENTRY BOOK-KEEPING - JOURNAL - LEDGER

Learning Objectives:

After studying this lesson, you should be able to understand the :

- ★ Double Entry System and its advantages, limitations
- ★ Journal and its importance
- ★ Importance of Ledger posting

Content Structure :

- 2.1 Introduction
- 2.2 Principle of Double Entry System
- 2.3 Rules of Debit and Credit
- 2.4 Advantages of Double Entry System
- 2.5 Limitations of Double Entry System
- 2.6 The Journal
- 2.7 Importance of Journal
- 2.8 Ruling of Journal
- 2.9 Subdivision of Journal
- 2.10 Ledger
- 2.11 Features and Importance of Ledger
- 2.12 Ledger posting
- 2.13 Balancing of Ledger Accounts
- 2.14 Summary
- 2.15 Technical terms
- 2.16 Model Questions
- 2.17 Reference Books

2.1 Introduction : The double entry system of book-keeping is the orderly recording of financial transactions of a business in a systematic manner. It is a scientific way of presenting accounts. Every business transaction involves receiving something having value and giving of something having value. The double entry system recognizes that every transaction has two aspects and the method of recording both the aspects of a transaction is known as Double Entry System of Book-keeping. Every transaction involves two accounts out of which one account is debited and the other is credited with an equal amount. The totals of all the debits must equal to the totals of all the credits. This is the fundamental principle of double entry system of book-keeping.

Under dual aspect concept, the Accountant deals with the two aspects of business transaction i.e., (i) receiving aspect and (ii) giving aspect. Receiving aspect is known as 'Debit aspect' and giving aspect is known as 'Credit aspect'.

2.2 Principle of Double Entry System : Double Entry System was originated in 1494 by Fra Luca Pacioli, an Italian, who wrote the first book entitled 'De Computis et Scripturis'.

The principle under which both debit and credit aspects are recorded is known as the principle of double entry. According to this principle every debit must necessarily have a corresponding credit and vice versa.

2.3 Rules of Debit and Credit : All business transactions are broadly classified into three categories : (i) those relating to persons, (ii) those relating to property and assets, and (iii) those relating to income and expenses. They are : (i) Personal Accounts, (ii) Real Accounts and (iii) Nominal Accounts.

Classification of Accounts

Accounts		
Personal Accounts	Real Accounts	Nominal Accounts
Rakesh	Furniture	Wages
Krishna	Buildings	Salaries
Apollo Hospitals	Machinery	Interest
SBI	Stock	Rent
	Cash	Commission

Before recording a transaction it is necessary to find out which of the accounts is to be debited and which is to be credited. The rules of debit and credit for the three types of transactions are given below.

a) Personal Accounts : Debit the account of the person who receives something and credit the account of the person who gives something.

Debit the receiver

Credit the giver

Example : Cash paid to Krishna Rs. 7,000.

In this the two accounts affected are Krishna account and cash account. Krishna account is a personal account and cash is a real account. Since Krishna is the receiver, his account has to be debited as per the first part of the rule of personal accounts 'Debit the receiver'. As cash has gone out, cash account will be credited according to the second part of the rule for real accounts 'credit what goes out'.

b) Real Accounts : When an asset is coming into the business, the account of that asset is to be debited. When an asset is going out of the business, the amount of that asset is to be credit.

Debit what comes in

Credit what goes out

Example : Cash received from Nagarjuna Hospitals Ltd.

In this the cash account and Nagarjuna Hospital Ltd. are the two accounts affected. Cash account is a real account and Nagarjuna Hospital Ltd., account is a personal account. As cash has come in, cash account will have to be debited according to the first part of the rule for real accounts 'debit what comes in'. Nagarjuna Hospitals Ltd. has given the benefit, so its account will have to be credited as per the second part of the rule for personal accounts 'credit the giver'.

c) **Nominal Accounts** : When an expense is incurred or loss suffered, the account representing the expense or the loss is to be debited. When any income is earned or gain made, the account representing the income or the gain is to be credited.

Debit all expenses and losses

Credit all incomes and gains

Example : Paid wages Rs. 2000.

In this case, the accounts affected are wages account and cash account. Wages account is a nominal account and cash account is a real account. Wages account will have to be debited as per the first part of the rule for nominal accounts 'debit all expenses and losses'. As cash has gone out, cash account will have to be credited according to second part of the rule for real accounts 'credit what goes out'.

2.4 Advantages of Double Entry System : The following are the main advantages of double entry system.

- ★ Double entry system records, classifies and summarises business transactions in a systematic manner and is scientific method.
- ★ Full and authentic information can be had about all transactions as the trader maintains the ledger with all types of accounts.
- ★ Assessment of profit or loss.
- ★ It provides complete information regarding debtors, creditors, assets, etc.,
- ★ It enables an enterprise to know its financial position on a particular day by preparing the Balance Sheet.
- ★ Since both the aspects of a transaction are recorded under this system, possibility of errors and frauds is reduced to a minimum.
- ★ Proper maintenance of records under this system serves as a proof in the court of law.

2.5 Limitations of Double Entry System :

The main drawbacks or disadvantages of this system are as follows:

- ★ This system requires the maintenance of a number of books of accounts which is not practical in small concerns.
- ★ This system is costly because a number of records are to be maintained.
- ★ The Trial Balance will tally inspite of the Errors of Omission, Errors of principle.

2.6 The Journal : The accounting process involves four stages : (1) Preparation of Journal and Ledger, (2) Preparation of Subsidiary Books, (3) Preparation of Final Accounts and (4) Preparation of Funds Flow Statement.

Journal means a 'day book' where in day-to-day business transactions are recorded in chronological order. Journal is treated as the book of original entry or first entry. The process of recording a transaction in the journal is called 'Journalising'. The entries made in the book are called 'Journal Entries'. Efficient use of journal depends on - the ability to analyze the effect of each transaction and familiarity with the standard form.

2.7 Importance / Advantages of Using a Journal :

Journal is used for the following reasons.

- i) **Availability of Full Information :** All business transactions date-wise will be recorded in journal. Hence, the total information for every transaction can be obtained very easily.
- ii) **Explanation of the Transaction :** Every journal entry will be briefly explained with a narration. Narration helps in proper understanding of the entry.
- iii) **Posting becomes easy :** Once the transactions are entered in the journal, recording the same in the relevant accounts in the ledger can be made easily.
- iv) **Location of errors :** Journal helps to locate errors easily.

2.8 Ruling of Journal : In its usual form, a journal is divided by vertical lines into five columns in which to enter, in respect of each transaction : a) Date, (b) Particulars, (c) Ledger folio, (d) Amount (Debit), (e) Amount (Credit).

The proforma of Journal is given below :

Date	Particulars	L.F.	Debit Rs.	Credit Rs.
2004 June 1	Purchases Account Dr To Cash account (Being goods purchased for cash)		1000	1000

1. **Date :** The first column deals with the date of the transaction.
2. **Particulars :** The particulars column is the column for account titles and description. The name of the account to be debited is entered at the extreme left of the particulars column next to the date column. The symbol 'Dr' is written at the right end of the particulars column on the same line of the account debited. The name of the account to be credited is entered on the next line with a prefix 'To'. A short explanation of the transaction known as narration begins on the line immediately below the account credit.
3. **Ledger Folio :** This column deals with the ledger folio (L.F.). It means the reference to the number of the page in the ledger in which this account will appear.
4. **Debit :** This column deals with the amount to be debited.
5. **Credit :** This column deals with the amount to be credited.

2.9 Subdivision of Journal :

When the transactions are numerous, the journal is inadequate as the sole book of the original entry. The number of operations and the volume of transactions determine the number and type of journal needed. The following types of journals are usually maintained.

1. Cash Book - to record cash transactions
2. Sales Day Book - to record credit sales

3. Purchases Day Book - to record credit purchases
4. Sales Return Day Book - to record sales returns
5. Purchases Return Day Book - to record purchases returns
6. Bills Receivable Book - to record bills receivable
7. Bills Payable Book - to record bills payable
8. Petty Cash Book - to record petty cash payments.
9. Journal Proper - to record residuary transactions.

2.10 Ledger : The ledger is the principal book of accounts where similar transactions relating to a particular person or thing are recorded. The owner of the business wants to know the accumulated effect of each account contained in a double entry system. It allocates to each account a number and arranges accounts in a logical subdivisions. In the journal all transactions are recorded in a chronological order. It is not possible to know whether a particular account is showing a debit or credit balance. Ledger contains the various accounts of all the transactions in duly classified form.

2.11 Features and importance of Ledger

A ledger may be defined as a summary statement of all the transactions relating to person, asset, expense or income, which have taken place during a given period of time. For example, if the owner wants to know the total purchases for an accounting period, he will only see the "purchase account". The important features of ledger are as follows:

- i) Ledger contains all the accounts - personal, real and nominal.
- ii) It is a permanent record of business transactions.
- iii) It provides a means of easy reference, and
- iv) It provides final balance of the accounts.

Standard Form of Ledger Account :

The widely used and simplified form of ledger accounts are 'T' accounts. A 'T' account is divided into two sides, the left hand side represents the debit side and the right hand side represents the credit side. Each side of the ledger has the following columns. A specimen 'T' form account is as under.

Title of Account							
Dr				Cr			
Date	Particulars	Folio	Amount Rs.	Date	Particulars	Folio	Amount Rs.

2.13 Balancing of Ledger Accounts :

Balance is the sum necessary to equalise the debit and credit totals of an account. Various accounts in the ledger are balanced with a view to prepare the final accounts. The 'balance' is an accounting term which means the difference between the two sides of an account.

The following steps are followed while balancing the accounts.

- 1) Take the totals of the two sides of the account and enter the highest balance on both the sides.
- 2) Compute the difference of the total of two sides.
- 3) Enter the difference in the amount column of the side showing less total, writing against the difference in the particulars column. "To Balance c/d" (C/d means carried drawn) on the debit side of the account and "By Balance c/d" on the credit side of the account. This way, the totals of two sides will agree.
- 4) The balance is brought forward at the beginning of the next period. If "To Balance c/d" is written on the debit side before balancing, it is brought forward on the credit side and "By Balance b/d" is written against the balance in the particulars column and vice-versa.
- 5) If the totals of the debit side and the credit side of an account are equal, then the account has nil balance. Then the account is said to have closed having no closing and opening balance.

Dr		Bank Account				Cr	
Date	Particulars	J.F	Amount Rs.	Date	Particulars	J.F	Amount Rs.
01.07.05	To Capital A/c		30,000	05.07.05	By Purchases A/c		10,000
15.07.05	To Sales A/c		15,000	20.07.05	By Wages A/c		5,000
				25.7.05	By Transport A/c		2,000
					By Balance c/d		28,000
			45,000				45,000
01.08.05	To Balance b/d		28,000				

2.12 Ledger Posting :

Posting is the process of entering in the ledger the entries given in the journal posting from journal to the ledger accounts are necessary to know how transactions have changed the account balances. The following are the guidelines for posting transactions into ledger.

- 1) Posting into the ledger is to be made only after the completion of journal entry.
- 2) For each item in the journal a separate account is to be opened and for each new item a new account is to be opened.
- 3) Based on the number of transactions space for each account is to be determined in the ledger.
- 4) For each account there must be a name. This should be written on the top of the account in the middle. At the end of name the word 'Account' is to be added. For example, surgical equipment account, salaries account etc.,
- 5) Enter on the debit side of the ledger in particulars column with a prefix 'To'
- 6) The credit side of the journal entry is posted on the credit side of the account by starting with 'By'.
- 7) Enter the date of the transaction in the date column.
- 8) Enter in the folio column of the journal, the number of the ledger page in which posting has been made.

Illustration of posting process:

Journal

(Page 5)

Date	Particulars	L.F	Dr Amount Rs.	Cr Amount Rs.
2005	Cash A/c Dr	6	25,000	
July 9	To Medwin Hospitals A/c (Being Cash received)	13		25,000

Ledger**Cash Account**

(Page 6)

Dr				Cr			
Date	Particulars	J.F	Amount Rs.	Date	Particulars	J.F	Amount Rs.
2005	To Medwin	5	25,000				
July 9	Hospital A/c						

Medwin Hospitals Account

Dr				(Page 13)				Cr
Date	Particulars	J.F	Amount Rs.	Date	Particulars	J.F	Amount Rs.	
				2005 July 9	By Cash A/c	5	25,000	

2.14 Summary :

The systematic way of presenting the accounts is duly under the double entry system. In double entry system the 'Debit aspect' and 'Credit aspect' are recorded. It facilitates the preparation of trial balance and the final accounts.

The first book in which the transactions are recorded is called a Journal. Each record in a journal is called an entry. A journal is a tool for analyzing and describing the impact of various transactions.

As discussed earlier, all transactions, irrespective of their nature, are recorded in the journal in a chronological order. The owner of the business wants to know the accumulated effect of each 'Chart of Accounts'. The ledger is the principal book of accounts where similar transactions relating to particular person or thing are recorded. Various accounts in the ledger are balanced with a view to prepare the final accounts.

2.15 Technical Terms :

Principle of Double Entry : The principle under which both debit and credit aspects are recorded is known as the principle of double entry.

Personal Accounts : Accounts which show transactions with persons, names of firms, companies or institutions are called 'personal accounts'.

Real Accounts : Accounts relating to properties or assets are known as 'Real Accounts'.

Ledger Posting : The process of transferring the entries from the journal into the ledger is called ledger posting.

2.16 Model questions :

1. What is meant by double entry system ? Explain its advantages and disadvantages.
2. How do you classify the accounts ? Explain the rules of debit and credit with respect of different types of accounts.
3. What is journal ? State the procedure for writing journal.
4. What is ledger ? State its advantages.

5. Distinguish between journal and ledger.
6. How are ledger accounts balanced ?

2.17 Reference Books :

1. S.P. Jain, K.L. Narang - Financial Accounting
2. R.L. Gupta - Introduction to Accountancy
3. G. Prasad, V. Chandrasekhar Rao - Accounting for Managers
4. A. Mukherjee, M. Hanif - Modern Accountancy
5. Ramachandran, N. & Ramkumar Kakani - Financial Accounting for Management
6. Mishra R.K. & Naveen, B. - Readings in Managerial Economics, Accounting & Financial Analysis

Lesson - 3

SUBSIDIARY BOOKS - CASH BOOK - TRIAL BALANCE - TRADING ACCOUNT - PROFIT AND LOSS ACCOUNT

Learning Objectives:

- After studying this Unit, you should be able to understand the;
- ★ Subsidiary books and their importance in accounting
 - ★ Need for Cash Book and various types of cash books
 - ★ Objectives and preparation of trading account and profit and loss account.

Content Structure :

- 3.1 Introduction
- 3.2 Subdivision of Journal
- 3.3 Advantages of Subsidiary Books
- 3.4 Preparation of Subsidiary Books
- 3.5 The Cash Book and its kinds
- 3.6 Two Column Cash Book
- 3.7 Three Column Cash Book
- 3.8 The Trial Balance
- 3.9 Objectives of preparing Trial Balance
- 3.10 Methods of preparation of Trial Balance
- 3.11 Types of Errors
- 3.12 Trading Account
- 3.13 Profit and Loss Account
- 3.14 Summary
- 3.15 Technical terms
- 3.16 Model Questions
- 3.17 Reference Books

3.1 Introduction :

In a small business enterprise the number of transactions are very limited. These transactions are first recorded in the journal and subsequently ledger accounts. Whereas the transactions in a big organizations are numerous and even run into thousand and lakhs. So single journal is inadequate as the sole book of original entry. It was found advantageous to have a separate book for different activities like purchases, sales, purchase returns, sales returns and so on. Smaller account books known as subsidiary books are distributed to various sections. As and when the transaction takes place, they are recorded in the subsidiary

Cash book plays an important role in accounting. Both for the cash and credit transactions, final settlement will be in the form of receipt or payment of cash. So all the transactions i.e., receipts and payments are recorded in the cash book.

A Trial Balance is simply a list of the names and balances of all the accounts in the ledger and cash book. The account balances are used to prepare the final accounts. Trial Balance indicate that all the transactions have been entered in the book, posted and balanced.

The first step in the presentation of Final Accounts is the preparation of the Trading Account. It reveals the gross profit or loss of the current year. However, the businessman is always interested in knowing the net profit. Net profit represents the excess of gross profit plus other revenue incomes over sales expense including sales costs and other expenses.

3.2 Subdivision of Journal :

As noted earlier, when the transactions are numerous, it was found advantageous to have a separate book for different activities. The main types of journal are as follows :

1. Cash Book
2. Purchases Day Book
3. Sales Day Book
4. Purchases Return Book
5. Sales Return Book
6. Bills Receivable Book
7. Bills Payable Book
8. Journal Proper

3.3 Advantages of Subsidiary Books :

The main advantages of Subsidiary books are as follows:

1. **Division of Work** : The work of recording business transactions may be given to a number of employees without any duplication of the same work.
2. **Time Saving** : The recording of transactions in a number of subsidiary books is done simultaneously. So work will be completed quickly.
3. **Readymade information** : The information relating to any class of transaction is available without delay as number of books are used for recording different types of transactions.
4. **Minimisation of frauds** : The checking of transactions for tracing mistakes and errors can be done easily. So frauds can be minimised.
5. **Effective decision-making** : Since the transactions of a similar nature are recorded at one place, the management can have the benefit of using them in planning and decision making.

3.4 Preparation of Subsidiary Books :

It is important to know that the subsidiary books are not a part of the double entry system of book keeping. It is a memorandum book of transactions which are subsequently entered in the ledger. The method of preparing the subsidiary is as follows.

1. **Cash Book** : In order to record cash transactions, in every organisation one separate book will be used. Usually it will be bigger in size. Since the cash book is very important the method of preparation of cash book is discussed in detail in the remaining part of this lesson.
2. **Purchases Book** : In this book only the credit purchases are recorded. Purchases Book is otherwise called Purchases day book, purchases journal or purchase register. The format of purchases book is as follows.

Format of Purchases Book

Date	Name of the Supplier	Inward Invoice No.	L.F.	Details	Total Rs.

3. **Sales Book** : Only credit sales transactions are entered in this book. Cash sales of goods and credit sales of assets and properties will not be recorded in the sales book. The ruling of this book will be same as that of purchases book. The entries are made from the copies of the invoices sent to the buyer. As the invoices are sent out they are called outward invoices. The net amount after deducting trade discount and adding sales tax and packing charges will be entered in the amount column.
4. **Purchases Returns Book** : When goods purchased are defective, damaged or substandard, will be returned to the supplier. These returns must be entered in a separate book called purchase returns book or returns outward book. The goods will be returned at cost. The purchase returns book contains the debit note column in the place of invoice.
5. **Sales Returns Book** : Sometimes the goods may be returned by the customers due to various reasons. They are called sales returns. As the individual customer is returning the goods, his account will be credited and sales returns or returns inwards account will be debited. The proforma of Sales returns book is given below.

Sales Returns Book

Date	Name of the Customer	Credit Note No.	L.F.	Details	Amount Rs.

6. **Bills Receivable Book** : When the goods are sold on credit, the trader usually asks the purchaser to accept a bill. All such bills accepted by the customers and returned to the trader are called Bills Receivables. The proforma of Bills Receivable Book is given below.

Bills Receivable Book

S.No.	Date of Receipt	From whom Received	Drawer	Acceptor	Where Payable	Date of Bill	Term	Due Date	L.F.	Amount Rs.

7. **Bills Payable** : When the trader purchases goods from others, he will accept the bills and return them to the drawer. All such bills accepted are called as bills payable. The bills payable proforma is given below.

Bills Payable Book

S.No.	Date of Receipt	From whom Received	Drawer	Acceptor	Where Payable	Date of Bill	Term	Due Date	L.F.	Amount Rs.

8. **Journal Proper** : All the transactions which do not find place in the above seven subsidiary books, will be recorded in the Journal Proper. Generally the following transactions are recorded in this journal proper. (1) Opening entries, (2) Closing entries, (3) Transfer entries, (4) Adjustment entries and (6) Miscellaneous entries.

3.5 The Cash Book and its kinds :

Cash is a current asset. All the economic activities of an organization involve the regular flow of cash. Cash balance is a very important element of its financial position.

Cash book plays an important role in accountancy. Both the cash and credit transactions will be settled in the form of receipt or payment of cash. All types of cash receipts and payments are recorded in the cash book. Cash book is divided into two sides, the left hand side records all kinds of receipts, and the right hand side records all payments. The receipts side is called as debit side and the payments side is called as credit side. As cash book is in the nature of ledger account it is also balanced like other ledger accounts.

As per the needs of the organisation Cash book may be of the following types.

1. Simple Cash Book

2. Two column cash book
3. Three column cash book
4. Petty cash book

Simple Cash Book : It is also called as single column cash book. In this only cash transactions are recorded. The model of the single column cash book is given below.

Cash Book

Date	Receipts	L.F.	Amount Rs.	Date	Payments	L.F.	Amount

3.6 Two Column Cash Book

The cash book in which cash and transactions involving receipts and payments by cheques are recorded is called two column or double column cash book. In this both cash and bank transactions are shown. The Bank Account maintained by the enterprise is a Personal Account. Double Column Cash book enables us to keep both the cash and Bank Account side by side.

Example : The two column Cash book of Apollo Hospitals Ltd., is as follows.

Cash Book

Dr					Cr				
Date	Particulars	L.F.	Cash	Bank	Date	Particulars	L.F.	Cash	Bank
2004 Aug.1	To Kiran & Co.		1200		2004 Aug.1	By Dinesh Medicals		1200	
Aug.9	To Scientific Co.		2000						
Aug.18	To Cash A/c	C*		2000	Aug.18	By Bank A/c.	C*	2000	

*C refers to contra entry. Contra refers to opposite side. Contra is an entry in a double entry account representing the reversal or cancellation of an entry on the other side.

3.7 Three Column Cash Book :

In modern business or service organisation, bank transactions are even more than cash transactions. So it is advantageous to have bank column in the cash book. In a three column cash

book there are three columns on each side, one for discount, the other for cash and the third one for bank transactions. The specimen of the three column cash book is presented below.

Three Column (Cash, Bank and Discount) Cash Book

Dr						Cr					
Date	Receipts particulars	L.F.	Discount allowed	Cash Rs.	Bank Rs.	Date	Payment particulars	L.F.	Discount Received	Cash Rs.	Bank Rs.

3.8 The Trial Balance :

The basic principle of Double Entry System is that for every debit there must be corresponding credit and vice-versa. It means that the totals of the debits must equal to the totals of the credits and the total of the debit balances must equal to the total of the credit balances. Thus, after balancing the ledger accounts, a statement is prepared to check whether the total of the debit balances agrees with the total of the credit balances or not. Such a statement is known as the Trial Balance. The agreement of the Trial Balance reveals that both the aspects of each transaction have been recorded and that the books are arithmetically accurate.

3.9 Objectives of preparing a Trial Balance :

The main objectives of preparing a trial balance are as follows:

- To provide a check on the arithmetic accounts.
- To provide a basis for the preparation of final accounts.
- To provide a summary of ledger accounts.
- Detection and Rectification of errors.

2.10 Methods of preparation of Trial Balance :

A trial balance may be prepared by any of the following two methods.

- Total Method :** Under this method the total of debits and credits of all ledger accounts are shown in the debit and credit side of the trial balance. The trial balance prepared under this method is known as gross trial balance.
- Balance Method :** As per this method all the balances of ledger accounts will be shown against the debit or credit side in the Trial Balance. If an account has no balance then it will not be shown in the trial balance. This method is more convenient and extensively used.

The specimen of Trial Balance is presented below.

Trial Balance of Global Hospital Ltd. as on 31.3.2004

S.No.	Name of the Account	Debit Amount	Credit Amount
1	Cash	3,00,000	
2	Ramesh Medicals		40,000
3	Lab Equipment		2,25,000
4	Wages	25,000	
5	Purchases	22,000	
6	Modern Pharma Ltd.		92,000
7	Interest	10,000	
		3,57,000	3,57,000

While preparing the trial balance from the given balances of ledger accounts, the following points should be considered.

1. All expenses and losses are debit balances.
2. All incomes and gains are credit balances.
3. All assets, drawings and reserve on liabilities are debit balances.
4. Capital, reserve on assets, reserves created out of profit and other liabilities are credit balances.
5. Opening stock is a debit balance.

3.11 Types of Errors :

As noted earlier, one of the main objectives of preparing a trial balance is to discover the errors. However, there may be certain errors in the books of accounts even if the two totals agree.

The errors may be classified into : (1) Errors disclosed by Trial Balance, (2) Errors not disclosed by Trial Balance.

Errors disclosed by the Trial Balance : The disagreement of trial balance will disclose the following errors.

- i) **Posting of wrong amount :** If wrong amount is posted in the ledger, the trial balance will not agree. For example, an amount of Rs. 1240 received from Mahesh Pharma Ltd. was wrongly posted as 1420. The effect of this error will be that debtors will reduce by Rs. 180.
- ii) **Posting Wrong side :** The trial balance would disagree if an amount is posted to the wrong side of an account.
- iii) **Duplication in posting :** If an amount is posted twice, by mistake in the ledger, the trial balance shall be affected.
- iv) **Omission to carry a balance from ledger to trial balance :** If the balance of an account is not carried to the trial balance the two sides of the trial balance shall not agree.
- v) **Wrong totalling or balancing of ledger accounts :** If some error is committed while totalling or balancing of ledger accounts, the wrong balance shall be carried to the trial balance and it will not agree.
- vi) **Wrong totalling of trial balance :** If there is an error in totalling the two sides of the trial balance, the trial balance does not agree.

Errors not disclosed by Trial Balance :

The agreement of trial balance is not a conclusive proof as to the absolute accuracy of books of accounts. Errors may exist even if the trial balance agrees. The following types of errors are not disclosed by the trial balance.

- i) Errors of omission in the books of original entry i.e., journal or any of the subsidiary books.
- ii) Incorrect amount recorded in the books of original entry.
- iii) Posting an item to wrong amount but with correct amount and side.
- iv) Corresponding errors, i.e., when two errors are made in such a manner that they neutralise the effect of each other.
- v) Errors of Principle : There may be wrong application of basic accounting principle. But such errors do not disturb the trial balance.

3.12 Trading Account :

After the preparation of Trial Balance, the next level of work in accounting is called "Final Accounts". Preparation of Final Accounts involves :

- i) the preparation of a Trading Account,
- ii) the preparation of a Profit and Loss Account; and
- iii) preparation of Balance Sheet

Trading account is prepared to know the gross profit or overall profit during an accounting year. Gross profit is the difference between sale proceeds of a particular period and the cost of goods actually sold. Since it means overall profit, no deduction of any sort is made. Trading account enables the management to make a comparison of gross profit or gross loss of the current year with that of previous years.

Preparation of Trading Account**Trading Account of G. Medical Services Ltd. for the year ended 31.5.2004**

Dr		Rs.	Particulars		Cr
Particulars					Rs.
To Opening Stock		XXX	By Sales	XXX	
To Purchases	XXX				
To Loss Returns	XX	XXX	Loss : Returns	XX	
To Wages		XXX	By Closing Stock		XXX
To Local tax		XX			
To Power		XX	By net loss transferred		
To Carriage		XX	to profit is a/c		XX
To Gross profit transferred to profit & loss A/c					
		XXXX			XXXX

Explanation of Debit side items of the Trading Account :

- 1) **Opening Stock** : It includes the value of goods brought from the previous year into the current year.
- 2) **Purchases** : This is the value of the goods purchased during the current year.
- 3) **Purchase Returns** : This is the value of the goods returned, hence it is deducted from the purchases.
- 4) **Carriage or freight inwards** : All charges of bringing purchased goods to the business place.
- 5) **Marine and factory insurance** : Marine insurance is for the safety of the goods imported and factory insurance is for the safety of the goods manufactured.
- 6) **Manufacturing Expenses** : All categories of direct expenses connected with manufacturing should be recorded on the debit side of trading account. For example, lighting, power, fuel etc.

Explanation of Credit side items of the Trading Account :

- 1) **Sales** : It represents the amount realised from the sale of the goods during the year.
- 2) **Sales Returns** : It represents the value of goods returned by customers. So it is deducted from the sales.
- 3) **Closing Stock** : It is the value of the unsold goods at the end of the trading period. It is credited to the trading account. Closing stock usually does not appear in the trial balance. Closing stock is valued at the cost price or the market price, whichever is lower.

3.13 Profit and Loss Account :

The importance of profit and its measurement in accounting leads to the significance of profit and loss account. Profit and loss account measures the income generated by the entity. In this process we should have clear idea of what constitutes revenue and expenses. As we have seen, profit and loss account is a summary of all accounts relating to revenue and expenses.

Thus, the main objectives of preparing profit and loss account are : i) to find net profit, ii) to compare current year's income with that of the previous year. A specimen of Profit and Loss Account is given as under :

Profit and Loss Account for the year ended 31.3.2004			
	Dr		Cr
	Rs.		Rs.
To Office Salaries	XXX	By Gross profit b/d	XXXX
To Rent	XX	By Interest received	XXX
To Printing & Stationary	XX	By Commission received	XXX
To Insurance	XX	By Discount	XXX
To Postage and Telephone	XX	By Rent received	XX
To Bad debts	XX	By Net loss transferred	
To Interest on Capital	XX	to capital a/c	XX
To Discount allowed	XX		
To Depreciation	XX		
To Sales Commission	XX		
To Net Profit transferred to Capital a/c	XX		
	XXXX		XXXX

3.14 Summary :

Journal is a book of original entry where transactions are recorded in the order in which they occur. After recording the transaction in the journal it is finally posted in the ledger.

The largest number of transactions in every business relate to cash and bank. A cash book records all cash and bank receipts on one side and all cash and bank payments on the other side. The difference between the amounts shown on both sides is the balance of cash or bank.

The trial balance is a statement of ledger balances which is prepared to check the arithmetical accuracy of books of accounts. It provides a basis for the preparation of final accounts.

As the main objective of preparing accounts is to find out the profitability at regular intervals a trading account and profit and loss accounts are prepared. The purpose of preparing a trading account is to find out gross profit. The purpose of preparing profit and loss account is to determine net profit or net loss. Thus, in lesson we have appreciated the subsidiary books, cash book, trial balance, trading account and profit and loss account in the process of accounting.

3.15 Technical Terms :

Journal : Journal means a day book where in day-to-day business transactions are recorded in chronological order.

Journal proper : This is used to record all the transactions that cannot be recorded in any of the subsidiary books.

Cash book : All cash transactions, receipts and payments are recorded in this book.

Trading account : To ascertain the gross profit during the accounting year trading account is prepared.

Carriage or freight inwards : This includes all charges of bringing purchased goods i.e., transport, loading and unloading charges.

3.16 Model questions :

1. What are various subsidiary books ? Explain.
2. Explain the advantages of subsidiary books.
3. State various types of cash book.
4. Explain the importance of three column cash book. Give the proforma of such cash book with hypothetical figures.
5. What is a 'Trading Account' ? What are the advantages of preparing a trading account?
6. What is the object of preparing a profit and loss account ?

3.17 Reference Books :

- | | | | |
|----|--------------------------------------|---|---|
| 1. | N. Ramachandran &
K. Ratna Kumari | - | Financial Management & Accounting |
| 2. | G. Prasad & V. Chandrasekhar Rao | - | Accounting for Managers |
| 3. | S.P. Jain, K.L. Narang | - | Financial Accounting & Analysis |
| 4. | A. Mukherjee, M. Haniff | - | Modern Accountancy |
| 5. | Siddiqui, S.A., Siddique, A.S. | - | Managerial Economics & Financial Analysis |

Lesson - 4

BALANCE SHEET - BANK RECONCILIATION STATEMENT

Learning Objectives:

After studying this lesson, you should be able to understand the :

- ★ understand and explain the terms used in a balance sheet;
- ★ Classify the different assets, liabilities and Capital, appear on a balance sheet;
- ★ understand the bank reconciliation statement;

Content Structure :

- 4.1 Introduction
- 4.2 Final Accounts
- 4.3 Balance Sheet
- 4.4 Construction of Balance Sheet
- 4.5 Contents of Balance Sheet
- 4.6 Classification of Assets
- 4.7 Classification of Liabilities
- 4.8 Bank Reconciliation Statement
- 4.9 Importance of Bank Reconciliation Statement
- 4.10 Causes of difference between Cash book and pass book balances
- 4.11 Procedure for Preparation of Bank Reconciliation Statement
- 4.12 Summary
- 4.13 Technical terms
- 4.14 Model Questions
- 4.15 Reference Books

4.1 Introduction :

Every organisation maintains detailed accounts so that its activities are known to the others and other interested parties. The main objective of this is to find out the profitability and to ascertain its financial position. In order to know the profit earned for an accounting year an organisation prepares Trading and Profit & Loss Account or Income Statement. Balance Sheet is prepared to know the overall financial position of the organisation.

4.2 Final Accounts :

Final accounts are prepared from the Trial Balance. So final accounts includes the preparation of:

- i) Trading and profit and loss account and
- ii) Balance Sheet

The final accounts reveals to the management, owners and other interested parties, a concise picture of profits and financial position of the business. In addition to management and owners, the creditors, shareholders, employees, banks and other financial institutions, government extensively use the information contained in the financial statements.

4.3 Balance Sheet :

As discussed earlier, one of the most important reports or statements to convey the accounting information is the Balance Sheet. Balance Sheet is concerned with reporting the financial position of an entity at a particular point of time. Balance sheet is prepared after the trading and profit and loss accounts have been compiled and closed. The liabilities and assets shown in balance sheet reveals the financial position of the concern. Excess of assets over liabilities represents capital. Such excess may be taken as an indicator of the financial soundness of a concern. The main characteristics of balance sheet can be stated as follows :

- ★ Balance Sheet is a statement and not an account.
- ★ It is always prepared on a particular date and reveals the position on that date.
- ★ The headings of the items contained in balance sheet are liabilities and assets.
- ★ The totals of liabilities and assets are always equal.
- ★ It shows the financial position of the organisation.

4.4 Construction of Balance Sheet :

It has already been stated that a Balance Sheet contains a list of assets and liabilities which are grouped and properly classified. The Balance Sheet summarises the incomplete transactions of the business. The left hand side of the Balance Sheet shows the sources from which cash can be obtained and the right hand side shows the forms in which cash has been invested. The specimen of Balance Sheet is as follows.

A Balance Sheet may be prepared in one of the two forms :

- i) Horizontal (Traditional) format and
- ii) Vertical format.

Specimen of Balance Sheet
Balance Sheet of Global Hospitals Ltd. as on 31.03.2004

Liabilities	Rs.	Assets	Rs.
Creditors	XXX	Cash in hand	XXX
Bills payable	XXX	Cash at bank	XXX
Bank Overdraft	XXX	Bills Receivable	XXX
Loans	XXX	Debtors	XXX
Reserves	XXX	Stock	XXX
Capital	XXX	Furniture	XXX
Add: Net profit	XXX	Lab equipment & tools	XXX
	XXX	Land and Buildings	XXX
Less: Drawings	XXX	Trademarks	XXX
	XXX		XXX

4.5 Contents of Balance Sheet :

A Balance Sheet is a statement of the assets, liabilities and capital of an organisation at a particular date. Assets and liabilities are two independent variables and the capital is the dependent variable. Excess of assets over liabilities represents capital and is indicative of the financial soundness of the organisation. The balance sheet shows the year end balance in the asset, liability and capital accounts. Since it is not feasible to draw up a balance sheet after every transaction, it is prepared at the end of a specific period, usually, an year. This period is referred to as accounting period or fiscal year or financial year. The various aspects of assets and liabilities of a balance sheet can be stated as follows.

The balance sheet lists assets, liabilities and capital separately. Again the assets and liabilities are shown into sub-groups and listed in the order of their liquidity. Liquidity implies the length of time required to convert them into cash. Assets which are likely to be converted into cash in the near future are grouped as current assets. Similarly liabilities which are due for payment in the short run are classified as current liabilities.

4.6 Classification of Assets :

Assets represents everything a business own and has money value. Assets can be classified into two categories, Current Assets and Fixed Assets. The various items of these two categories are explained below.

Current Assets : Current Assets are assets which will normally be converted into cash within a year or within the operating cycle. The difference between fixed assets and current assets is mainly based on time. The various items of current assets are explained below.

Cash : Cash is usually taken to include currency, cheques or any other document that circulates as cash. Cash is considered as current asset because it is available for a firm's day-to-day operations. Most of these funds are usually on deposit with the banker.

Temporary investments : These are easily marketable securities and are generally converted into cash within the accounting period. The temporarily idle cash in the organisation would be invested somewhere to get some return. These investments may include shares, debentures and government securities. Investments are valued in the at cost or current market value, whichever is lower.

Sundry Debtors : The amounts due from persons is considered as this current asset. It is also known as Accounts Receivables. This represents amounts usually arising out of normal commercial transactions. In most situations these accounts are unsecured and have only the personal security of the customer. It is quite usual that some of these accounts become uncollectible. These collection losses are called bad debts.

Bills Receivable : These are the acknowledgments of debts. When the amount owed is by a written acknowledgment, it would appear under the head "Bills Receivable".

Stock : Stock is the inventory of raw materials, work-in-progress and goods. For a service organisation like hospital it consists of the entire lab equipment and some accessories used in their services. Stock is recorded in the balance sheet at its cost or current market value whichever is lower.

Prepaid Expenses : Several times, some of the items of expenses are usually paid in advance such as rent, taxes, subscriptions and insurance. The reason why these prepayments are included in

current assets is that these payments meant for the coming accounting year. So all the payments made for the coming period should be treated as current assets for the current accounting year.

Fixed Assets : Fixed assets are tangible and they are purchased for use over a long period of time. The benefit of these assets are available throughout its useful life. Fixed assets are not acquired for sale. These are meant to increase the production or services performed by the organisation. Some examples of fixed assets are : land, buildings, plant & machinery, furniture, motor vehicles, lab equipment.

In accounting we are concerned with useful life of the assets. Useful life is the period for which a fixed asset could be economically used.

Valuation of fixed assets is usually made on the basis of original cost. Since the assets have limited life the cost will be expiring with the expiration of the life.

The process of providing depreciation for each year will continue. Depreciation represents the cost of earning the revenue in an accounting period on account of use of fixed assets.

4.7 Classification of Liabilities :

Liabilities are obligations which arise from transactions or other events that have already been occurred. Liabilities can be classified into : Fixed Liabilities, Current Liabilities and Contingent Liabilities. They include the following items.

Capital : In the accounting sense, capital is the money contributed by the owner to an organisation to enable it to function. It is measured by the excess of assets over liabilities. Capital can be brought in by a person into the business in cash or kind. In accounting parlance, liabilities are of two types : liability to outsiders and liability to the owner. The liability to outsiders is termed as 'liabilities'. The liability to the owner is called as 'Capital'.

Creditors : The claims of the suppliers against the organisation activities for the supply of goods on credit. The amount due to the creditors is current liability.

Bills payable : The claims of the suppliers which is evidenced by a note or some other written acknowledgment of debt.

Other liabilities : Various other categories of liabilities include outstanding expenses, deferred income, liability for taxes, bank overdraft and other loans.

Reserves and Surplus : Reserves and surplus or retained earnings arise out of profitable operations. These are surplus earned by the organisation not distributed as dividends. These are profits decided to be retained within the business.

4.8 BANK RECONCILIATION STATEMENT :

An organisation can open an account with the bank by paying an initial sum of money. An amount can be deposited in the form of Cash or Cheque with the help of 'paying-in-slip' and withdraw by means of a cheque. The bank acts as a trustee of the customer, it provides a 'Bank Statement' at regular intervals, which summarizes payments as well as deposits and other charges. Thus bank statement is a copy of the customer's account in the Bank's Ledger. In order to know the bank balance, an organization has to verify the Bank column of the cash book or pass book issued by the

Bank. At any given time the balance shown in bank column of cash book should be equal to that shown in the pass book. Bank opens the account of the client as a personal account. When the amount is deposited in bank, it credits the client's account and when the amount is withdrawn it debits the client's account.

4.9 Importance of Bank Reconciliation :

Bank Reconciliation is a significant practice in almost all organisations for internal control of cash inflow and outflow. Both of them must tally as per Cash Book with the Bank Statement with reconciliation errors and irregularities can be detected. Usually the two functions of bank reconciliation and recording cash transactions are separated from each other. The need for Bank Reconciliation Statement arises due to the following :

- to reflect the actual bank balance position.
- to detect mistake in the Cash Book and in the Pass Book.
- prevents frauds in recording the banking transactions.
- explains any delay in the collection of cheques.

4.10 Causes of differences between Cash Book and Pass Book balances :

The differences in the balances of Cash Book and Pass Book arise due to - timing, transactions, and errors. Following are the main reasons for the difference between two balances.

- 1) **Cheques issued but not presented for payment:** When payments are made through cheques the entries are passed on the credit side of Cash Book. The balance at bank is immediately reduced on the issue of a cheque. The cheques go to the clients and then they sent them to their banks for collection when the cheques are sent to outstation creditors, it takes some time to reach them. Then the creditors will send these cheques to their banks a little late. The bank will debit the client's bank account only when the cheque reach its branch but the balance in the cash is reduced at the time when cheques are issued for payment. So this gap between the payment made and actually amount collected is the cause for the difference in balances shown by cash book and pass book.
- 2) **Cheques deposited but not yet collected :** The cheques received are sent to bank for collection when the cheques are deposited in the bank, the amount is entered on the debit side of cash book in the bank column and the balance in bank is increased. It takes some time to the bank to collect the cheques and credit the amount in client's bank account. The entry in cash book is passed on the assumption that when a cheque is sent to bank it increases the balance in bank on the same day but bank increases the balance pass book when the cheque is realised from the issuing party. Hence the difference in balances of cash book and pass book takes place.
- 3) **Bank charges not entered in the cash book :** The bank charges some amount from each customer by way of incidental charges, collection charges and debits his account from time to time. This reduces the bank balance of the customer's account. But the customer learns about these charges only when he receives the Bank Statement or Pass Book. Until then, the bank balance as per the Pass Book would be less than the bank balance as per the Cash Book or Bank Account.
- 4) **Amount directly deposited into bank :** Some debtors may deposit the amount due from them directly into the bank account. The bank will immediately increases the balance in bank account. But this information may reach the party late. This entry will be passed in the cash book only after receipt of this information either from the debtor or from the bank. Until then there will be a difference in the balances shown by the Cash Book and Pass Book.

- 5) **Interest credited by Bank not entered in the Cash Book :** When the bank allows interest to a customer, it credits the customer's account and his bank balance would increase. The customer comes to know about it only at the end of the month and then only he would pass suitable entry. Until then, the bank balance as per the pass book would be more than the balance as per the Cash Book.
- 6) **Dishonour of Cheque :** When a cheque is sent to bank for collection it is entered on the debit side of the cash book. So it increases the bank balance in cash book. When a cheque is dishonoured it will not be credited by bank in the client's account. So until this information is received and entry is passed in cash book, it will show more balance than that shown by pass book.
- 7) **Delay in sending the cheque for collection :** A cheque received from the customer may be entered in cash book but not sent for collection. Then the bank balance will increase in the cash book but there will be no entry in pass book since bank has not received the cheque.
- 8) **Standing Order :** A customer may give a standing instruction to the bank to make a fixed payment regularly. The regular payments made by the bank may be monthly, quarterly, annually or at any convenient interval. Until the organisation receives the bank statement reflecting these payments, cash book and pass book shows different balances.
- 9) **Wrong Entry :** In addition to the above sometimes the wrong entries may cause the difference. The bank may pass some wrong entry in the pass book. Similarly the organisation may pass some wrong entry in the cash book.

4.11 Procedure for preparation of Bank Reconciliation Statement :

As stated earlier, a statement prepared to reconcile the balance shown by cash book and pass book is called as bank reconciliation statement. A reconciliation statement is prepared at regular intervals by checking the entries in cash book and pass book.

A reconciliation statement is prepared at regular intervals by verifying the entries in cash book and pass book. While preparing bank reconciliation statement the following procedure is to be adopted.

- 1) Comparing the entries in the cash book with the entries in the pass book.
- 2) The debit side entries of cash book are compared with the credit side entries of the pass book.
- 3) The credit side entries of cash book are compared with the debit side entries of pass book.
- 4) The entries which appear in one book and not in the other are to be considered because these entries have affected the balances of cash book and pass book.
- 5) The reconciliation statement is prepared on a particular date and the balance of either cash book or pass book is taken to start with.

Started with Cash Book balance :

Balance as per cash book	Rs.
Add : All the entries which have decreased the balance of cash book or which have increased the balance of pass book	xxx
Less : All the entries which have increased the balance of cash book and which have reduced the pass book	xxx
Balance as per pass book	xxx

Thus, if we start with the balance of cash book, the answer will be the balance at pass book. Likewise when the balance of pass book is taken first then we will find balance at cash book at the end.

4.12 Summary :

A statement prepared to reconcile the balances shown by cash book and pass book is known as bank reconciliation statement. Sometimes the balance shown in cash book is different from that shown by pass book.

The preparation of Bank Reconciliation Statement is not a part of the double entry book keeping system. It is just a procedure to prove the Cash Book balance. It is an important mechanism of internal control of cash inflow and outflow. The main reason for the difference in balances is due to the no party intimates the other every time a transaction takes place. Disagreement in balances may also arise owing to mistakes in the Cash Book or Bank Statement.

4.13 Technical terms :

Bank Reconciliation Statement : A statement which contains a complete and satisfactory explanation of the differences in balances as per the Cash Book and Pass Book.

Standing Order : An instruction to a bank by a customer to make a fixed payment regularly on stated days.

Direct Debit : An instruction given to a bank by its customer to allow changes to be made periodically to the account at the instance of some third party.

4.14 Model questions

1. What is a bank reconciliation statement ? Why is it prepared ?
2. What are the reasons of differences of balances of cash book and pass book ?
3. Describe the procedure followed for preparing a bank reconciliation statement.
4. Discuss the advantages of preparing a bank reconciliation statement.

1.14 Reference Books

1. N. Ramachandran & K. Ratnakumari - Financial Management & Accounting
2. A. Mukherjee & M. Hanif - Modern Accounting
3. Accounting & Financial Management - S.K. Gupta & R. K. Sharma
4. Siddiqui S.A. & Siddiqui A.S. - Managerial Economics - A Financial Analysis

UNIT - II

Lesson - 5

MATERIALS MANAGEMENT : AN INTRODUCTION CONCEPTS - ORGANIZING THE MATERIALS MANAGEMENT

Learning Objectives:

After studying this lesson, you should be able to understand the :

- ☆ appreciate the need for materials management;
- ☆ define the scope and objectives of materials management;
- ☆ design the organization structure for materials management;
- ☆ identify the leadership qualities on the part of a materials manager

Content Structure :

- 5.1 Introduction
- 5.2 Objectives of Materials Management
- 5.3 Materials Planning
- 5.4 Materials Cycle and Flow Control System
- 5.5 Materials Budget
- 5.6 Organizations for Materials Management
- 5.7 Restructuring of functional organization
- 5.8 Leadership qualities of a materials manager
- 5.9 Organization Chart for materials management
- 5.10 Summary
- 5.11 Technical terms
- 5.12 Model Questions
- 5.13 Reference Books

5.1 Introduction :

Materials Management is primarily concerns with the optimum use of materials. Materials constitute 50 to 90 percent of the cost of the end-product. So naturally management of materials in the process of production of goods and services occupies an important place. Materials Management represents that aspect of management activities which deals with the supply of materials, accounting, storing, issue and movement for optimum utilization of materials.

Effective Materials Management involves materials productivity. In order to achieve this a well coordinated and integrated approach towards various problems involving decision-making with respect to materials is required. The primary goal of Materials Management is to obtain materials at the lowest possible price, with quality and continuous supply. Thus, management of this whole flow of

materials is more often called Materials Management. Technological changes and proliferation of new materials are demanding an altogether new information system.

5.2 Objectives of Materials Management :

One of the basic functions of management is to yield the maximum results, which can be done by maximizing the productivity. Objectives of the organization as a whole can be achieved through the efficient management of the materials function. Materials Management cannot be viewed in isolation. It mainly aims at reducing cost and efficient use of the infrastructure and equipment.

Generally, the basic objectives of the undertaking as a whole are :

- i) Maximizing the profits for survival and growth
- ii) Maximizing satisfaction to customers or recipients of the service.
- iii) Technological innovations to overcome resistance to growth and competition.
- iv) Providing good working conditions to employees.
- v) Achieving social objectives.

In the process of achieving the above objectives, the objectives of materials management can be stated as follows :

- i) Maintaining continuity of productive or service operations by supplying an uniform flow of materials.
- ii) Reducing material costs through systematic and scientific techniques.
- iii) Reducing materials costs through effective inventory control techniques.
- iv) Ensuring quality of product or service at reasonable prices or fee.
- v) Ensuring lower departmental costs, higher and better service to customers and maintaining of ethical practices and standards.
- vi) Establishing good relations and hospitality to the customers.

Modern materials management provides many effective tools and techniques through which cost can be reduced and the profitability of the organization can be improved.

5.3 Materials Planning :

Materials Planning is one of the important aspects of Materials Management. Materials Planning is a scientific technique of determining in advance the requirements of raw materials, ancillary parts, equipment, etc. as required by the production or service. The basis of materials planning is usually production or service based.

Requirements of various items of material or equipment are generally determined by master production or service schedule. Materials budget becomes the tool of control, and within its framework

1. మధ్య ద్రావిడ భాషలు :

1. తెలుగు :

తెలుగులో వచనం రెండు రకాలు. ఒకటి ఏకవచనం రెండు బహువచనం. తెలుగులో వచనం మహల్, అమహల్ బేదాల్ని ఆశ్రయించి వుంటుంది. పురుష బోధకాలు మహత్తులు. మిగిలిన స్త్రీ తిర్వగ్గడ వాచకాలన్నీ అమహత్తులు. అమహత్తుల్లో స్త్రీ వాచకాన్ని తెలియజేయునది మహతీవాచకం. ఈ మహతీ వాచకం ఏకవచనంలో అమహత్తులతోనూ బహువచనంలో మహత్తులతోనూ వుంటుంది.

ప్రాచీనకాలంలో మహద్భూమి వచనానికి ఒక ప్రత్యయం, అమహద్భూమి వచనానికి మరో ప్రత్యయం వుండేది. మహద్భూమి వచనానికి 'అర్' , అమహద్భూమి వచనానికి 'కళో' అనే ప్రత్యయాలు చేరేవి. క్రమక్రమంగా అమహద్భూమి వచన ప్రత్యయమైన 'కళో' లు ప్రత్యయంగా మారింది.

జడవాచకాలైన నామ పదాలకు బహువచన ప్రత్యయం అవసరకంటేదని 'తోల్ కాప్పియం' లో చెప్పబడింది.

ఉదా॥ మూడు వందన /పశువులు వచ్చినవి/

మూల ద్రావిడ భాషాలక్షణ ఆవేశాలు ఇప్పటికీ తెలుగులో అక్కడక్కడ కనిపిస్తున్నాయి.

ఉదా॥ వంద ఎకరం, నూరు గడప, లక్ష జనం

పై ఉదాహరణాల్లో బహువచన ప్రత్యయం లేకుండగానే ఉపయోగిస్తారు.

తెలుగు వచనంలో మరో విలక్షణ విశిష్ట విశేష లక్షణంచోటుచేసుకుంది. అమహద్భూమి వచన కర్తకు ఏకవచన క్రియ ఉపయోగిస్తారు.

ఉదా॥ వంద విస్తరి వేశారు	చిలుకలు పలికింది
నూరు ఆకు తెచ్చారు	చెట్లు పడింది
ఏబై మేక కొన్నాడు	వేయి విస్తరిలేచింది
వందకాయ ఊరగాయ	వేయి గడప వుంది.

1. డు- ము - వు - ఏకవచనం :

తెలుగు భాషలో డు, ము, వు ఈ మూడూ ఏకవచన ప్రత్యయాలు. 'లు' బహువచన ప్రత్యయం. ఏక వచనానికి చివర సాధారణంగా డు, ము, వు అనే ప్రత్యయాల్లో ఒకటి చేరుతుంది.

ఉదా॥ రాముడు, వృక్షము, దేనువు.

1. 'డు' :

మూల ద్రావిడ భాషలోని 'అన్' అనే దాని మీద క్రమంగా 'రు' అనే బహు వచన ప్రత్యయం చేరింది. ఆ రేఫంకాల గమనంలో /మూర్ధన్యాక్షరం, ఊమ్మత నుండి స్పృశ్యతను పొంది / 'డ' వర్ణంగా మార్పు చెంది పిదప 'డు' వర్ణంగా మారింది ఈ 'డు' వర్ణం బిందుపూర్వకం కావడం వల్ల దీని పూర్వ రూపం 'అన్' తఅని తెలుస్తుంది.

ఉదా॥ రామన్ + రు రామన్లు	రామణ్లు
రామండు	రాముడు కృష్ణుడు

11. ము - వు :

ము, వల రెండింటికీ మూలరూపం 'వు' కాల గమనంలో 'వు' మార్పు చెంది నాడత పొంది 'బు' వర్ణంగా మారింది. పిదప పిదప ఇందులో ఇందులో అనునాసిక్యం చోటు చేసుకుంది. ప్రాచీన శాసనాల్లో ఈ మార్పు మనకు స్పష్టంగా కనబడుతుంది. ఇందులో అనునాసిక్యం చోటు చేసుకుంది. ప్రాచీన శాసనాల్లో ఈ మార్పు మనకు స్పష్టంగా కనబడుతుంది. ఇందలి 'బు' వర్ణమే 'ఉ' కారాంత పదాల్లో 'వు' వర్ణంగా మార్పు చెందింది.

ఉదా॥	శాసనపు	శాసనబు	శాసనంబు
	శాసనము	వృక్షము	ధనము

తెలుగు భాషలో మాత్రం వు వు గా మారడం తత్పమ పదాల మీద మాత్రమే కనబడుతుంది. కన్నడంలో ఆకారాంతాల మీద 'వు' వర్ణకం కనబడుతుంది.

నిత్య ఏకవచనాలు :

సస్య, లోహ సంభార వాచకాలు, ద్రవ్య, సదృశ వాచకాలు, అక్కడాదులు కొన్ని సర్వనామాలు నిత్యైక వచనాంతాలు.

1. కొన్ని పదాలు:

కొన్ని పదాలకు డు, ము, వు ప్రత్యయాలు చేరవు. అయినప్పటికీ ఆ పదాలు ఏకత్వ బోధకాలు కావడం చేత వాటిని ఏకవచన పదాలుగానే వ్యవహరిస్తారు.

ఉదా॥ హరి, గిరి, సీత, అన్న, అక్క, గోడ, మేడ, చరిత్ర మొ॥

2. సస్య వాచకాలు :

పంటల్ని తెలియజేసేవి సస్యవాచకాలు.

ఉదా॥ వరి, చోడి, జొన్న, రాగి, కంది, పెసర, మినుము మొ॥

3. లోహ వాచకాలు :

ఉదా॥ బంగారం, వెండి, కంచు, ఇత్తడి, రాగి, సీసం, ఇనుం మొ॥

4. సంభార వాచకాలు :

పాక సామగ్రిని తెల్చే పదాలు సంభార వాచకాలు.

ఉదా॥ నింతపండు, నూనె, నేయి.

5. ద్రవ్య వాచకాలు :

ద్రవ్యం అంటే పదార్థం. బియ్యం అనేది ద్రవ్యవాచకం. దీనికి బహువచనం కాదు.

6. సదృశ వాచకాలు :

సదృశం అంటే సమానం. సదృశం అనే అర్థాన్ని తెలియజేసే పదాలు సదృశ వాచకాలు

ఉదా॥ ఈడు, ఎన, సరి, సాటి మొ॥

7. అక్కదాదులు :

అక్కడ, ఇక్కడ, ఎక్కడ, అచ్చట, ఇచ్చట, ఎచ్చట, అప్పుడు, ఇప్పుడు, ఎప్పుడు మొ॥

8. కొన్ని సర్వనామాలు :

రెండు, మూడు, పెక్కు, అన్ని, ఇన్ని, మున్నగు సర్వనామాలు బహుత్వబోధకాలు అయినప్పటికీ ఏక వచనంగానే పరిగణించబడతాయి.

9. విశేష్యం, విశేషణం ఒకే వచనంలో వుండడం సర్వసాధారణం :

ఉదా॥ వాడు బాలుడు, వారు బాలురు.

10. స్త్రీ సమములైన విశేషణాల మగంత విశేషణాల బహువచనానికి ఏకవచనం వస్తుంది.

ఉదా॥ మాటలు పెక్కులేల - మాటలు పెక్కేల
కులిశధారలు కుంతిలములయ్యె -
కులిశధారలు కుంతిలములయ్యె
ఇష్టములగు పదార్థములు -
ఇష్టమగు పదార్థములు
సరసములగు మాటలు -
సరసమగు మాటలు

2. లు, బహువచనం :

'లు' వర్ణం బహువచనం . ఇది ప్రాచీన శాసనాల్లో ల్, ల్, ళు అనే రూపాలతో కన్పిస్తుంది. మరికొన్ని చోట్ల కళ్, కళు కళ్, గళ్, గళు, కొళ్, కొళు అనే రూపాంతరాలు కన్పిస్తున్నాయి.

చాలా ప్రాచీన కాలం నుంచి అమహద్భహువచనంగా వున్న 'కళ్' క్రమంగా మహత్తుల మీదకి వ్యాపించి అనుచిత విభాగం కొన్నిచోట్ల పొందింది.

ఉదా॥ ఈం + గళ్ ఈంగళ్ ఈగ + లు
మరికొన్ని చోట్ల 'క' కార లోపం వల్ల కూడా ఏర్పడింది.

ఉదా॥ పండితర్ + కళ్ + పండితాళ్
పండితు +లు - పండితులు

కాలగమనంలో ఈ 'ళ' కారం 'ల' కారంగా మార్పు చెందింది. అయినప్పటికీ కొన్నిచోట్ల తెలుగలో 'ళ', వర్ణం కనిపిస్తుంది

ఉదా॥ ఊళ్లు, గోళ్లు, వేళ్లు,

నిత్యబహువచనాలు :

1. ధాన్య వాచకాలు :

ఆళ్లు, చోళ్లు, వడ్లు, కందులు, పెసలు, జొన్నలు, గోదుమలు మొదలైనవి ధాన్య వాచకాలు నిత్యబహువచనాలు

2. క్రీడా విశేషాలు:

గొట్టిళ్లు, గుజ్జనగూళ్లు, అచ్చన గాయలు, ఓమనగుంటలు, దాగిలిమాతలు, వన్నెల కుప్ప మొదలైన క్రీడా విశేషాలు నిత్య బహువచనాలు.

3. గౌరవవాచకాలు :

'పూజ్యత' అనే అర్థంలో ఏకవచనానికి బదులుగా బహువచనాన్ని వాడుతారు.

ఉదా॥ ఈయన మా ఉపాధ్యాయుడు
వీరు మా ఉపాధ్యాయులు
స్వామి ; దయచేయండి

'పూజ్యత' అనే అర్థంలో ఆత్మార్థక బహువచనం యుష్మదర్థానికి బదులుగా వాడుతారు.

తమరెప్పుడు దయచేశారు
తమ రాకతో మా గృహం పావనమైంది.

4. సంబంధ బాంధవ్యాలు :

సంబంధ బాంధవ్యాల్ని తెలయచేసినప్పుడు బహువచనాన్ని ఉపయోగిస్తారు.

ఉదా॥ ఇది మా ఇల్లు
వీరు మా నాన్నగారు
మీ యూరీది

5. ప్రశ్నార్థకాలు / అజ్ఞాత ప్రశ్నలు/ :

అజ్ఞాత ప్రశ్న చేసినప్పుడు ఏక వచనానికి బదులుగా బహువచనం వాడడం జరుగుతుంది.

వచ్చినవారెవరు ?
వచ్చినవారు పురుషులారా ? స్త్రీలారా ?

6. సర్వనామాలు :

కొన్ని సర్వనామాలు నిత్యబహువచనాలై వుంటాయి. ఇద్దరు, ముగ్గురు, పలువురు, పెక్కురు, అందరు, కొందరు మొదలైనవి.

7. ఇతర పదాలు :

కురులు, మిణుగురులు మొదలైనవి బహువచనాలుగానే ఉపయోగించబడతాయి. అంటే దీనికి ఏకవచనంలో ప్రయోగం లేదని అర్థం. మిణుగురు బుర్రు అని సమాజంలో ఏకత్వ బోధకమై వుంటుంది. ఇచ్చట ఆక్షేపలేదు.

2. గోండి :

పురుష వాచకాల్లో బహువచన ప్రత్యయ రూపాలు ర్, ఊర్, ఈర్, ఈర్, 'ర్' ఈకారాంతాల్లోనూ 'ఊర్' ఏ లేక ఆల్ తో అంతమయ్యే వాటిలోనూ వస్తుంది.

కాండీర్	-	అబ్బాయిలు
కల్లీ	-	దొంగలు
అక్కూర్	-	తల్లియొక్క తండ్రులు
మామాలీర్	-	మామయ్యలు

పురుషేతర నామవాచకాల్లో బహువచనానికి క్, డ్ /ంగ/ అనే రెండు రూపాలు వున్నాయి.

'క' కొన్ని అజంత నామ వాచకాల్లో వస్తుంది. ఇది హలంత నామాల్లో నియతంగా వస్తుంది.

మరాక్	-	చెట్టు
ఆజీక్	-	తండ్రి తల్లులు
అతీక్	-	అత్తలు
కాయాజ్	-	కాయలు
కోందాజ్	-	ఎడ్లు
పిట్టజో	-	పిట్టలు

3. కువి:

పురుష వాచక బహువచన ప్రత్యయం 'రి'.

కొకరి	-	అబ్బాయి
-------	---	---------

స్త్రీ వాచకాల్లో బహువచన ప్రత్యయం 'స్క'.

అయస్క/బయనిక	-	ఆడవాళ్లు
-------------	---	----------

అమనుష్య వాచకాల్లో బహువచన ప్రత్యయ రూపాలు 'క', 'జ' /ంగ/. సాధారణంగా 'క' హలంతాలు తర్వాత వస్తుంది.

పక్క	-	పళ్లు
కణ్క	-	కళ్లు

'జ' /ంగ/ అజంతాల తర్వాత వస్తుంది.

బుగ్గజ	-	బుగ్గలు
సెప్పుజ	-	చెప్పులు
కడవెజ	-	కడియాలు
మొక్కజ	-	మొక్కలు

2. దక్షిణ ద్రావిడ భాషలు

1. తమిళం :

లింగ భేదాన్ని అనుసరించి ద్రావిడ భాషల్లో వచన ప్రత్యయాలు వుంటాయి. తమిళంలో రెండు వచనాలు వున్నాయి. ఒకటి ఏకవచనం రెండు బహువచనం. తమిళంలో రెండు వచనాలు వున్నప్పటికీ వచన రూపాలు ఐదు భాగాలున్నాయి.

1. తమిళంలో ఏక వచనం - రకాలు

తమిళంలో ఏకవచనం మూడు రకాలు. అవి ఇవి -

1. పురుషవాచకాలు
2. స్త్రీ వాచకాలు
3. జడవాడదాలు

2. తమిళంలో బహువచనం - రకాలు

తమిళంలో బహువచనం రెండు రకాలు. అవి ఇవి -

- i. మహాన్నహతీ బహువచనం /పలర్పాల్ /
- ii. అమహాల్ బహువచనం /పలపిన్పాల్/

తమిళభాషలో లింగానిక వచనానికి తేడా లేదు. ఒకే ప్రత్యయం అటు లింగాన్ని ఇటు వచనాన్ని తెలయజేస్తుంది. మనుష్య వాచకాల /ఉయర్తితై/ లో బహువచన ప్రత్యయాలు ఆర్ / ఆర్, ఓర్, ఇర్, మార్.

పాణర్	-	పాటలు పాడేవారు
తాయర్	-	తల్లులు
పార్ప్యార్	-	బ్రాహ్మణులు
అటియార్	-	సేవకులు
ఇళైయార్	-	పడుచువాళ్లు
కేళిర్	-	చుట్టాలు
పెంటర్	-	స్త్రీలు
ఐయన్మార్	-	ఆన్నలు
తోళియార్	-	చెలికత్తెలు

2. మలయాళం :

ఈ భాషలో మనుష్య వాచక బహువచన ప్రత్యయాలు 'ఆర్', 'మార్'

మాతర్	-	స్త్రీలు
తచ్చకమార్	-	వడ్రంగులు

అమనుష్య వాచకాలలోనూ, కొన్ని మనుష్య వాచకాలల్లోనూ 'కళో' ప్రత్యయం వుంది.

మరజ్జాళ్	-	చెట్లు
స్త్రీకళో	-	స్త్రీలు

అచేతన నామవాచకాల్లో 'కళో' వైకల్పికం. బహుత్వాన్ని సూచించే సంఖ్య వున్నప్పుడు అచేతన నామవాచకానికి ఈ ప్రత్యయాన్ని చేర్చనక్కరలేదు.

నాలుకల్లు/కళ	-	నాలుగు రాళ్లు
--------------	---	---------------

3. తొద

తొదలో అన్ని నామవాచకాల్లోనూ ప్రథమ పురుష సర్వనామాల్లోనూ బహువచన ప్రత్యయం 'ఆమ్'

ఆతామ్	-	వారు, అవి
ఇరామ్	-	గేదెలు
మొఖామ్	-	అబ్బాయిలు
కూఖామ్	-	అమ్మాయిలు
కొయామ్	-	చేతులు

III. ఉత్తర ద్రావిడ భాషలు :

1. బ్రాహూయి :

బ్రాహూయి భాషలో బహువచన ప్రత్యయం క్, ఆక్.

'కో' దీర్ఘచ్చుకానీ, ఎయ్ కానీ చివరలోవున్న నామాల్లోనూ ట్, డ్, డ్, న్, మ్, ల్, ల్, ర్, న్, వ్, డ్, ఝు - ఈ హల్లులో ఒక దానితో అంతమయ్యే నామాల్లోనూ వస్తుంది.

చాక్	-	నోళ్ళు
దేక్	-	రోజులు
ఉరాక్	-	ఇళ్ళు
పూక్	-	పురుగులు

'ఆక్' మిగిలిన హల్లులతో నామాల తర్వాత అకారాంతమైన నామాల తర్వాత వస్తుంది.

పుటాక్	-	జాట్లు
పిడ్డాక్	-	కడుపులు
తమాక్	-	నిద్రలు
ఇరమాక్	-	రోట్టెలు

'ఆన్' అనే బహువచన ప్రత్యయం పేర్లకీ, సంబంధించిన వాచక పదాలకీ, చేర్చబడుతుంది. ఇది ఆ వ్యక్తిని, ఆ వ్యక్తికి సంబంధించిన కుటుంబాన్ని లేక సముదాయాన్ని సూచిస్తుంది.

బాజ్ఖానాన్స్	-	బాజ్ ఖానా ఆయన కుటుంబమూ
ఎమ్మమాన్స్	-	తల్లి ఆమెకి సంబంధించిన వాళ్ళూ

2. మాల్తో :

మనుష్య వాచక బహువచన ప్రత్యయం 'రో'

మలెర్	-	మనుష్యులు
మన్నీర్	-	స్త్రీలు
మగెర్	-	అమ్మాయిలు

అమనుష్య వాచకాలకి బహువచన ప్రత్యయంలేదు. అయితే బహుత్వాన్ని సూచించవలసిన వచ్చేటప్పుడు 'గవో' అనే పదార్థాన్ని నామవాచకానికి చేరుస్తారు.

బేడే గవోండిత్ - గర్భాలు

'గవో' అనే పదం చేర్చడం కూడా వుంది.

గృవోసియండే - నక్కలన్నీ

3. నుడువ :

మనుష్య వాచక బహువచన ప్రత్యయం 'అర్', 'ర్'

అలర్ - పురుషులు

ముక్కర్ - స్త్రీలు

పెల్లర్ - ఇమ్మాయిలు

అమనుష్య సమదాయాన్ని సూచించడానికి 'గురియార్' అనే పదం వాడుతారు.

అలీ గురియార్ - భార్యలు

అలర్ గురియార్ - పురుషుల సముదాయం

బంధు వాచక పదాలకి 'బగ్గర్' చేరుస్తారు.

దాదాబగ్గర్ - అన్నలు

అమనుష్య వాచకాలకి బహువచన ప్రత్యయంలేదు. అయితే బహుత్వాన్ని సూచించ వలసినవచ్చేటప్పుడు 'గుట్టే' అనే పదార్థాన్ని నామవాచకానికి చేరుస్తారు.

యన్ గుట్టే - చెట్లు

నెర్ గుట్టే - పాములు

అడ్డో గుట్టే - ఎడ్లు

విషయాల్ని బాగా పరిశీలిస్తే ద్రావిడ భాషల్లో మనుష్య వాచకాలకి ఒక బహువచన ప్రత్యయం, అమనుష్య వాచకాలకి ఒక బహువచన ప్రత్యయం వున్నాయిన తెలుస్తుంది.

4. విభక్తులు :

ఒక వాక్యంలో వేర్వేరు పదాలకు అన్వయాన్ని సాధించి పెట్టే ప్రత్యయాలు విభక్తులు సాధారణంగా విభక్తులు రెండు రకాలు. ఒకటి నామ విభక్తులు రెండు క్రియా విభక్తులు. ప్రాతి పదికలపై చేరేవి నామవిభక్తులు. దాతువలపై చేరేవి క్రియా విభక్తులు.

నామవిభక్తుల్ని సంస్కృతంలో 'సుప్పులు' అంటారు. అవి చేరిన ప్రతిపదికల్ని 'సుబంతాలు' అంటారు. ఏదో ఒక విభక్తి చేయబడి, లేదా చేరి లోపించబడి సుబంతాలకు వాక్యంలో ప్రయోగంలేదు.

సంస్కృత విభక్తి ప్రత్యయాలకు తెలుగు విభక్తి ప్రత్యయాలకు ఎలాంటి పోలికలేదు. 'ప్రత్యయం ఇహ వర్ణకః' అని ప్రాచీనులు వ్యవహరించురని సూరిగారి వివరణ.

ద్రావిడ భాషలు - విభక్తులు - విశిష్టత :

1. ప్రథమా విభక్తి :

ద్రావిడ భాషలో ప్రాతిపదికమే ప్రథమా విభక్తిలో వుపయోగించబడుతుంది. తెలుగు వ్యాకర్తలు డు, ము, వు, లు, అనే నాలుగు ప్రత్యయాలు ప్రథమా విభక్తి ప్రత్యయాలు అని పేర్కొన్నారు. ఇందులో డు, ము, వు, ఈ మూడు ఏక వచనంలో వస్తాయి 'లు' బహువచనంలో వస్తుంది. ఉదా: రాముడు, వృక్షము, దేనువు, నదులు, అయితే పైన చెప్పిన డు, ము, వు, లు అనేవి లింగవచన బోధకాలేకావి ప్రథమా విభక్తి ప్రత్యయాలు కావు.

2: ద్వితీయా విభక్తి

1. మధ్య ద్రావిడ భాషలు :

1. తెలుగు :

ని, ను, ల, కూర్చి, గురించి మొదలైనవి ద్వితీయా విభక్తి ప్రత్యయాలు. ద్వితీయా విభక్తి కర్మకు వస్తుంది. ధాతువు యొక్క అర్థమైన పలాన్ని ఆశ్రయించి కర్మ వుంటుంది. 'కర్మ' కు వస్తుంది. ధాతువు యొక్క అర్థమైన పలాన్ని ఆశ్రయించి కర్మ వుంటుంది.

1. ను :

ఇది ద్వితీయా విభక్తి ఏక వచన ప్రత్యయం. ఇది ద్రుతం కూడా ఇది కొన్ని ఎడల 'ని' వర్ణంగానూ కొన్ని ఎడల 'న' కారం 'నో' గానూ మారుతుంది. అందుచేతనే సూరి 'ను' వర్ణం, ద్వితీయ అని మాత్రమే చెప్పారు. ఇది సర్వనామరూపమైన నన్ - నన్ను అనే వాని సామ్యం వల్ల ఏర్పడింది. ఈ 'ను' అనేది ఇకారాంత వదాల తర్వాత చేరేటప్పుడు స్వర సామ్యాన్ని బట్టి 'ని' అయింది.

హరి + ను -హరిని.

ఉదా దండధరుడు	-	దండమును ధరించువాడు
నెలతాల్పు	-	నెలను ధరించినవాడు
నరపాలుడు	-	నరులను పాలించువాడు

II. కూర్చి :

'కూడు' అనే ధాతువు యొక్క ప్రేరణ రూపం 'కూర్పు', 'కూర్పు' క్షార్దక రూపమే కూర్చి, 'కూర్చి' స్వతంత్ర్య పదం

ఉదా|| పార్వతి శివుని గూర్చి తపస్సు చేసెను.
రాముని గూర్చి వచ్చెను
ఇంటిని గూర్చి వెళ్ళెను

III. గుఱించి:

ద్వితీయా విభక్తిలో 'కూర్చి' అనే దానికి బదులుగా 'గుఱించి' అనేది కూడా ప్రయోగించబడుతుంది. 'కూర్చి' లోని 'క' కారం 'గ' కారంగా మారడంతో పాటు అనునాసికం కూడా చేరి 'గుఱించి' అనే రూపం ఏర్పడినట్లు భావించవచ్చు.

ఉదా|| నిన్ను గుఱించి ఎదురు చూసెతిని

2. గోండి : ఊన్
 ఇది జౌవ విభక నకారం తర్వాత లోపిస్తుంది
 బయ్యేన్ - ఆమ్మని
 కోందాతున్ - ఎద్దుని

3. కొండ : జ్, జి
 ఈ భాషలో ద్వితీయ చతుర్థి, చతుర్థి ద్వితీయావిభక్తి అవుతుంది.
 యుష్మదస్మదర్థకాలాల్లో 'జి' వస్తుంది.
 నుక్కడిదిజ్ - కుక్కని, కుక్కకి
 నజి - నాకు
 మిజి - మీకు

II. దక్షిణ ద్రావిడ భాషలు :

1. తమిళం :

తమిళంలో 'ఐ' ప్రత్యయం

- వేంతన్నె - రాజుని
 ఎన్నె - నన్ను

2. మళయాళం :

మలయాళంలో 'ఎ' ప్రత్యయం

- అవనె - వాణ్ణి
 మళయాళంలో ప్రాచీన కాలంలో శాసనాల్లో 'ఐ' వుంది.
 మగన్ - మగనె - కుమారుని
 అవన్ - అవనె - వానిని

III. ఉత్తరం ద్రావిడ భాషలు :

1. బ్రాహుయీ : ఎ

- దుజ్జె - దొంగని - దొంగకి
 మారె - కొడుకుని - కొడుకుకి
 ఇక్కడ ద్వితీయా విభక్తిచతుర్థి విభక్తి కూడా అవుతుంది.

2. మాల్తో : ఎన్ / ఇన్ / న్ / అ / న్ /

- ఎంగన్ - నన్ను
 మలెరిన్ - మనుష్యుల్ని

కుబోన్ - 'కుక్కుని'
టూడన్/ - పులిని / టూడ్ /

3. కూడళ్ / కురుళ్ : అన్ / ఆన్ / ఇన్

ఫెస్పన్ - వడ్డు
ఎంగన్ - 'నన్ను'
అడ్డన్ - ఎద్దుని
ముక్కరిన్ - ముక్కరిన్

ఈ భాషలో ద్వితీయకు చతుర్థి, చతుర్థికి ద్వితీయా విభక్తి అవుతుంది.

3 : తృతీయా విభక్తి :

1. మధ్య ద్రావిడ భాషలు :

1. తెలుగు : చేతన్, చే, తోడన్, తో, అనే ఈ నాలుగు తృతీయా విభక్తి ప్రత్యయాలు.

1. చేతన్ - చే :

'చేత' అనేది 'చేయి' అనే పదం యొక్క తృతీయసప్తమ్యంతరూపం. 'చెయి' శబ్దానికి 'అన్' అనే స్థల వాచకమైన పదం చేర్చగా ఏర్పడిన రూపం కాబట్టి ఇది ద్రుతాంతమైంది. కాబట్టి చేతన్, చేన్ అనే రూపాలు వుంటాయి. చేత వర్ణకం కర్మార్థక వాక్యంలో కర్తకు అగుతుంది.

ఉదా విషయ సంపన్నుడు	-	విషయముల చేత సంపన్నుడు
వాత్సల్య సంపూర్ణుడు	-	వాత్సల్యం చేత సంపూర్ణుడు
కుసుమ శృంగారం	-	కుసుముల చేత శృంగారం
రూపం మహనీయులు	-	రూపం చే మహనీయులు
మంత్ర పూతం	-	మంత్రం చే పూతం

2. తోడ - తో :

'తోడు' అనే పదం యొక్క విభక్యంత రూపం 'తోడ'. ఇది తోడు ధాతురూపం. 'తోడు' అంటే సంధించు, కలుపు అనే అర్థాలు వున్నాయి. తోడు అనే దానికి 'అన్' చేర్చగా వచ్చిన రూపం ఇది కాబట్టి ఇది ద్రుతాంతం. అంచేత తోడన్, తోన్ అనే రూపాలు వుంటాయి. సహార్థంలోనూ, తుల్యార్థంలోనూ 'తోడ' వర్ణకం వస్తుంది.

ఉదా నా సమానుడు	-	నా తోడి సమానుడు
రవి సమానుడు	-	రవితోడి సమానుడు
క్రోధ వచనములు	-	క్రోధము తోడి వచనములు
దీపార్పితము	-	దీపములతో అర్పితము
శక్తియుతము	-	శక్తితోయుతం

మందారదామం - మందారములతో దామం
వెండినాణెములు - వెండితో నాణెములు

2. గోండి :

తృతీయాకు సప్తమీ విభక్తి వస్తుంది.
కుయ్దే - చేతితో / లో
నాటే - ఊళ్లో
రూసినే - కత్తులతో / తో
రోన్ - ఇంట్లో / ఇండులో 'పి' లోపిస్తుంది/
సహార్థకవిభక్త్యర్థం :
థోడో - వోని థోడో - వాడితో

3. కొండ : అండ్

తృతీయాకు పంచమీ విభక్తి వస్తుంది.
దుడుదండ్ - దుడ్డుతో
పనెదండ్ - దువ్వెనతో
దూరంతండ్ - దూరాన్నించి
నేఱండ్ - నేటి నుంచి
'ణి' అనే వస్త్ర ప్రత్యయం చేరే స్థల కాలవాచి పదాల్లో పంచమీ విభక్తి ప్రత్యయం 'జ్' వస్తుంది.
అబెణిజ్ - అప్పటి నించి
ఇన్తోణిజ్ - ఇంట్లోనించి
సహార్థక ప్రత్యయం : వలె
మావలె - మాతో

2. దక్షిణ ద్రావిడ భాషలు :

1. తమిళం :

కరణార్థక ప్రత్యయాలు : ఆన్, ఆల్
మరుప్పినాన్ - తొండంతో
కైయాల్ - చేత్తో
సహార్థక ప్రత్యయాలు : ఒటు, ఓటు
వలియొటు / పులిమొటు - పులితో

2. మలయాళం :

కరణార్థకం	-	ఆల్
కైయల్	-	చేత్తో
సహార్థకం	-	ఒటు / ఓటు
ఆవనోటు / ఆపవోటు	-	వాడితో

3. కన్నడం :

ఈ భాషలో తృతీయా, పంచమీ విభక్తులకు ఒకే ప్రత్యయం వుంటుంది.

కరణార్థకం - అపాదానార్థకం :

ప్రాచీనకాలంలో	- ఇం	- ఇందం	- ఇందె
ఆధునిక కాలంలో	-	ఇంద	

పూగళింపూవు గళంద - పువ్వులతో, పువ్వుల నించి

ఇదటిందం / ఇదరింద - దీనితో, దీనినించి

సహార్థకం	:	ఒడనె
రామనొడనె	-	రాముడితో
నన్నెడనె	-	నాతో
యారొడనె	-	ఎవరితో

III. ఉత్తర ద్రావిడ భాషలు :

1. బ్రాహుయీ :

కరణార్థకం	-	ఆటో
ఖరాసల్	-	ఎద్దుతో
ఎట్టటో	-	కర్రతో
సహార్థకం	-	తో
మారతో	-	కుడుకుతో

2. మాల్తో :

కరణార్థకం	-	ఎత్ / ఇత్ / త్
కీడెత్	-	ఆకలివల్ల
టెటుత్	-	చేత్తో
ఆమెత్	-	నీళ్ళతో
మలెరిత్	-	మనుషులతో
సహార్థకం	:	గునన్ / గనే
నమ్గునన్	-	మనతో

4. : చతుర్థి విభక్తి :

1. మధ్య ద్రావిడ భాషలు :

1. తెలుగు : 1. కొఱకు :

కొఱకు, కయి రెండూ చతుర్థి విభక్తి ప్రత్యయాలు. ఇందులో 'కొఱకు' ద్రుతాంతం. సంప్రదానానికి చతుర్థి విభక్తి అవుతుంది. త్యాగోద్దేశ్యం సంప్రదానం. ఎవరిని ఉద్దేశించి త్యాగం చేయుటం జరుగుతుందో ఆ వ్యక్తి సంప్రదానం.

ఉదా॥	భోగమందిరం	-	భోగం కొరకు మందిరం
	గురుదక్షిణ	-	గురువు కొరకు దక్షిణ
	పెండ్లి కొడుకు	-	పెండ్లి కొరకు కొడుకు
	కళ్యాణ వేదిక	-	కళ్యాణం కొరకు వేదిక

2. కై :

కు + అయి కయి కై. ఇది 'కయి' యొక్క రూపాంతరం. ఈ పదం కు + అయి - కయి అనే వాని కూడిక వల్ల కలిగింది. ఇది 'అగు' ధాతువు యొక్క క్రౌర్థకరూపం.

తపమునకై అడవికి వెళ్లెను
జ్ఞానమునకై అభ్యాసము చేయుచుండెను.

2. గోండి : క్ / కూన్

నాక్ / నాకూన్	-	నాకు
మూరాత్క్ / మూరాత్కూన్	-	ఆవుకి

3. కువి : కి

మైహాకి	-	పురుమడికి
--------	---	-----------

1. దక్షిణ ద్రావిడ భాషలు :

1. తమిళం : క్కు

ఎనక్కు	-	నాకు
వీట్టిఱ్ఱు / వీట్టుక్కు	-	ఇంటికి
అవఱ్ఱు / అవనుక్కు	-	వాడికి

2. మలయాళం : క్కు

కొటిక్కు	-	జండాకి
ఎనిక్కు	-	నాకు

తనిక్కు	-	తనకి
నముక్కు	-	మనకి

3. కిన్నడం : ఆ ఆకరం తార్వత ర్, తర్వాత క్కె, మిగిలిన చోట్ల గె.

మరక్కె	-	చెట్టుకి
ఓలగక్కె	-	సభకి
అదర్కె/అదక్కె	-	దానికి
కవిగె	-	కవికి

III. ఉత్తర ద్రావిడ భాషలు :

1. మాలతో : క్, ఇక్

ఇంగె	-	నాకు
మలెక్	-	మనిషికి
ఫెసిక్	-	ఊరికి
డడెక్	-	ఆడవికి
పాకిక్	-	చెరువుకి

2. కురుఫ్ : గే

అన్ గే	-	వాడికి
ఎంగాగే	-	నాకు

5. పంచమి విభక్తి :

1. తెలుగు :

వలన, కంటె, పట్టి ఈ మూడు పంచమి విభక్తి ప్రత్యయాలు. వలన కంటె రెండూ ద్రుతాంతాలు. పట్టి ద్వితీయాంత రూపానికి చేరుతుంది.

1. వలన :

'వలన' అంటే ప్రక్క దిక్కు అని అర్థం. 'వలను' కి బదులు 'వల్ల' అని కూడా ప్రయోగిస్తారు.

ఉదా॥ వలన వల్ల వల్ల

భయాదులు దేనివల్ల కలుగుతాయో దానికి 'వలన' అనే ప్రత్యయం వస్తుంది. భయం, జాగుపు, ఆలుపు, పరాకు, ఎరుగుట, తీసికొనుట, పుట్టుట, కాచుట, విరమించుట దాగుట, అడ్డుకొనుట, ఎడబాటు నొందుట మొదలైనవి భయాదులు.

ఉదా॥ భయం	-	చోరుని వలన భయం
జాగుపు	-	పాపం వలన ఏవగించు

అలపు -	అద్యయనం వలన అలుపు
పరాకు -	పాడివలన పరాకు పడెను
ఎరుగుట -	ఈ అర్థం అతనివల్ల తెలిసింది
తీసుకొనుట -	రాజా ప్రజల వలన కప్పం కొనును
పుట్టు -	బ్రహ్మవలన మానవులు పుట్టిరి
కాచుట -	శత్రువుల వలన ప్రజల కాచుట రాజధర్మం
విరమించుట -	భోగాల వలన విరమించుట శ్రేయం
దాగుట -	కృష్ణుడు తల్లివలన దాగెను
అడ్డుకొనుట -	శోకం వలన అడ్డుకొనెను
ఎడబాటునొందుట -	రాజ్యం వలన భ్రష్టుడయ్యెను.

'వలన' కు బదులు 'ఉండి' కూడా వాడబడుతుంది.

ఉదా॥ భోగాల నుండి విరమించుట శ్రేయం.

ఒక్కోసారి 'వలన' అనే ప్రత్యయానికి ఉండి అనే పదం అను ప్రయక్తమగుతుంది.

ఉదా॥ బ్రహ్మమున నుండి మానవులు పుట్టిరి.

ii. కంటె :

కు + అంటెను - కంటెను అనే రూపం ఏర్పడుతుంది. నిర్ధారణలోనూ, అన్యం మొదలైన పాదాలతోడి సంబంధంలోనూ 'కంటె' వర్ణకం వస్తుంది. అన్యం, ఇతరం, పూర్వం, పరం, ఉత్తరం మొదలైనవి అన్యాయలు.

ఉదా॥ మానవోని కంటె మరణం మేలు / నిర్ధారణం /
 చైత్రుని కంటె మైత్రుడు గుణవంతుడు / నిర్ధారణం /
 నీవు వచ్చు కంటె పూర్వమే యీతడు వచ్చెను / నిర్ధారణం /
 రాముని కంటె నన్యుడు దానమ్ముడు లేడు / అన్యార్థం //

iii. పట్టి :

'పట్టి' అంటే గ్రహించు అని అర్థం. ఇది పట్టు దాతువు యొక్క క్షార్పక రూపం. 'పట్టి' అనే ప్రత్యయం హేతువులైన గుణ క్రియలకు చేరుతుంది.

ఉదా॥ జ్ఞానమును పట్టి ముక్తడగును
 నీవు చేయుటను 'పట్టి' వర్ణకం వస్తుంది.
 హేతుర్థంలో పట్టికి బదులు 'వలన' వర్ణకం వస్తుంది.
 ఉదా॥ జ్ఞానం వలన ముక్తుడగును
 నీవు చేయుట వలన ఇది పూర్తి అయినది.

short, every operation requiring raising, lowering or moving an item may be termed as Materials Handling.

7.2 Scope and Importance of Materials Handling :

Materials handling activity is integrated with all types of organisational activities. The problem of moving materials at a lowest expenditure, time and effort is not restricted some types of organisations. The techniques and methods of material handling can be applied in any field of activity. Materials handling in various fields can be as follows :

- 1) **Manufacturing Sector** : In the manufacturing units, the managements are setting up a coordination committee to think of reducing the handling of materials. In view of growing competition, material handling is very important aspect in manufacturing units.
- 2) **Transportation Sector** : As it comes under the service sector, the movement of materials is the primary problem. Materials are moved from source to the manufacturing units and finished products from factories to the marketing points. In these industries the handling charges are as high as 60% of the operating costs.
- 3) **Process Industries** : In these, material handling is the supporting function. material handling problem has to be considered with the layout problem. Hence the layout is drawn by first drawing the material flow lines.
- 4) **Extractive Industries** : In these industries materials handling function is integrated with the operations involved in extracting the materials. Usually units using these materials are located nearer to mines to reduce the handling costs.

The importance of materials handling arises from the fact that the cost of handling is 30 to 40% of the wage bill in many organisations. Sometimes it will be as much as 50 to 60 percent of the product cost. Thus the importance of material handling study is in reducing both the cost and time of materials handling.

7.3 Materials Handling Principles :

Eventhough the material handling practices vary from one industry to another industry, some of the basic principles remain same. They are as follows :

- 1) **Standardization of equipment** : Material handling equipment should be selected in such a manner as to afford flexibility. The equipment should be capable performing multiple operations.
- 2) **Least handling cost** : Always it is better to keep the handling cost to the minimum, because handling does not add value to the product or material.
- 3) **Handling method as per volume** : Material handling method is determined by the volume, regardless of size, shape and value.
- 4) **Equipment Capacity** : The capacity should be carefully examined and never exceeded. Overloading causes accidents, excessive maintenance and repairs.
- 5) **Analysis of Operations** : Various material handling operations must be analyzed to determine combination of handling activities. It results in reduction of handling costs.
- 6) **Prepositioning of materials** : Materials should be moved on a horizontal plane wherever practicable. Excessive work can be reduced if the work layout is properly planned.
- 7) **Loading and unloading** : Proper attention must be given on loading and unloading, because the major portion of material handling lies in these two.

7.4 Features of efficient Materials Handling Programme :

As we have noted earlier, the ultimate efficiency of Materials Handling would be judged by the measure of reduction in handling costs. Thus an efficient Materials Handling Programme includes :

- ★ Elimination of all unnecessary handling
- ★ Good planning of materials handling
- ★ Reduction in movements of plants by re-layout
- ★ Use of the simplest equipment wherever possible
- ★ Standardization of handling equipment
- ★ Full utilization of the handling equipment
- ★ Scope for flexibility due to change in products, layouts etc.
- ★ Reviewing the Material Handling constantly

At present, the situation is changing to an integrated materials movement and flow-systems which are being increasingly based on computer use.

7.5 Store Keeping of Materials :

In any organisation all the activities cannot be carried out at one point of time. Storage of material is an essential process. All the activities involving materials are in day-to-day touch with the stores. In a majority of organisations materials or equipment constitutes the major fraction of cost. Material or equipment deterioration and careless handling may lead to reduced profits.

It is very clear that stores in any organisation has a significant role to play. Stores Management is concerned with carrying the right kind of materials in right quantity, providing it quickly as and when required and keeping it safe. Thus, the success of the organisation, besides other factors, depends to a large extent on the efficient storage and control of materials.

7.6 Functions and Activities of Storage System :

The main objective behind the stores function is to render service to the stores. The major functions and activities of the stores can be stated as follows.

- 1) **Receipt** : Receiving and accounting the material, equipment, spares, tools, other items and check their quality and quantity.
- 2) **Storage** : After accepting the materials, provision of right and adequate storage and preservation of materials.
- 3) **Retrieval** : Storing the material in respective locations, facilitating easy location and optimum space utilisation.
- 4) **Issue** : Proper issue of items to the consumer department or sections on the receipt of authorised purchase requisitions.
- 5) **Maintenance of Records** : To maintain proper records and update receipt and issue of materials.
- 6) **House keeping** : Keeping the stores clean and in a systematic manner thereby the handling, stocking, receipt and issue can be done satisfactorily.
- 7) **Control** : Stores management is also concerned with watching the discrepancies, abnormal consumptions, accumulation of stocks.

- 8) **Coordination** : To coordinate and cooperate with other departments such as purchasing, manufacturing, production planning and control, inspection etc.

7.7 Stores Organisation :

The centralization and decentralization of stores function is basically depends on the size of the organisation. Although centralization helps to ensure economy, better control, it creates some difficulties in providing service to various sections situated in different locations.

Generally two types of organisation are applied in stores.

- 1) **Materials function** : As per this, the organisatin of stores is considered to be a materials function and is clubbed with the purchasing or materials management department.
This kind of arrangement is relevant - i) As the activities of stores are material oriented, it should report to a department, whose primary interests lie in teh aterials and related operations; ii) From the total control point of view, the receiving and stores activities should be included in the rest of materials / equipment activities.
- 2) **Production function** : According to this, the stores organization is clubbed with the production department. The main reasons for this arrangement are : i) in order to run the production or service operation smoothly there must be control over the immediate material supply from stores. ii) in order to avoid any kind of collision of materials / equipment, the receiving and storing should be kept separate from the purchase department.

The objectives of the storekeeping and management are - store and manage the materials, making available to goods according to the needs, efficient supply of materials and equipment and to perform stores functions at minimum cost.

In stores management, both the centralised and decentralised organisations of stores are practised. Advantages of Centralised Stores Organisation -

- i) Effective and better supervision and control
- ii) Less related costs through reduced personnel requirement.
- iii) Better inventory checks
- iv) Maintenance of optimum stores
- v) Provision of better security arrangements

Advantages of decentralised stores organization :

- i) Reduced material handling and associated work
- ii) Convenient for every section or department to draw equipment or material
- iii) Less chances of production stoppages due to easy and prompt availability of materials.

7.8 Stores Location :

Stores location should be carefully decided and planned so as to ensure maximum efficiency. So the location of stores is a strategic decision, which once taken cannot be altered easily. The optimal location of stores minimises the transportation, handling and other costs and provides the protection for stores items.

The location of stores depends upon the nature and value of the items to be stored and the frequency with which the items are received and issued to the different departments. Factors determining the location of stores :

- i) Nature and value of the items to be stored
- ii) Number and location of users
- iii) type and volume of goods to be handled
- iv) inprocess stores near to subsequent operation
- v) tools and supplies stores is located centrally to the personnel and equipment served
- vi) should be done with a futuristic outlook.

In big organisations it is not possible to locate the stores near to all the departments usually a central stores is located and the issues are decentralised by setting the substores.

7.9 Stores Layout and Design :

The efficient layout and design of stores is very important as the overall functioning of the organisation depends on it. The planning and designing of stores should be carried out with the following objectives :

- i) To achieve ease of operation with ready accessibility of equipment or materials.
- ii) To achieve maximum utilization of space and flexibility of arrangement
- iii) Minimization of material handling requirements.

Factors in planning the layout and design : In order to achieve the objectives specified above, the following factors should be taken into consideration while planning the layout and design of the stores.

- i) The space for receipt and inspection should be adjacent to the main stores;
- ii) Different storage facilities should be situated in clearly defined lanes, so that items are quickly stored and located.
- iii) Clear markings should be made at storage space to facilitate location and identification.
- iv) The fast moving items should be stored near the dispensing window; the slow moving should be away from the window.
- v) The layout should be suitable for the use of modern material handling equipment.
- vi) Stores layout should encourage the FIFO (First In First Out), i.e., the old stock should be used earlier.
- vii) Sufficient space should be left for expansion purposes in each portion.
- viii) Hygienic environment must be provided within the store room.
- ix) Adequate and clear lighting arrangements should be provided.
- x) Adequate safety provisions i.e., fire fighting equipment, alarms, accident prevention methods should be inbuilt in the store room design.
- xi) Special facilities, such as cold room heating equipment, air-conditioning etc., if required should be carefully planned in advance.

7.10 Storage and Handling equipment :

The different types of equipment used in a stores department can be classified as - storing equipment and material handling equipment. The equipment should be selected very carefully for the successful operation of a stores room. Rapid changes have been taking place in the material storage and handling equipment due to the advancement of technology.

Commonly used Storing equipment :

- i) Platforms
- ii) Pallets and skids
- iii) Cabinets
- iv) Stacking boxes
- v) Special storage racks
- vi) Gravity feed racks
- vii) Open and closed shelves
- viii) Bins
- ix) Trays
- x) Drums
- xi) Barrels

The selection of the equipment shall be determined by the size, shape, extent of preservation required and other physical characteristics. At the same time the selection of material for various types of equipment should be done very carefully.

Common type of material handling equipment : As we have identified earlier, many factors like layout, processes, nature of equipment influences the material handling system. Therefore, an integrated approach will have to be taken in the case of material handling.

The common type of material handling equipment used in stores are as follows :

- i) Trolleys
- ii) Fork-lift truck
- iii) Hoists
- iv) Belt conveyor
- v) Roller conveyor
- vi) Crane

7.11 Stores Systems and Procedures :

In the stores management there are three broad areas. They are receipt, storage and issue of material or equipment. At every stage a great deal of information is required for checking, controlling and feedback purposes. Well designed stores systems and procedures are needed for effective store keeping and warehousing management. The three main areas of stores systems and procedures are briefly explained below.

- 1) **Receipt System :** This can be divided into receipts from outside suppliers and receipts from internal divisions. When a purchase order is placed, a copy is sent to the stores, indicating quantity and deliver date. Suppliers, once they despatch the goods, normally send an advice

note to the stores. In the third stage the document prepared by the transport carrier. Thus the documents, namely, purchase order, suppliers' advice document and the consignment note, enable the Stores Manager to speedy clearance of the material and minimize cost.

- 2) **Storing Practices** : Stocking function follows at the end of receipt. It involves activities like sorting out materials and storing them in their locations. This process is very crucial in warehouses where thousands of parts are stocked for meeting needs.
- 3) **Issue Control** : In the final stage of stores management, issue control takes place. Issues can be made to consuming departments or to outside suppliers.

Good stores system can greatly assist the store manager to maintain accurate reports, detection of discrepancies.

7.12 Standardisation, Codification and Variety Reduction :

Organisations deal with a large number of materials with varying degree of characteristics in terms of size, shape, sources of supply, modes of handling etc.

Classification, Codification, standardisation and variety reduction are the important aspects of stores management.

- 1) **Codification** : When there are large number of items handled by an organisation, there must be some means of identifying the items accurately, uniquely and adequately. Codification is the process of representing each item by a group of numbers and alphabets indicating the group, the subgroup, the type and dimension of the item. Many organisations in the private and public sectors, have their own system of codification.

The main objectives of Codification are : Accurate Identification prevention of Duplication, Efficient Purchasing, Efficient Recording and Accounting, Easy locating and inspection, and Easy Computerisation.

- 2) **Standardization and Variety Reduction** : Standardization is the process of grouping of items to conform to widely acceptable representative features and characteristics. Variety Reduction is the process of reducing a large variety of items with close characteristics to fewer items through standardization. Thus the process of standardization logically leads to simplification or variety reduction.

The main advantages of standardization are : reducing inventory items, evolving better means of communication, further inventory analysis, quality control and creating confidence in the international market.

7.13 Automated Stores Management :

In the past few decades significant developments have taken place in the area of stores management. With the rapid developments in the technology automated storage and retrieval system has been inviting the attention of professionals. Some of the systems to improve the efficiency of automated storage systems are - sequencing in an optimal way, allowing a single operator to perform all storage and order picking operations, storing items in pairs, locating items from the rack as per the structure and importance of orders.

7.14 Summary :

An effective material handling system depends upon tailoring the layout and equipments to suit specific requirements. The storage system forms the key component of any materials management system. The efficient planning and design of the store system is very much important for the efficient and smooth operation of any organization. Efforts should be made to incorporate the latest developments in the area of stores management so as to enable minimum blockage of capital.

In this lesson we have identified that effective storage of goods is vital to the success of any organization. The need of a proper identification, receipt and storage system has been highlighted. The aspects of codification, standardization and variety reduction have been discussed.

7.15 Technical terms :

Storage System : The manner in which goods are physically stored.

Receipt System : The procedure to monitor the receipt of goods in store with indications of the conditions of goods.

Codification : Condensing the long information with the help of few digits comprising alphabets and numbers.

Variety Reduction : Process of reducing a large variety of items with close characteristics to fewer items.

7.16 Model questions

1. Discuss the major functions of stores in an organisation.
2. What are the advantages and disadvantages of centralised store room facilities ?
3. Why materials handling function is considered as an important function ? Explain.
4. Explain the factors to be considered while selecting a material handling equipment.
5. What are the reasons for classification, codification and standardisation of materials ?
6. How would you choose the best location for a new store ?
7. What are the objectives of good store room layout ? Explain.

7.17 Reference Books

- | | |
|---|--|
| 1. Gopalakrishnan, P.
and Sunderasan, M. | - Materials Management - An Integrated
Approach |
| 2. A.K. Dutta | - Materials Management |
| 3. IGNOU | - MS-5 Management of Machines and Materials |
| 4. P. Rama Murthy | - Production and Operations Management |

Lesson - 8

MATERIALS RECORDS MANAGEMENT

Learning Objectives:

After studying this lesson, you should be able to :

- ☆ understand the various records of materials;
- ☆ know the system of stores management;
- ☆ become familiar with different kinds of documents used in stores;
- ☆ aware of the importance of material records and the latest developments.

Content Structure :

- 8.1 Introduction to Materials Records Management
- 8.2 Material Records
- 8.3 Bin Cards
- 8.4 Stores Ledger
- 8.5 Stock Identification Card
- 8.6 Materials Received Note
- 8.7 Materials Requisition Slip
- 8.8 Materials Returns Slip
- 8.9 Materials Transfer Note
- 8.10 Bill of Materials
- 8.11 Material Abstract or Material Issue Analysis Sheet
- 8.12 Summary
- 8.13 Technical terms
- 8.14 Model Questions
- 8.15 Reference Books

8.1 Introduction to Materials Records Management :

In the fast developing economy like India, materials manager has a tremendous challenge and responsibility. Any significant contribution made by the materials manager in reducing

materials cost will go a long way in improving the profitability and the return on investment. In order to achieve the real goals of material management an integrated approach is necessary.

Material records management is primarily based on proper materials accounting. The primary basis for materials accounting is cost. Stores accounting is important from the point of view of estimating the cost of the product for pricing decisions. The costing of materials or equipment has to be done both for the materials consumed in the production and estimating the value of materials held in stock.

Materials are recorded on a continuous basis and there is no prescribed procedure which can be used in the determination of materials or equipment cost for accounting purposes. In order to know the money value of materials on hand at a particular point of time, the quantity and value of those materials must be known.

8.2 Material Records :

Material or Stores Record Management is an essential process in the overall materials management.

The records which are usually kept in the process of materials records management can be as follows:

- ★ Bin Card
- ★ Stores Ledger
- ★ Stock Identification Card
- ★ Materials Received Note
- ★ Materials Requisition Slip
- ★ Materials Return Slip
- ★ Materials Transfer Note
- ★ Bill of Materials
- ★ Material Abstract

Development of appropriate recording system for stores or materials is important to provide right information regarding the physical inventory. Following are the significant aspects of the materials records management.

8.3 Bin Cards :

For each kind of material, a separate record is kept on Bin Card which shows details of quantities of each type of material received, issued and on hand each day. The storekeeper maintains the Bin Cards up-to-date and usually in duplicate. The card also shows maximum, minimum and re-order levels. One card is attached to each bin on shelf containing the material and record remains with the store-keeper for reference.

The purpose for which bin cards kept and the specimen bin card are as follows:

- ☆ To know the exact position of materials.
- ☆ Information of stock levels and the quantity balance on hand is immediately known.
- ☆ It serves as a check on stock ledger and helps physical verification of stores.

BIN CARD						
Code No: _____			Bin No: _____			
Description: _____			Max. Level: _____			
_____			Min. Level: _____			
_____			Re-order Level: _____			
Stores Ledger Folio: _____						
Receipt			Issue			Balance
Date	GRM No.	Qty.	Date	MRS. No.	Qty.	Qty.

Double bin System : Some organizations divide the bin or rack into two parts. The smaller part to store the quantity equal to the minimum quantity and the other part to store the remaining quantity. The material or equipment from the smaller part is not issued so long as the quantity is available in the other part this system helps in effective stores control.

8.4 Stores Ledger :

The stores ledger is similar to the bin card except that receipts, issues and balances are shown along with their money values. The stores ledger may be maintained by a separate material accounting department. The entries relating to the material ordered, received and issued are made from the purchase order, receiving section report and the material requisitions respectively. The stores ledger provides the following information as against bin cards.

- 1) Supplier's name and address
- 2) Quantity ordered each time and Invoice number and Price
- 3) Expected delivery with due date and
- 4) Stock levels.

A specimen of the stores ledger is given below:

STORES LEDGER													
Description _____						Max. Stock _____							
_____						Min. Stock _____							
Code No. _____						Re-order Level _____							
Bin No. _____						Normal Order _____							
RECEIVED						ISSUED							
Date	GRN No.	Supplier	Qty.	Rate	Price	Date	MRS No.	To Whom	Qty.	Rate	Price	Bal. Qty.	Remarks

8.5 Stock Identification Card :

The stock identification cards are kept in the stores against each bin or rack where stocks are actually kept in order to identify the materials or equipment. Usually they possess the following information.

- 1) Material Code No. and Full Description
- 2) Respective Stores Ledger Folio and Bin Card Number.

A specimen of the stock identification card is given below.

STOCK IDENTIFICATION CARD	
Code No. _____	Name _____
Description and Specification	
Stores Ledger Folio No. _____	

8.6 Materials Received Note :

After proper verification and approval by the inspection authority, the materials are passed on to the stores. Then the materials and supplies are taken into stock through a document known as Materials Received Note or Goods Received Note. This record of materials is prepared by the receiving department and relevant information would be taken from the party's invoices. The usual process in this regard can be as follows.

- 1) Sent to Inspection Department for approval.
- 2) When approved, it is passed to the appropriate authority for checking.
- 3) Sent to Accounts Department for recording of materials.

A specimen Materials Received Note is given below.

MATERIALS RECEIVED NOTE	
	Date _____
	No. _____
Received at _____	On _____
Delivery Point	Date Received
From _____	
Name of Supplier	

Address	
Code No _____	Description _____
Quantity received _____	Condition _____
Purchase Order No. _____	Date _____
Received by _____	Checked by _____
Signature	Signature
Approved by _____	
Signature	

8.7 Materials Requisition Slip :

Issue of materials or equipment is always based on the materials requisition slip. The quantity is required to be filled by the department or section submitting this to the stores department. While receiving the materials requisition slip, the stores department must take care on the following aspects : (1) Signature of the authorized person on the Materials Requisition Slip, (2) Code number and description of the material, (3) Quantity to be checked by the receiving centre. A specimen materials requisition slip is given below.

MATERIALS REQUISITION SLIP						
Copy to Prod (or) Service / Stores / Accounts				No. _____		
				Date _____		
Required for _____						
Code No.	Description	Qty. Required	Qty. Issued	Rate	Amount	Remarks
Required by		Received by		Issued by		
(Signature)		(Signature)		(Signature)		

8.8 Materials Returns Slip :

When materials are not required by the production or service department, they are returned to the stores with an authorization called Materials Returned Note. Then the stores and stock records are adjusted. The usual proforma of the material returned note is as follows.

MATERIALS RETURNED NOTE					
Returned to _____				No. _____	
				Date _____	
From _____					
Code No.	Description	Qty.	Rate	Amount	Remarks
Returned by		Received by		Accounts	
(Signature)		(Signature)		(Signature)	

8.9 Materials Transfer Note :

Sometimes materials or supplies are transferred from one department to another or from one job to another. In such a situation, a Materials Transfer Note is prepared and sent to the store accounts department for adequate recording of materials. A specimen material transfer note is given below.

MATERIALS TRANSFER NOTE					
No. _____					
Date _____					
From _____			To _____		
Code No.	Description	Qty. Transferred	Rate	Amount	Remarks
Transferred by (Signature)		Received by (Signature)		Stores / Accounts (Signature)	

8.10 Bill of Materials :

A bill of materials gives a complete list of all materials required with quantities for a particular job order or process. All materials or equipment required for a particular job are listed in a single document. This bill serves the purpose of material requisition. It also serves the purpose of an indent for the purpose of materials required for a particular job. The use of a bill of materials saves time by avoiding the need for preparation of separate requisitions for different materials.

A specimen form of bill of materials is as follows.

BILL OF MATERIALS							
Job No. _____				No. _____			
Department Authorized _____				Date _____			
Serial No.	Description of Materials	Stores Code No.	Quantity Received	Quantity Required	Rate	Amount	Remarks
Drawing Officer _____				Priced by _____			
Received by _____				Stores Ledger Folios _____			
Store Keeper _____							

8.11 Material Abstract or Material Issue Analysis Sheet :

Periodically an analysis of various requisitions; materials returned notes and material transfer notes should be prepared in the form of statement. It shows at a glance the value of material consumed.

The material abstract serves a very useful purpose, as it shows the amount of materials to be debited to the various jobs. The ruling of the abstract is given as under.

MATERIAL ABSTRACT

Week Ending _____

Material Requisition or Transfer Note or Returned Note	Amount Rs.	Job Nos.				Total for Jobs	Overheads (Indirect Materials Changed) Rs.
		1	2	3	4		
Total							

8.12 Summary :

Materials records management is primarily based on proper materials accounting. In this process the costing of material or equipment has to be done both for the materials consumed in the production or service and estimating the value of materials held in stock. Development of appropriate recording system is essential to provide right information regarding the physical inventory.

The major functions of the stores are receipt, storage, issue, maintain proper records, housekeeping, surplus management, verification and coordination. An important consideration in organizational design is the centralization Vs decentralization. Both the centralized and decentralized organizations of stores are practiced.

Significant developments have taken place in the area of materials records management in the past few decades. The concept of totally automated storage and retrieval system has been inviting the attention of professionals to match the storage system with the rapid developments in the technology.

The storage system forms the key component of any materials management system. Efforts should be made to incorporate the latest developments in the area of the materials records management.

In this lesson we have identified the need for proper identification and maintenance of materials records.

8.13 Technical terms :

Storage System : The manner in which goods are physically stored.

Store Accounting System : Collection of relevant data for estimating the cost of the product for pricing decisions.

Bill of Materials : A list of all items incorporated into a product or service of the organization.

Store Records System : Appropriate recording system for stores to provide right information regarding the physical inventory.

Stock Identification Card : The cards kept in the stores against each bin or rack in order to identify the material or equipment.

8.14 Model questions

1. Discuss the significant material or stores records in an organization.
2. Explain the bin card and stores ledger of material records.
3. Explain the documents Materials Received Note and materials Requisition Slip.
4. Explain in brief the computerization of records management.

8.15 Reference Books

1. Gopalakrishnan, P. and Sunderasan, M. - Materials Management - An Integrated Approach
2. A.K. Dutta - Materials Management - Procedures, Text and Cases
3. IGNOU - MS-5 Management of Machines and Materials
4. P. C. Sharma - Materials Management
5. M.M. Verma - Essentials of Store Keeping and Purchasing

అధ్యాపకుల, విద్యార్థుల సలహాలు, సూచనలు :

అధ్యాపకులు, విద్యార్థులు ఈ స్టడీ మెటీరియల్ కు సంబంధించిన సలహాలు, సూచనలు, ముద్రణ దోషాలు తెలియపరచినచో, పునర్ముద్రణలో తగు చర్యలు తీసుకొనగలము. తెలియపరచవలసిన చిరునామా : డిప్యూటీ డైరెక్టర్, దూరవిద్యా కేంద్రం, ఆచార్య నాగార్జున విశ్వవిద్యాలయం, నాగార్జున నగర్ - 522 510.

Course

P.G.Diploma in Hospital and
Health Care Management

Paper No. & Title

Paper - V : Hospital Accounting and
Hospital Laws