

**S.Y.B.COM.**

**Elective Courses (EC)  
Discipline Specific Elective (DSE)  
Courses**

**Financial Accounting and Auditing  
(Introduction to Management  
Accounting and Auditing)**

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Institute of Distance and Open Learning  
Revised Syllabus  
S. Y. B.Com.  
With Effect from the Academic Year 2019-20  
Elective Courses (EC)  
Discipline Specific Elective (DSE) Courses  
Financial Accounting and Auditing –  
(Introduction to Management Accounting and Auditing)

SECTION I

Modules at a Glance

Sr. No.	Modules
1	Introduction to Management Accounting
2	Ratio Analysis and Interpretation
3	Working Capital Management
4	Capital Budgeting

Sr. No.	Modules
1	<p><b>Introduction to Management Accounting</b></p> <p><b>A. Introduction to Management Accounting –</b> Meaning, Nature, Scope, Functions, Decision Making Process, Financial Accounting V/s Management Accounting</p> <p><b>B. Analysis and Interpretation of Financial Statements</b></p> <p>i) Study of Balance sheet and Income statement / Revenue statements in vertical form suitable for analysis</p> <p>ii) Relationship between items in Balance Sheet and Revenue statement</p> <p>iii) Tools of analysis of Financial Statements (i) Trend analysis (ii) Comparative Statement (iii) Common Size Statement</p> <p><b>Note :</b> (i) Problems based on trend analysis (ii) Short Problems on Comparative and Common sized statements</p>
2	<p><b>Ratio Analysis and Interpretation</b> (Based on Vertical Form of Financial statements) – Meaning, classification, Du Point Chart, advantages and Limitations)</p> <p><b>A. Balance Sheet Ratios :</b></p> <p>i) Current Ratio</p> <p>ii) Liquid Ratio</p>

## II

	<ul style="list-style-type: none"> <li>iii) Stock Working Capital Ratio</li> <li>iv) Proprietary Ratio</li> <li>v) Debt Equity Ratio</li> <li>vi) Capital Gearing Ratio</li> </ul> <p><b>B. Revenue Statement Ratio:</b></p> <ul style="list-style-type: none"> <li>i) Gross Profit Ratio</li> <li>ii) Expenses Ratio</li> <li>iii) Operating Ratio</li> <li>iv) Net Profit Ratio</li> <li>v) Net Operating Profit Ratio</li> <li>vi) Stock Turnover Ratio</li> </ul> <p><b>C. Combined Ratio :</b></p> <ul style="list-style-type: none"> <li>i) Return on capital employed (Including Long Term Borrowings)</li> <li>ii) Return on proprietor's Fund (Shareholders Fund and Preference Capital)</li> <li>iii) Return on Equity Capital</li> <li>iv) Dividend Payout Ratio</li> <li>v) Debt Service Ratio</li> <li>vi) Debtors Turnover</li> <li>vii) Creditors Turnover</li> </ul> <p><b>(Practical Question on Ratio Analysis)</b></p>
3	<p><b>Working Capital Management (Practical Questions)</b></p> <ul style="list-style-type: none"> <li>A. Concept, Nature of Working Capital , Planning of Working Capital</li> <li>B. Estimation / Projection of Working Capital Requirement in case of Trading and Manufacturing Organization</li> <li>C. Operating Cycle</li> </ul>
4	<p><b>Capital Budgeting</b></p> <ul style="list-style-type: none"> <li>A. Introduction:</li> <li>B. The classification of capital budgeting projects</li> <li>C. Capital budgeting process</li> <li>D. Capital budgeting techniques - <b>Payback Period, Accounting Rate of Return, Net Present Value, The Profitability Index, Discounted Payback. (Excluding calculation of cash flow)</b></li> </ul>

### III

#### SECTION II

Sr. No.	Modules
5	Introduction to Auditing
6	Audit Planning, Procedures and Documentation
7	Auditing Techniques and Internal Audit Introduction
8	Auditing Techniques : Vouching & Verification

Sr. No.	Modules
5	<p><b>Introduction to Auditing</b></p> <p>A. <b>Basics</b> – Financial Statements, Users of Information, Definition of Auditing, Objectives of Auditing, Inherent limitations of Audit, Difference between Accounting and Auditing, Investigation and Auditing.</p> <p>B. <b>Errors &amp; Frauds</b> – Definitions, Reasons and Circumstances, Types of Error, Types frauds, Risk of fraud and Error in Audit, Auditors Duties and Responsibilities in case of fraud.</p> <p>C. <b>Principles of Audit</b>, Materiality, True and Fair view</p> <p>D. <b>Types of Audit</b> – Meaning, Advantages, Disadvantages of Balance sheet Audit, Interim Audit, Continuous Audit, Concurrent Audit and Annual Audit, Statutory Audit</p>
6	<p><b>Audit Planning, Procedures and Documentation</b></p> <p>A. <b>Audit Planning</b> – Meaning, Objectives, Factors to be considered, Sources of obtaining information, Discussion with Client, Overall Audit Approach</p> <p>B. <b>Audit Program</b> – Meaning, Factors, Advantages and Disadvantages, Overcoming Disadvantages, Methods of Work, Instruction before commencing Work, Overall Audit Approach.</p> <p>C. <b>Audit Working Papers</b> – Meaning, importance, Factors determining Form and Contents, Main Functions / Importance, Features, Contents of Permanent Audit File, Temporary Audit File, Ownership, Custody, Access of Other Parties to Audit Working Papers, Auditors Lien on Working Papers, Auditors Lien on Client's Books.</p>
7	<p><b>Auditing Techniques and Internal Audit Introduction</b></p> <p>A. <b>Test Check</b> – Test Checking Vs Routing Checking, test Check meaning, features, factors to be considered,</p>

## IV

	<p>when Test Checks can be used, advantages, disadvantages, precautions.</p> <p>B. <b>Audit Sampling</b> – Audit Sampling, meaning, purpose, factors in determining sample size – Sampling Risk, Tolerable Error and expected error, methods of selecting Sample Items Evaluation of Sample Results auditors Liability in conducting audit based on Sample</p> <p>C. <b>Internal Control</b> – Meaning and purpose, review of internal control, advantages, auditors duties, review of internal control, Inherent Limitations of Internal control, internal control samples for sales and debtors, purchases and creditors, wages and salaries. Internal Checks Vs Internal Control, Internal Checks Vs Test Checks.</p> <p>D. <b>Internal Audit</b> : Meaning, basic principles of establishing Internal audit, objectives, evaluation of internal Audit by statutory auditor, usefulness of Internal Audit, Internal Audit Vs External Audit, Internal Checks Vs Internal Audit</p>
8	<p><b>Auditing Techniques : Vouching &amp; Verification</b></p> <p>A. <b>Audit of Income</b> : Cash Sales, Sales on Approval, Consignment Sales, Sales Returns Recovery of Bad Debts written off, Rental Receipts, Interest and Dividends Received Royalties Received</p> <p>B. <b>Audit of Expenditure</b> : Purchases, Purchase Returns, Salaries and Wages, Rent, Insurance Premium, Telephone expense Postage and Courier, Petty Cash Expenses, Travelling Commission Advertisement, Interest Expense</p> <p>C. <b>Audit of Assets Book Debts / Debtors, Stocks</b> – Auditors General Duties; Patterns, Dies and Loose Tools, Spare Parts, Empties and Containers Quoted Investments and Unquoted Investment Trade Marks / Copyrights Patents Know-How Plant and Machinery Land and Buildings Furniture and Fixtures</p> <p>D. <b>Audit of Liabilities</b> : Outstanding Expenses, Bills Payable Secured loans Unsecured Loans, Contingent Liabilities</p>

### Reference Text:

1. Cost and Management Accounting - Colinn Dury 7th Edition
2. Cost and Management Accounting- Dbarshi Bhattacharyya pearson Publications 2013 edition
3. Management Accounting - M.Y.Khan
4. Management Accounting - I.M.pandey



### Question Paper Pattern

Question No	Particular	Marks
Q-1	Objective Questions A) Sub Questions to be asked 12 and to be answered any 10 B) Sub Questions to be asked 12 and to be answered any 10 (*Multiple choice / True or False / Match the columns/Fill in the blanks)	20 Marks
Q-2	Full Length Question <b>OR</b>	15 Marks
Q-2	Full Length Question	15 Marks
Q-3	Full Length Question <b>OR</b>	15 Marks
Q-3	Full Length Question	15 Marks
Q-4	Full Length Question <b>OR</b>	15 Marks
Q-4	Full Length Question	15 Marks
Q-5	Full Length Question <b>OR</b>	15 Marks
Q-5	Full Length Question	15 Marks
Q-6	A) Theory questions B) Theory questions <b>OR</b>	10 Marks 10 Marks
Q-6	Explain the terms To be asked Twelve To be answered Ten	20 Marks



**Section I****1****INTRODUCTION TO MANAGEMENT ACCOUNTING****Unit Structure :**

- 1.0 Objectives
- 1.1 Introduction
- 1.2 Meaning and Nature of Management Accounting
  - 1.2.1 Meaning and Definition
  - 1.2.2 Nature of Management Accounting
- 1.3 Function of Management Accounting
- 1.4 Scope of Management Accounting
- 1.5 Difference between Management Accounting and Financial Accounting
- 1.6 Exercise

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**1.0 OBJECTIVES**

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After studying the unit the students will be able to:

- Define the term Management accounting.
- Explain the nature and functions of Management Accounting
- Discuss the role of management accountant.
- Explain the difference between Management accounting and financial accounting.
- Understand the limitations of MA.

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**1.1 INTRODUCTION**

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Management accounting can be viewed as Management-oriented Accounting. Basically it is the study of managerial aspect of financial accounting, "accounting in relation to management function". It shows how the accounting function can be re-oriented so as to fit it within the framework of management activity. The primary task of management accounting is, therefore, to redesign the entire accounting system so that it may serve the operational needs of the firm. It furnishes definite accounting information, past, present or future, which may be used as a basis for management action. The financial data are so devised and systematically developed that they become a unique tool for management decision.

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## **1.2 MEANING AND NATURE OF MANAGEMENT ACCOUNTING**

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### **1.2.1 Meaning and Definition**

The term "Management Accounting", observes Broad and Carmichael covers all those services by which the accounting department can assist the top management and other departments in the formation of policy, control of execution and appreciation of effectiveness.

The Report of the Anglo-American Council of Productivity (1950) has also given a definition of management accounting, which has been widely accepted. According to it, "Management accounting is the presentation of accounting information in such a way as to assist the management in creation of policy and the day to day operation of an undertaking". The reasoning added to this statement was, "the technique of accounting is of extreme importance because it works in the most nearly universal medium available for the expression of facts, so that facts of great diversity can be represented in the same picture. It is not the production of these pictures that is a function of management but the use of them." An analysis of the above definition shows that management needs information for better decision-making and effectiveness. The collection and presentation of such information come within the area of management accounting. Thus, accounting information should be recorded and presented in the form of reports at such frequent intervals, as the management may want. These reports present a systematic review of past events as well as an analytical survey of current economic trends. Such reports are mainly suggestive in approach and the data contained in them are quite up to date. The accounting data so supplied thus provide the informational basis of action. The quality of information so supplied depends upon its usefulness to management in decision-making.

### **1.2.2 Nature of Management Accounting**

Following points explain the nature of Management Accounting:

1. The term management accounting is composed of 'management' and 'accounting'. The word 'management' here does not signify only the top management but the entire personnel charged with the authority and responsibility of operating an enterprise.
2. The task of management accounting involves furnishing accounting information to the management, which may base its decisions on it.
3. It is through management accounting that the management gets the tools for an analysis of its administrative action and can lay suitable stress on the possible alternatives in terms of costs,

prices and profits, etc. but it should be understood that the accounting information supplied to management is not the sole basis for managerial decisions.

4. Along with the accounting information, management takes into consideration or weighs other factors concerning actual execution. For reaching a final decision, management has to apply its common sense, foresight, knowledge and experience of operating an enterprise, in addition to the information that is already has.
5. The word 'accounting' used in this phrase should not lead us to believe that it is restricted to a mere record of business transactions i.e., book keeping only.
6. Management accounting has no set principles such as the double entry system of bookkeeping. In place of generally accepted accounting principles, the philosophy of cost benefit analysis is the core guide of this discipline. It says that no accounting system is good or bad but it can be considered desirable so long as it brings incremental benefits in excess of its incremental costs.

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### **1.3 FUNCTIONS OF MANAGEMENT ACCOUNTING**

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The basic function of management accounting is to assist the management in performing its functions effectively. The functions of the management are planning, organizing, directing and controlling. Management accounting helps in the performance of each of these functions in the following ways:

1. **Provides data:** Management accounting serves as a vital source of data for management planning. The accounts and documents are a repository of a vast quantity of data about the past progress of the enterprise, which are a must for making forecasts for the future.
2. **Modifies data:** The accounting data required for managerial decisions is properly compiled and classified. For example, purchase figures for different months may be classified to know total purchases made during each period product-wise, supplier-wise and territory-wise.
3. **Analyses and interprets data:** The accounting data is analyzed meaningfully for effective planning and decision-making. For this purpose the data is presented in a comparative form. Ratios are calculated and likely trends are projected.
4. **Serves as a means of communicating:** Management accounting provides a means of communicating management plans upward, downward and outward through the organization. Initially, it means identifying the feasibility and consistency of the various segments of the plan. At later stages it keeps all parties

informed about the plans that have been agreed upon and their roles in these plans.

5. **Facilitates control:** Management accounting helps in translating given objectives and strategy into specified goals for attainment by a specified time and secures effective accomplishment of these goals in an efficient manner. All this is made possible through budgetary control and standard costing which is an integral part of management accounting.
6. **Uses also qualitative information:** Management accounting does not restrict itself to financial data for helping the management in decision making but also uses such information which may not be capable of being measured in monetary terms. Such information may be collected from special surveys, statistical compilations, engineering records, etc.

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## 1.4 SCOPE OF MANAGEMENT ACCOUNTING

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Management accounting is concerned with presentation of accounting information in the most useful way for the management. Its scope is, therefore, quite vast and includes within its fold almost all aspects of business operations. However, the following areas can rightly be identified as falling within the ambit of management accounting:

1. **Financial Accounting:** Management accounting is mainly concerned with the rearrangement of the information provided by financial accounting. Hence, management cannot obtain full control and coordination of operations without a properly designed financial accounting system.
2. **Cost Accounting:** Standard costing, marginal costing, opportunity cost analysis, differential costing and other cost techniques play a useful role in operation and control of the business undertaking.
3. **Revaluation Accounting:** This is concerned with ensuring that capital is maintained intact in real terms and profit is calculated with this fact in mind.
4. **Budgetary Control:** This includes framing of budgets, comparison of actual performance with the budgeted performance, computation of variances, finding of their causes, etc.
5. **Inventory Control:** It includes control over inventory from the time it is acquired till its final disposal.
6. **Statistical Methods:** Graphs, charts, pictorial presentation, index numbers and other statistical methods make the information more impressive and intelligible.

7. **Interim Reporting:** This includes preparation of monthly, quarterly, half-yearly income statements and the related reports, cash flow and funds flow statements, scrap reports, etc.
8. **Taxation:** This includes computation of income in accordance with the tax laws, filing of returns and making tax payments.
9. **Office Services:** This includes maintenance of proper data processing and other office management services, reporting on best use of mechanical and electronic devices.
10. **Internal Audit:** Development of a suitable internal audit system for internal control.

### **CHECK YOUR PROGRESS**

1. "The basic function of management accounting is to assist the management in performing its functions effectively". Discuss.

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2. Enlist the points explaining the scope of Management Accounting.

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### **1.5 DIFFERENCE BETWEEN MANAGEMENT ACCOUNTING AND FINANCIAL ACCOUNTING**

Financial accounting and management accounting are closely interrelated since management accounting is to a large extent rearrangement of the data provided by financial accounting. Moreover, all accounting is financial in the sense that all accounting systems are in monetary terms and management is responsible for the contents of the financial accounting statements. In spite of such a close relationship between the two, there are certain fundamental differences. These differences can be laid down as follows:

Financial Accounting	Management Accounting
<b>1. Objectives</b>	
<p>Financial accounting is designed to supply information in the form of profit and loss account and balance sheet to external parties like shareholders, creditors, banks, investors and Government. Information is supplied periodically and is usually of such type in which management is not much interested.</p>	<p>Management Accounting is designed principally for providing accounting information for internal use of the management. Thus, financial accounting is primarily an external reporting process while management accounting is primarily an internal reporting process.</p>
<b>2. Analyzing performance</b>	
<p>Financial accounting portrays the position of business as a whole. The financial statements like income statement and balance sheet report on overall performance or status of the business.</p> <p>Financial accounting deals with the aggregates and, therefore, cannot reveal what part of the management action is going wrong and why.</p>	<p>Management accounting directs its attention to the various divisions, departments of the business and reports about the profitability, performance, etc., of each of them.</p> <p>Management accounting provides detailed analytical data for these purposes.</p>
<b>3. Data used</b>	
<p>Financial accounting is concerned with the monetary record of past events. It is a post-mortem analysis of past activity and, therefore, out the date for management action.</p>	<p>Management accounting is accounting for future and, therefore, it supplies data both for present and future duly analyzed in detail in the 'management language' so that it becomes a base for management action.</p>
<b>4. Monetary measurement</b>	
<p>In financial accounting only such economic events find place, which can be described in money.</p>	<p>Management is equally interested in non-monetary economic events, viz., technical innovations, personnel in the organization, changes in the value of money, etc. These events affect management's decision and, therefore, management accounting cannot afford to ignore them.</p>

<b>5. Periodicity of reporting</b>	
<p>The period of reporting is much longer in financial accounting as compared to management accounting. The Income Statement and the Balance Sheet are usually prepared yearly or in some cases half-yearly.</p> <p>Management requires information at frequent intervals and, therefore, financial accounting fails to cater to the needs of the management.</p>	<p>In management accounting there is more emphasis on furnishing information quickly and at comparatively short intervals as per the requirements of the management.</p>
<b>6. Nature</b>	
<p>Financial accounting is more objective.</p>	<p>Management accounting is more subjective because management accounting is fundamentally based on judgment rather than on measurement.</p>
<b>7. Legal compulsion</b>	
<p>Financial accounting has more or less become compulsory for every business on account of the legal provisions of one or the other Act.</p>	<p>A business is free to install or not to install system of management accounting.</p>

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## **1.6 EXERCISE**

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1. What are the functions of a management accounting? Elaborate each one of them.
2. Distinguish management accounting from financial accounting.
3. Objective Type Questions:
  - a. Match Group A With Group B

<b>Group A</b>		<b>Group B</b>	
a)	Financial Accounting	1.	Function of management accounting
b)	Reports of Management	2.	Mandatory
c)	Management Accounting	3.	Technique of management
d)	Collection of data	4.	Future oriented

e)	Reports of Financial Accounting	5.	Optional
f)	Budgetary Control	6.	Historical Data

**Ans. a – 6 , b – 5 , c- 4 , d-1 , e – 2 , f -3**

b. Fill in the Blanks with proper words / phase.

1. Inventory control is \_\_\_\_\_ in management accounting.
2. Financial accounting deals with \_\_\_\_\_ data.
3. Management accounting is \_\_\_\_\_ oriented.
4. There is no legal format for management accounting \_\_\_\_\_.
5. In management accounting publication of reports is \_\_\_\_\_.
6. Management account is \_\_\_\_\_ in nature.

**(Answer: 1. Included, 2. Historical, 3. Future, 4. Reports, 5. Optional, 6. Analytical)**

c. State whether following statement are True or False.

1. Management accounting is analytical in nature.
2. Management accounting is dynamic.
3. Management accounting provides decisions to the management.
4. Management accounting is future oriented.
5. Management accounting includes Standard Costing.
6. Financial Accounting is future oriented.

**(Answer: 1. True 2.True 3. False 4. True 5. True 6. False)**

d. Multiple Choice Questions.

1. Financial accounting records only
  - a) Actual Figures
  - b) Budgeted figures
  - c) Standard Figures
  - d) All of the above
2. The use of management accounting is
  - a) Mandatory
  - b) Optional
  - c) Compulsory
  - d) All of the above
3. Management Accounting includes
  - a) Financial Accounting
  - b) Cost Accounting
  - c) Budgetary control
  - d) All of the above

4. Management Accounting is
  - a) Analytical
  - b) Future oriented
  - c) Dynamic
  - d) All of the above
  
5. Financial Accounting deals with
  - a) Determination of cost
  - b) Determination of profit
  - c) Determination of prices
  - d) None of the above
  
6. Management accounting relates to
  - a) Recording of accounting data
  - b) Recording of costing data
  - c) Presentation of accounting data
  - d) None of the above

**(Answer: 1. a, 2. b, 3.d, 4.d, 5. b, 6.c)**



## **ANALYSIS AND INTERPRETATION OF FINANCIAL STATEMENTS**

### **Unit Structure :**

- 2.0 Objectives
- 2.1 Introduction
- 2.2 Meaning and Nature of Financial Statements
  - 2.2.1 Meaning
  - 2.2.2 Nature of Financial Statements
  - 2.2.3 Objective of Financial Statements
  - 2.2.4 Limitations of Financial Statements
- 2.3 Analysis and Interpretations of Financial Statements
  - 2.3.1 Need of interpretation
  - 2.3.2 Meaning of Analysis and Interpretations
- 2.4 Preparation of Financial Statements

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### **2.0 OBJECTIVES**

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After studying the unit the students will be able to:

- Understand the objectives and nature of Financial Statements.
- Know the characteristics of Financial Statements.
- Discuss about the qualities of Ideal Financial Statements.
- Interpret the financial statements.

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### **2.1 INTRODUCTION**

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The joint stock companies are legally required to prepare set of financial statement to periodically assess the profit earned and to know the financial position of the company as on a specified date. Thus, as in the case of other business enterprises, a limited company prepare the income statement and the balance sheet. However, in the case of companies registered under Companies Act, the Act specifies the books of accounts to be maintained and also prescribes the format and content of financial statement. In addition, the accounts must be statutorily audited by the external person called the auditor and it is duty of the auditor to submit a report in the prescribed format to the shareholder.

Since the owner or shareholder elect a board of director to manage the company and rely on the ability and skills of these directors to conduct the business in the most profitable manner, the Companies Act tries to protect the shareholders' interest by prescribing a set of covenants according to which the financial statements are to be prepared and presented to the shareholders. The objective of the Company Act in laying down the various provisions with respect to accounts and audit is to ensure that adequate information is provided to be shareholders in order for them to judge the performance of the directors during an accounting period. The legal requirement laid down by the Companies Act therefore, assume a great importance in the preparation of the financial statements.

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## 2.2 MEANING AND NATURE OF FINANCIAL STATEMENTS

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### 2.2.1 Meaning :

Every business concern wants to know the various financial aspects for effective decision making. The preparation of financial statement is required in order to achieve the objectives of the firm as a whole. The term financial statement refers to an organized collection of data on the basis of accounting principles and conventions to disclose its financial information. Financial statements are broadly grouped in to two statements:

- I. Income Statements (Trading, Profit and Loss Account)
- II. Balance Sheets

In addition to above financial statements supported by the following statements are prepared to meet the needs of the business concern:

- (a) Statement of Retained Earnings
- (b) Statement of Changes in Financial Position

The meaning and importance of the financial statements are as follows :

**Income Statements:** The term 'Income Statements' is also known as Trading, Profit and Loss Account. This is the first stage of preparation of final accounts in accounting cycle. The purpose of preparing Trading, Profit and Loss Accounts to ascertain the Net Profit or Net Loss of a business concern during the accounting period.

**Balance Sheet:** Balance Sheet may be defined as "a statement of financial position of any economic unit disclosing as at a given

moment of time its assets, at cost, depreciated cost, or other indicated value, its liabilities and its ownership equities." In other words, it is a statement which indicates the financial position or soundness of a business concern at a specific period of time. Balance Sheet may also be described as a statement of source and application of funds because it represents the source where the funds for the business were obtained and how the funds were utilized in the business.

**Statement of Retained Earnings:** This statement is considered to be as the connecting link between the Profit and Loss Account and Balance Sheet. The accumulated excess of earning over losses and dividend is treated as Retained Earnings. The balance of retained earnings shown on the Profit and Loss Accounts and it is transferred to liability side of the balance sheet.

**Statement of Changes in Financial Position:** Income Statements and Balance sheet do not disclose the operational efficiency of the concern. In order to measure the operational efficiency of the concern it is essential to identify the movement of working capital or cash inflow or cash outflow of the business concern during the particular period. To highlight the changes of financial position of a particular firm, the statement is prepared may emphasize of the following aspects :

1. Fund How Statement is prepared to know the changes in the firm's working capital.
2. Cash Flow Statement is prepared to understand the changes in the firm's cash position.
3. Statement of Changes in Financial Position is used for the changes in the firm's total financial position.

### 2.2.2 NATURE OF FINANCIAL STATEMENTS

Financial Statements are prepared on the basis of business transactions recorded in the books of Original Entry or Subsidiary Books, Ledger, and Trial Balance. Recording the transactions in the books of primary entry supported by document proofs such as Vouchers, Invoice Note etc.

According to the American Institute of Certified Public Accountants, "Financial Statement reflects a combination of recorded facts, accounting conventions and personal judgments and conventions applied which affect them materially." It is therefore, nature and accuracy of the data included in the financial statements which are influenced by the following factors :

- (1) Recorded Facts.
- (2) Generally Accepted Accounting Principles.
- (3) Personal Judgments.
- (4) Accounting Conventions

### **2.2.3 OBJECTIVES OF FINANCIAL STATEMENTS**

The following are the important objectives of financial statements:

1. To provide adequate information about the source of finance and obligations of the finance firm.
2. To provide reliable information about the financial performance and financial soundness of the concern.
3. To provide sufficient information about results of operations of business over a period of time.
4. To provide useful information about the financial conditions of the business and movement of resources in and out of business.
5. To provide necessary information to enable the users to evaluate the earning performance of resources or managerial performance in forecasting the earning potentials of business.

### **2.2.4 LIMITATIONS OF FINANCIAL STATEMENTS**

1. Financial Statements are normally prepared on the basis of accounting principles, conventions and past experiences. Therefore, they do not communicate much about the profitability, solvency, stability, liquidity etc. of the undertakers to the users of the statements.
2. Financial Statements emphasize to disclose only monetary facts, i.e., quantitative information and ignore qualitative information.
3. Financial Statements disclose only the historical information. It does not consider changes in money value, fluctuations of price level etc. Thus, correct forecasting for future is not possible.
4. Influences of personal judgments leads to opportunities for manipulation while preparing of financial statements.
5. Information disclosed by financial statements based on accounting concepts and conventions. It is unrealistic due to difference in terms and conditions and changes in economic situations.

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## **2.3 ANALYSIS AND INTERPRETATIONS OF FINANCIAL STATEMENTS**

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### **2.3.1 Need of interpretation**

Presentation of financial statements is the important part of accounting process. Following are some points:

1. To provide more meaningful information
2. To enable the owners, investors, creditors or users of financial statements

3. To evaluate the operational efficiency of the concern during the particular period.
4. More useful information is required from the financial statements to make the purposeful decisions about the profitability and financial soundness of the concern.
5. In order to fulfill the needs of the above, it is essential to consider analysis and interpretation of financial statements.

### **2.3.2 Meaning of Analysis and Interpretations**

The term "Analysis" refers to rearrangement of the data given in the financial statements. In other words, simplification of data by methodical classification of the data given in the financial statements.

The term "interpretation" refers to "explaining the meaning and significance of the data so simplified."

Both analysis and interpretations are closely connected and inter related. They are complementary to each other. Therefore presentation of information becomes more purposeful and meaningful—both analysis and interpretations are to be considered. **Metcalf and Tigard have defined** financial statement analysis and interpretations as, "a process of evaluating the relationship between component parts of a financial statement to obtain a better understanding of a firm's position and performance".

The facts and figures in the financial statements can be transformed into meaningful and useful figures through a process called "Analysis and Interpretations.

In other words, financial statement analysis and interpretation refer to the process of establishing the meaningful relationship between the items of the two financial statements with the objective of identifying the financial and operational strengths and weaknesses.

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## **2.4 PREPARATION OF FINANCIAL STATEMENTS**

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Financial statements should be rearranged for proper analysis and interpretations of these statements. It enables to measure the performance of operational efficiency and profitability of a concern during particular period. The items of operating revenues, non-operating revenues, operating expenses and non-operating expenses are rearranged into different heads and sub-heads are given below:

**Vertical Profit and Loss:**

Profit and loss account is a statement showing the net result of business operations during the period, usually a year.

**Vertical Profit and loss for the year ended \_\_\_\_\_**

<b>Particulars</b>	<b>Rs.</b>	<b>Rs.</b>	<b>Rs</b>
Gross Sales			
Cash Sales		Xx	
Credit Sales		Xx	
<b>Less : Returns and allowance</b>		(xx)	
<b>Net Sales</b>			<b>XX</b>
<b>Less: Cost of Goods Sold</b>			
Opening Stock of Raw Material	Xx		
Purchases of Raw Material	Xx		
<b>Less : Closing Stock of Raw Material</b>	(xx)		
<b>Raw Material Consumed</b>		<b>Xx</b>	
<b>Less:</b> <b>Direct expenses ( Factory Expenses)</b>			
Carriage inwards	Xx		
Factory power	Xx		
Wages	Xx		
Other factory expenses	Xx		
Depreciation on Machinery	Xx		
Depreciation on Factory Building	Xx		
Depreciation on Patterns and Patents	Xx		
<b>Total</b>		<b>xx</b>	
<b>Add: Opening stock of Finished goods</b>		Xx	
<b>Add: Purchases of Finished Goods</b>		Xx	
<b>Less: Closing Stock of Finished Goods</b>		(xx)	
<b>Cost of Goods Sold</b>			<b>(xx)</b>
<b>Gross Profit / Gross Margin</b>			<b>xx</b>
<b>Less:</b> <b>a) Administration Expenses</b>			
Office Expenses	Xx		

Office Rent , Rates and Taxes	Xx		
Insurance, Office Electricity	Xx		
Printing and stationery, Audit Fees	Xx		
Repairs, other office expenses, Directors Fees	Xx		
Depreciation on office Assets	Xx		
Postage and telegrams	Xx		
<b>Total Administrative Expenses</b>		<b>xx</b>	
<b>b) Selling and Distribution Expenses</b>			
Salaries to salesman	Xx		
Rent of shop, show room	Xx		
Exhibitions, Trade fair, Sales Discount/ Commission	Xx		
Normal Bad Debts	Xx		
Depreciation on Delivery Van	Xx		
Advertisement and publicity	Xx		
Travelling / Van Expenses	Xx		
<b>Total Selling and Distribution Expenses</b>		<b>Xx</b>	
<b>c) Finance Charges / Expenses</b>			
Cash Discount	Xx		
Bank Chagres	Xx		
Abnormal bad Debts	Xx		
<b>Total Finance Charges / Expenses</b>		<b>Xx</b>	
<b>Total Operating Expenses (Except Interest)</b>			<b>(xx)</b>
<b>Operating Profit Before Interest</b>			<b>Xx</b>
<b>Less: Interest Paid</b>			
Interest on Debentures Or Bonds		Xx	
Interest on Loans		Xx	
Interest on public deposits		Xx	
Interest on short term loans		Xx	
<b>Interest Paid</b>			<b>(xx)</b>
<b>Operating Profit After Interest</b>			<b>Xx</b>

<b>Add: Non-operating Income</b>			
Dividend on shares		Xx	
Interest on debentures, loans etc.		Xx	
Profit on sale of Fixed assets / investment		Xx	
Damages received		Xx	
Royalty / shares transfer fees		Xx	
<b>Total Non-operating Income</b>			<b>Xx</b>
<b>Less:</b>			
<b>Non-operating Expenses</b>			
Loss on sale of Fixed assets / Investment		Xx	
Damages paid / due		Xx	
Preliminary expenses written off		Xx	
Fine and penalty		Xx	
<b>Total Non-Operating Expenses</b>			<b>(xx)</b>
<b>Net Profit Before Tax</b>			<b>Xx</b>
<b>Less : Income Tax</b>			<b>(xx)</b>
<b>Net Profit After tax</b>			<b>Xx</b>
<b>Add: Profit and Loss A/c (Op. Balance)</b>			<b>Xx</b>
<b>Less:</b>			
<b>Appropriations</b>			
Transfer to Sinking Fund		Xx	
Dividend Paid		Xx	
Interim Dividend		Xx	
Transfer to Reserve		Xx	
<b>Appropriation</b>			<b>(xx)</b>
<b>Retained Earnings / Balance Transfer to Balance Sheet</b>			<b>Xx</b>

From the above rearrangement of operating statements, the following accounting equations may be given:

1. **Net Sales** = Cost of sales + operating expenses + Non-operating expenses
2. **Gross Profit** = Net sales – Cost of goods sold
3. **Net operating profit** = Gross profit – operating expenses.

4. **Gross Sales:** Gross sales also called 'Turnover' is the amount of total sales of goods and services. This includes both cash and credit sales.

**Gross sales = Credit sales + cash sales**

5. **Cost of Goods Sold:** This is the cost of purchases or cost of manufacturing the goods, which are sold during the year.

**Cost of Goods Sold = Opening stock + Purchases + Direct Expenses + Depreciation – less closing stock**

6. **Gross Profit:** This is the major source of operating income of an organization. This is the amount of profit earned on purchases, manufactures and sales of goods and services.

**Gross Profit = Net Sales – Cost of goods sold**

7. **Operating Expenses:** These are the expenses incurred in the course of normal conduct of business, which are related to the business activities. Broadly, operating expenses are classified into the following categories.

- a. **Administrative Expenses:** These are the expenses pertaining to general office administrative of an organization.
- b. **Selling and Distribution Expenses:** These are the expenses incurred for the purpose of increasing and maintaining the sales, distributing and delivering the goods.
- c. **Finance Chagres:** This includes: Cash discount, Bad debts (Abnormal), Bank charges, bank Commission.

**Operating Expenses = Administrative Expenses + Selling & Distribution Expenses + Finance Expenses**

8. **Operating Profit:** Excess of operating income over operating expenses is called net operating profit. This is the amount of profit earned during the normal course of business. Operating profit may be

- a. **Operating Profit before Interest:** Gross Profit - Operating expenses (Before Interest)
- b. **Operating Profit After Interest :** Operating profit (before Interest) - Interest

9. **Non-operating Income:** Income not related to the ordinary course of business i.e. Interest on investment is not an operating income to a company, which is engaged in buying and selling of goods and services of goods. But for an investment company, interest will be considered as an operating income.

10. **Non-Operating Expenses:** These are the expenses, which do not relate to day to day conduct of business operations. These expenses arise due to certain unusual events and unexpected occurrences.

**11. Net Profit :** This is the excess of total operating and non-operating income over the total operating and non-operating expenses. It is therefore, ultimate profit earned by the organization.

a. **Net Profit before Tax** = Net operating profit + Net non-operating Income

b. **Net profit After Tax** = Net profit before tax - Income tax

**12. Retained Earnings:** Net profit after tax - dividend

**Vertical Balance Sheet:**

Balance sheet is a statement of assets and liabilities.

**Vertical Balance sheet as on \_\_\_\_\_**

Particulars	Rs.	Rs.	Rs.
<b>A. Sources of Funds</b>			
<b>1) Owners funds</b>			
<b>a) Share capital</b>			
Equity share capital	Xx		
Preference share capital	Xx		
<b>Less:</b> Unpaid calls/	(xx)		
<b>Add:</b> Forfeiture shares	Xx	<b>Xx</b>	
<b>b) Reserve and Surplus</b>			
Capital Reserve / Capital Redemption Reserve	Xx		
Share premium /General Reserve	Xx		
Other reserve / Sinking Fund	xx	<b>xx</b>	
<b>c) Losses &amp; Fictitious Assets</b>			
Profit and loss A/c Debit Balance	Xx		
Miscellaneous Expenditure Not Written off	Xx		
Preliminary Expenses	Xx		
Shares Issue Expenses	Xx		
Discount on Issue of shares or Debenture	Xx	<b>(xx)</b>	
<b>Own Funds or Net Worth (a+b-c)</b>			<b>xx</b>
<b>2) Loan Funds</b>			
<b>a) Long term Loans</b>			
Debentures or bonds	Xx		
Loans from banks	Xx		

Loans from financial Institutions	Xx		
Public deposit	Xx	Xx	
<b>b) Short Term Loans</b>			
Other Loans		Xx	
<b>Owed Fund (a+b)</b>			Xx
<b>Total Funds Available / Capital Employed</b>			xx
<b>B. Application of Funds</b>			
<b>1) Net Fixed Assets</b>			
<b>a) Tangible Assets</b>			
Land and building (Cost)	Xx		
Leaseholds, Plant and Machinery ( Cost)	Xx		
Furniture and fitting, Vehicles (Cost)	Xx		
<b>Less: PFD</b>	(xx)	Xx	
<b>b) Intangible Assets</b>			
Goodwill	Xx		
Patents, Trademarks, And Designs	Xx	Xx	
<b>Total Fixed Assets (a+b)</b>			Xx
<b>2) Long Term Investment</b>			
Investment in Govt. Securities		Xx	
Investment immovable properties		Xx	
Investment in capital of partnership firm		Xx	
Long term loans given		Xx	Xx
<b>3) Working Capital</b>			
<b>a) Quick Assets</b>			
Cash and Bank	Xx		
Debtors	xx		
Less: RDD	(xx)	Xx	
Bills Receivable / Trade receivable	Xx		
Current Investment	Xx		
Accrued Income	Xx		
Loans and Advance	Xx		

Inventory	Xx		
Prepaid Expenses	Xx		
Advance Tax	Xx		
Advance for goods	Xx	Xx	
<b>Less:</b>			
<b>b) Current Liabilities</b>			
Creditors	Xx		
Bills Payable / Trade Payable	Xx		
Advance Received	Xx		
Expenses Payable	Xx		
Accrued Interest	Xx		
Provision for taxation	Xx		
Provision for dividend	Xx		
Unclaimed Dividend	Xx		
Provision for dividend Distribution Tax	Xx		
Bank Overdraft	Xx		
Income received in advance	Xx	(Xx)	
<b>Net current assets (a-b)</b>			<b>Xx</b>
<b>Total Application of Fund</b>			<b>Xx</b>

### Application of Funds

#### 1. Fixed Assets:

Fixed Assets are called long-term assets. They do not flow through the cash cycle of business within one year or the normal operating cycle. They are used over several periods.

#### Classification of Fixed Assets:

- a. Tangible movable assets;
  - b. Tangible immovable assets; and
  - c. Intangible assets.
- a) **Tangible movable assets** are the assets which can be seen, touched and moved from one place to another place. Plant and Machinery, furniture and fixtures, transportation equipment etc. Are tangible movable assets.
  - b) **Tangible immovable assets** are the assets which can be seen and touched but cannot be moved from one place to another place. Such assets include land, buildings, mines, oil wells, etc.
  - c) **Intangible assets** are the assets which cannot be seen and

touched. However, their existence can only be imagined such as patents, trademarks, copyrights, goodwill etc. Their existence is very important for the business.

Fixed Assets = Tangible Assets + Intangible Assets

## 2. Investments:

Long term investments are "Fixed Assets". Marketable Investments are those investments which are acquired by the company by employing its surplus funds or cash temporarily.

Short term investments are grouped under "Current Assets".

## 3. Current Assets and Quick Assets :

### a) Current Assets:

Current assets represent employment of money by the company on a short-term basis.

**Current Assets =** Stock + Debtors + Cash & Bank +Loans &Advances + Marketable Securities +Other Current Assets

### b) Quick Assets:

These assets are known as 'near cash' assets. In other words, quick assets are those which can be converted into cash quickly. Therefore, they are also known as liquid assets.

**Quick Assets =** Current Assets–Inventory –Prepayments

## Sources of Fund

### 1. Proprietor's Funds

These are the funds provided by the proprietors or the shareholders. Proprietors fund is also called as Proprietors Equity, Owners Funds, Owners Equity, or Share holders Funds. This is also known as the Net Worth of the business. Owners' Equity refers to the claim of the owners and it is made up of contributions of proprietors by way of:

**Share Capital** (May be Equity Share Capital only or Equity and Preference Share Capital)

**Plus:** Reserves

**Plus:** Profit and Loss Account (Credit) Balance (Surplus)

**Less:** Accumulated Losses

**Less:** Fictitious Assets (If any)

### a) Share Capital:

Share capital is the amount that is raised by a company from the public at large, through the issue of shares. There are different concepts of share capital from the legal and accounting points of view.

- i. **Authorised Capital:** Authorised Capital is the maximum capital a company can raise as mentioned in the Memorandum of Association under its Capital Clause. It is also called as the Registered Capital or Nominal Capital of the Company.
- ii. **Issued and Unissued Capital:** A company usually does not need the entire registered capital. The capital may be raised as and when necessary. Only a part of the authorised capital may be issued at a time. Issued capital is that part of the authorised capital which is actually offered to the prospective investors for subscription.
- iii. **Subscribed Capital:** The issued capital may not be fully subscribed by the public. Subscribed capital is that part of the issued capital which has been subscribed or taken up by the public.
- iv. **Called up and Uncalled Capital:** The company may not need the entire capital subscribed by the public. The company, therefore, may collect the capital in several instalments. The called-up capital is that portion of the subscribed capital which has been called or demanded by the company to be paid. The capital that is not demanded from the shareholders is called uncalled capital.
- v. **Paid up Capital:** Paid up capital is that part of the called up capital which has been actually paid by the members. The paid-up capital is the called-up amount less calls not paid.(calls unpaid or calls-in- arrears).

**b) Reserves and Surplus:**

According to Companies Act, Reserve shall not include any amount written off or retained by way of providing for depreciation, renewals or diminution in value of assets or retained by way of providing for any known liability. Generally reserves are divided into two categories viz. Specific Reserves and General Reserves. Reserve created for a specific purpose is called as a "specific reserve" and a reserve created for a general purpose is called a "general reserve. General reserves are free and can be utilized for:

- a. Payment of Dividends.
- b. Development and expansion,
- c. Any other purpose the company thinks proper.

General Reserve is also called as revenue reserve or a free reserve. A free reserve is a reserve which is available for any purpose, including payments of dividend. It is not marked for any specific purpose.

## 2. Capital Reserves:

Capital reserve is created out of capital profits which do not arise in the normal course of business. The following reserves are capital reserves:

- a. Profits prior to incorporation
- b. Profit on redemption of preference shares,
- c. Profit on redemption of debentures,
- d. Securities premium,
- e. Profit on forfeiture of shares,
- f. Profit on sales of fixed assets,
- g. Profit on revaluation of fixed assets,
- h. Capital redemption of fixed assets,

## 3. Long-term Liabilities

External borrowings of a company which constitute its owed funds are important sources of long-term finance. These borrowings are termed as fixed liabilities or term liabilities or long term-loans.

- a) **Secured loans:** It refers to loans which are secured by a fixed or floating charge on the assets of the business. It includes :
  - i. Debenture
  - ii. Loan and advance from banks,
  - iii. Loan and advance from subsidiaries and
  - iv. Other loan and advances.
- b) **Unsecured loans:** It refers to the loans which are not secured by assets of the business. It is not covered by any security. It includes:
  - i. Fixed deposits,
  - ii. Loans and advance from subsidiaries,
  - iii. Short-term loan and advances: a) from banks ,b)from others,
  - iv. Other loans and advance: loan from directors, secretaries, treasurers and managers should be shown separately.

**Loan Fund= Secured loans +unsecured loans**

## 4. Current Liabilities and Provisions

### a) Current Liabilities

Current liabilities are those short-term obligations of an enterprise which mature within one year or within the operating cycle. They are as follows:

- i. Sundry Creditors–when goods are purchased
- ii. Bills Payable– by acceptance of bills drawn by creditor – (Accounts payable)
- iii. Interest accrued but not due
- iv. Wages and salaries payable–out standing expenses.
- v. Unclaimed dividends.
- vi. Bank Overdraft.

**b) Provisions:**

Provision means any amount retained by way of providing for any known liability of which the amount cannot be determined with substantial accuracy. They are at best estimates. The examples of provisions are asunder:

- i. Provision for depreciation on assets.
- ii. Provision for doubtful debts.
- iii. Provision for proposed dividends.
- iv. Provision for taxation.

Provisions relating to specific assets are shown as deduction from the specific assets.

**c) Quick Liabilities:** These are the current liabilities which mature within a very short period of time.

**Quick Liabilities=** Current Liabilities –Bank Overdraft

**Check Your Progress :**

1. Give the formulas of the following:
  - a) Proprietors Fund
  - b) Quick Liabilities
  - c) Quick Assets
  - d) Net profit before tax
  - e) Retained earnings
  - f) Cost of goods sold
  - g) Operating expenses

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2. Give the examples of the following:
  - a) Current Liabilities
  - b) Provisions
  - c) Secured loan
  - d) Capital Reverses
  - e) Current Assets
  - f) Fictitious Assets
  - g) Non-operating Income
  - h) Administration expenses

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## 2.5 SOLVED PROBLEMS

### Illustration 1

Following is the trial balance of Good Luck Ltd. as on 31.3.2014

#### Trial Balance

Particulars	Amt.	Particulars	Amt.
Preliminary Expenses (Not yet written off)	20,000	Equity Shares Capital (Rs.100)	7,00,000
Administrative Expenses	4,00,000	Gross Sales	20,40,000
Land And Building	8,00,000	General Reserve	3,20,000
Plant & Machinery	6,00,000	Profit and loss A/c (Cr.)	2,00,000
Selling Expenses	1,00,000	12.5% Debentures	4,00,000
Furniture	3,00,000	<b>Provision for Depreciation</b> On Land & Building On Plant & Machinery On Furniture	2,00,000 1,00,000 80,000
Cost of production	9,60,000		
Return Inward	40,000		
Finished Goods	2,40,000		
Government Bonds	2,80,000	Trade Expenses	4,00,000
Advance Tax	2,00,000		
Trade Receivable	5,00,000		
	<b>44,40,000</b>		<b>44,40,000</b>

Other Information:

1. Closing stock of Finished goods as on 31.3.2014 was Rs.1,60,000.
2. Provide Dividend on Equity Shares at 10%.
3. Make provision for Income Tax of Rs.2,00,000.

From the following information you are required to prepare Income Statement for the year ended 31.3.2014 and balance sheet as on that date in vertical form suitable for analysis.

**Solution****Income Statement for the year ended 31.3.2014**

<b>Particulars</b>	<b>Amt.</b>	<b>Amt.</b>
Gross Sales	20,40,000	
<b>Less:</b> Return Inward	40,000	
<b>Net Sales</b>		<b>20,00,000</b>
Cost of Production	9,60,000	
Add Opening stock	2,40,000	
Less Closing Stock	(1,60,000)	
<b>Cost of Goods Sold</b>		<b>10,40,000</b>
<b>Gross Profit</b>		9,60,000
<b>Less:</b> Operating Expenses		
1. Administrative Expenses	4,00,000	
2. Selling Expenses	1,00,000	
<b>Total Operating Expenses</b>		5,00,000
Operating Profit before Interest		4,60,000
<b>Less:</b> Debenture Interest		50,000
Profit After Interest before Tax		4,10,000
<b>Less:</b> Tax		2,00,000
Profit after tax		2,10,000
<b>Add:</b> Profit and loss balance		2,00,000
Total Profit		4,10,000
<b>Less:</b> Appropriation		
Equity Dividend		70,000
<b>Retained Earning</b>		<b>3,40,000</b>

**Balance Sheet as on 31.3.2014**

<b>Particulars</b>	<b>Amt.</b>	<b>Amt.</b>
<b>Sources of Fund</b>		
1. Share Holders Fund		
Equity Share Capital		7,00,000
Reserve and Surplus		
General Reserve	3,20,000	
Profit and loss A/c	3,40,000	
<b>Total</b>	<b>6,60,000</b>	

<b>Less:</b> Preliminary Expenses	(20,000)	6,40,000
<b>Share Holders Fund</b>		<b>13,40,000</b>
<b>2.</b> Loan Fund		
12.5% Debentures		4,00,000
<b>Total Sources of Fund</b>		<b>17,40,000</b>
<b>Application of Fund</b>		
<b>1.</b> Fixed Assets		
Land & Building (8,00,000 – 2,00,000)	6,00,000	
Plant & Machinery (6,00,000 – 1,00,000)	5,00,000	
Furniture (3,00,000 – 80,000)	2,20,000	13,20,000
<b>2.</b> Investment Government Bonds		2,80,000
<b>3.</b> Working Capital		
<b>a.</b> Current Assets		
Trade Receivable	5,00,000	
Stock of Finish Goods	1,60,000	
Advance Tax	2,00,000	
<b>Total current assets</b>	<b>8,60,000</b>	
<b>b.</b> Current Liabilities		
Trade Payable	4,00,000	
Provision for tax	2,00,000	
Equity Dividend	70,000	
Debenture Interest outstanding	50,000	
<b>Total Current Liabilities</b>	<b>7,20,000</b>	
<b>Net Working Capital (a-b)</b>		<b>1,40,000</b>
Total Application of Fund		<b>17,40,000</b>

### Illustration 2

Following is the Trial balance of M/s. Anand Ltd. As on 31.3.2015.

Particulars	Amt.	Amt.
Sales		20,00,000
Fixed Assets	10,00,000	
Bills Receivable & Bills Payable	2,00,000	1,50,000
Cash and Bank Balance	50,000	
Opening Stock	1,00,000	

Bank Overdraft		1,00,000
Purchases	12,50,000	
Administrative Expenses	30,000	
Legal Expenses	20,000	
Salaries	50,000	
Advertisement	40,000	
Warehouse Rent	20,000	
Depreciation On Machinery	50,000	
Interest on Bank Overdraft	10,000	
Equity Shares Capital		6,00,000
General Reserve		1,00,000
Lap Top Repairs	20,000	
Direct Expenses	20,000	
Investment	40,000	
Debtors And Creditors	1,00,000	50,000
<b>Total</b>	<b>30,00,000</b>	<b>30,00,000</b>

**Additional Information:**

1. Closing Stock on 31.3.2.15 was valued at Rs.50,000
2. Cash sales were 1/3 of credit sales.

You are required to prepare vertical Income statement for the year ended 31.3.2015 and vertical Balance sheet as on that date for financial analysis.

**Solution****Income Statement for the year ended 31.3.2015**

Particulars	Amt.	Amt.
Sales : Cash	5,00,000	
Credit	15,00,000	20,00,000
Less: Cost of Goods Sold		
Opening Stock	1,00,000	
Add: Purchases	12,50,000	
Add: Direct expenses	20,000	
Less: Closing Stock	50,000	
Depreciation On Machinery	50,000	13,70,000

<b>Gross Profit</b>		<b>6,30,000</b>
Less:		
<b>a. Operating Expenses</b>		
Administrative Expenses	30,000	
Legal Expenses	20,000	
Salaries	50,000	
Lap Top Repairs	20,000	
Total Operating Expenses	<b>1,20,000</b>	
<b>b. Selling &amp; Distribution Expenses</b>		
Advertising	40,000	
Warehouse rent	20,000	
Total Selling expenses	<b>60,000</b>	
Total (a+b)		1,80,000
<b>Net profit Before Interest</b>		<b>4,50,000</b>
Less: Interest on Bank overdraft		10,000
<b>Net profit before Tax</b>		<b>4,40,000</b>

#### Balance Sheet as on 31.3.2015

Particulars	Amt.	Amt.
<b>Sources of Fund</b>		
1. Share Holders Fund		
Share capital	6,00,000	
Reserve and Surplus		
General Reserve	1,00,000	
Profit and loss A/c	4,40,000	
Share Holders Fund		11,40,000
2. Loan Fund		
Bank Overdraft		1,00,000
<b>Total Sources of Fund</b>		<b>12,40,000</b>
<b>Application Of Fund</b>		
1. Fixed Assets		
Tangible Assets		10,00,000
2. Investment		40,000
3. Working Capital		

<b>a. Current Assets</b>		
Inventories	50,000	
Trade receivable	1,00,000	
Debtors	2,00,000	
Cash	50,000	
Total Current Assets	4,00,000	
<b>b. Current Liabilities</b>		
Creditors	50,000	
Bills Payable	1,50,000	
Total Current Liabilities	2,00,000	
Net Working Capital (a-b)		2,00,000
<b>Total Application of Fund</b>		<b>12,40,000</b>

**Illustration 3**

M/s. Avinash Ltd. has provided you the following information for the year ended 31.3.2015.

Particulars	Amt.	Particulars	Amt.
Sales	20,00,000	Return Inward	50,000
Opening Stock of Raw Material	1,10,000	Purchases of Raw Material	5,00,000
Staff Salaries	1,50,000	Commission allowed	5,000
Salesmen Salaries	25,000	Proposed Dividend	1,50,000
Bank Charges	10,000	Exhibition Expenses	35,000
Freight Inwards	40,000	Repairs of Computer	5,000
Office Rent and Insurance	45,000	Closing stock of WIP	40,000
Debenture Interest	50,000	Wages	70,000
Loss on sale of Machinery	10,000	Purchases of Finish Goods	80,000
Printing & Stationery	5,000	Interest Received on Investment	40,000
Direct expenses	50,000	Provision for Income Tax	2,00,000
Profit & Loss A/c (Credit)	2,40,000	Closing Stock of Raw Material	80,000
Depreciation on patterns	10,000	Sale of scrap	20,000
Depreciation on Machinery	20,000		

You are required to rearrange the above information and prepare vertical income statement, suitable for analysis.

### Solution

#### Income Statement for the year ended 31.3.2015

Particulars	Amt.	Amt.
Sales	20,00,000	
Less: Return Inwards	50,000	19,50,000
Less: Cost of Material		
Opening Stock	1,10,000	
Add: Purchases	5,00,000	
Add: Freight Inwards	40,000	
Less: Closing Stock	80,000	
Cost of Material	<b>5,70,000</b>	
Wages	70,000	
Direct Expenses	50,000	
Depreciation Machinery	20,000	
Depreciation Pattern	10,000	
Total Direct Expenses	<b>7,20,000</b>	
Less: Closing stock of WIP	40,000	
	6,80,000	
Less: Sale of Scrap	20,000	
<b>Cost of production</b>	<b>6,60,000</b>	
Add: Purchases of Finish Goods	80,000	7,40,000
<b>Gross Margin</b>		<b>12,10,000</b>
Less: Operating Expenses		
a) Administrative Expenses		
Staff Salaries	1,50,000	
Office rent & Insurance	45,000	
Printing and Stationery	5,000	
Repairs and computers	5,000	
Total Administrative Exp	<b>2,05,000</b>	
b) Selling & Distribution Expenses		
Salesman Salaries	25,000	

Commission allowed	5,000	
Exhibition expenses	5,000	
Total Selling Exp.	<b>65,000</b>	
c) Finance Expenses		
Bank charges	<b>10,000</b>	
Total Exp. (a+b+c)		<b>2,80,000</b>
Net profit before Interest		<b>9,30,000</b>
Less: Interest on Debenture		50,000
Net profit after Interest		<b>8,80,000</b>
Add: Non-operating Income		
Interest on Investment		40,000
		9,20,000
Less: Non-operating Expenses		
Loss on sale of Machinery		10,000
Net profit before tax		<b>9,10,000</b>
Less: Provision for Tax		2,00,000
Net profit after tax		<b>7,10,000</b>
Add: P/L A/c balance		2,40,000
		9,50,000
Less: Proposed Dividend		1,50,000
Net profit carried to Balance sheet		<b>8,00,000</b>

#### Illustration 4

The following balances appear in the books of M/s Ram Ltd. as on 31.3.2015. You are required to prepare a balance sheet in the vertical form.

Particulars	Amt.	Particulars	Amt.
Sundry Debtors	2,00,000	Creditors	1,50,000
Trade Investment	2,50,000	Capital Reserve	1,50,000
Bank Overdraft	1,00,000	Short term Investment	50,000
Public deposit	3,00,000	Plant and Machinery	12,00,000
Bills Payable	7,90,000	Outstanding Expenses	1,20,000

General Reserve	1,00,000	Cash at Bank	7,00,000
Bills Payable	2,00,000	Profit and loss A/c (Credit )	4,00,000
Vehicles	9,00,000	Stocks	5,00,000
10% Pref. Sh. Capital	8,00,000	Land and Building	12,00,000
Commission on issue of shares( not w/off)	40,000	Preliminary Expenses (not w/off)	10,000
Provision for tax	1,00,000	Equity shares capital	16,00,000
Bank Loan	3,00,000	Debentures	5,00,000
Advance tax	3,00,000	Proposed Dividend	3,00,000
Prepaid Expenses	1,00,000	Advance to suppliers	60,000

**Solution****Balance Sheet as on 31.3.2015**

Particulars	Amt.	Amt.
<b>Sources of Fund</b>		
1. Share Holders Fund		
a) Share Capital		
Equity sh. Capital	16,00,000	
10% Pref.sh Capital	8,00,000	
Total (a)	24,00,000	
b) Reserve And Surplus		
General Reserve	1,00,000	
P & L A/c	4,00,000	
Capital Reserve	1,50,000	
Total (b)	6,50,000	
<b>Total (a+b)</b>	<b>30,50,000</b>	
<b>Less: Preliminary Expenses</b>	10,000	
Commission on shares	40,000	30,00,000
2. Loan Fund		
Debentures	5,00,000	
Public Deposit	3,00,000	

Bank Loan	3,00,000	11,00,000
<b>Total</b>		<b>41,00,000</b>
Application of Funds		
<b>1. Fixed Assets</b>		
Tangible Assets		
Land and Building	12,00,000	
Plant and Machinery	12,00,000	
Vehicles	9,00,000	33,00,000
<b>2. Investments</b>		
Trade Investment		2,50,000
<b>3. Working Capital</b>		
<b>a) Current Assets</b>		
Stock	5,00,000	
Sundry Debtors	2,00,000	
Bills Receivable	2,00,000	
Short Term Investment	50,000	
Cash & bank	7,00,000	
Adv. To suppliers	60,000	
Adv. Tax	3,00,000	
Prepaid Expenses	1,00,000	
Total Current Assets	21,10,000	
<b>b) Current Liabilities</b>		
Creditors	1,50,000	
Outstanding Expenses	1,20,000	
Bank Overdraft	1,00,000	
Bills Payable	7,90,000	
Provision for Tax	1,00,000	
Proposed Dividend	3,00,000	
Total Current Liabilities	15,60,000	
Working Capital (a-b)		5,50,000
<b>Total</b>		<b>41,00,000</b>

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## 2.6 EXERCISE

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1. Discuss the nature of Financial Statement.
2. Define financial statement analysis. Explain the need and importance of it.
3. Define Assets. Explain various types of Assets.
4. Objective type Questions
  - A. Match Group A With Group B

Group A		Group B	
a)	Source of Fund	1.	Current Assets
b)	Liquid Assets Fund	2.	Net Worth + Loan Fund
c)	Call in Arrears	3.	Current Asset - Stock
d)	Retained Earnings	4.	Deduct from subscribed capital
e)	Over subscription	5.	Profit & Loss A/c balance
f)	Loose tools	6.	Subscribed capital is more than issued capital

(Answer: a – 2 ,b – 3, c- 4 , d- 5, e – 6 , f – 1)

**B.** Fill in the Blanks with proper words / phase.

1. Trade Mark is an \_\_\_\_\_ assets.
2. Advance tax is shown under \_\_\_\_\_.
3. Current Liabilities = \_\_\_\_\_ - Current Assets.
4. Fictitious Assets are \_\_\_\_\_ .
5. Securities Premium forms part of \_\_\_\_\_.
6. Capital Employed = Fixed Assets + \_\_\_\_\_ capital.

(Answer : 1. Intangible , 2. Loans and Advances, 3. Working Capital,  
4. Intangible, 5. Reserve & Surplus 6. Working.)

**C.** State whether following statement are True or False.

1. Balance sheet shows result of activities.
2. Goodwill will be shown under fictitious assets.
3. Arrears of preference dividend are contingent liabilities.
4. All quick liabilities are current liabilities.
5. Operating expenses are incurred to conduct the operations smoothly.
6. Public deposit is a secured loan.

(Answer: 1. False 2. False 3.True 4.True 5.True 6. False)

**D.** Multiple Choice Questions.

1. Patents and Copyrights is an
  - a) Intangible Assets
  - b) Movable assets
  - c) Intangible fixed assets
  - d) Fictitious Assets

2. Balance sheet is a
  - a) Statement of assets and liabilities
  - b) Statement of operating results
  - c) Statement of working capital
  - d) None of the above
  
3. Income Statement is a
  - a) Statement of working results
  - b) Statement of Sources of Fund
  - c) Statement of Cash Flow
  - d) Fund from Operation
  
4. Fixed assets are Rs.5, 00,000; Current Assets are Rs.3, 00,000; Current Liabilities are Rs. 1, 00,000. There is no investment, Find out capital employed.
  - a) 8,00,000
  - b) 7,00,000
  - c) 9,00,000
  - d) 6,00,000
  
5. Sales are Rs.5, 00,000; operating cost is Rs.2, 00,000; profit on sale of machinery is Rs.10, 000, find out operating profit.
  - a) 3,00,000
  - b) 3,10,000
  - c) 3,10,000
  - d) 3,50,000
  
6. Short term investments are shown under which head in the vertical balance sheet.
  - a) Investment
  - b) Current Assets
  - c) Current Liabilities
  - d) Fictitious Assets

(Answer: 1. c, 2. a, 3. d, 4. b, 5.a, 6.b)



## TOOLS OF ANALYSIS OF FINANCIAL STATEMENTS

### Unit Structure:

- 3.1 Objectives
- 3.2 Introduction
- 3.3 Trend Ratio and Trend Analysis
  - 3.3.1 Meaning
  - 3.3.2 Utility of Trend Analysis
  - 3.3.3 Steps involved in calculation of trend percentage
  - 3.3.4 Following is the example of Trend analysis
  - 3.3.5 Comparative Balance Sheet
  - 3.3.6 Illustration
- 3.4 Comparative Statement
  - 3.4.1 Meaning and Definition
  - 3.4.2 Importance of Comparative Statement
  - 3.4.3 Preparation of Comparative Statements
  - 3.4.4 Preparation of a Comparative Income Statement
- 3.5 Common size statement
  - 3.5.1 Meaning
- 3.6 Exercise

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### 3.1 OBJECTIVES

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After studying the unit the students will be able to:

- Explain the meaning of financial statement analysis.
- Know the meaning and utility of Trend analysis.
- Understand the meaning of Comparative and Common Size Statements
- Prepare the Comparative and Common Size Statements from the given information.

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### 3.2 INTRODUCTION

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Financial statements are prepared to meet external reporting obligations and also for decision making purposes. They play a dominant role in setting the framework of managerial decisions. As the information provided in the financial statements is not an end in itself as no meaningful conclusions can be drawn from these statements alone. However, the information provided in the financial statements is of immense use in making decisions through analysis and interpretation of financial statements. To overcome

from the limitations it becomes necessary to analyse the financial statements. The analytical tools generally available to an analyst for this purpose are:

1. Comparative financial and operating Statements
2. Common-size statement
3. Trend ration and trend analysis
4. Average Analysis
5. change in working capital
6. Fund-flow and cost-flow analysis
7. Ratio analysis

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### **3.3 TREND RATION AND TREND ANALYSIS**

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#### **3.3.1 Meaning**

Trend analysis is an important and useful technique of analysis and interpretation of financial statement. Under this technique the ration of different items for various periods are calculate for the company over a definite period of time say three to five years and then we can analysis trend highlighted by this ratio. Trend analysis can be done in following way:

- i) Trend percentage,
- ii) Trend ratio,
- iii) Graphic and diagrammatic representation.

#### **3.3.2 Utility of Trend Analysis:**

- a) It is a simple technique. it does not involve tedious calculation and not requires trained experts
- b) It is brief method to indicate the future trend
- c) It reduces the chances of errors as it provides the opportunity to compare the percentage with absolute figures
- d) It computes the percentage change for different variables over a long period and then makes a comparative study of them.
- e) The trend percentage helps the analytics to study the changes that have occurred during the period. Such an analysis indicates the progress of business by showing ups and downs in it activity.

#### **3.3.3 Steps involved in calculation of trend percentage**

The calculation of trend percentage involves the following steps.

- a) Selection of base year.
- b) Assigning a weight of 100 to be value of the variable of the base year and
- c) Expressing the percentage change in value of variable from base year as shown below.

### 3.3.4 Following is the example of Trend analysis

Years	Sales	Percentage ( + ) Increase or ( - ) Decrease
1980	20,000	100 (Base year )
1981	35,000	175
1982	28,000	140
1983	30,000	150
1984	35,000	175
1985	14,000	70
1986	22,000	110

A trend for single financial item is seldom very informative. A comparison of trend for relative items often help to analysis in perfect understanding of the business fact as is clear from the below mentioned comparative balance sheet.

### 3.3.5 Comparative Balance Sheet

Assets	1986 Rs.	1987 Rs.	1988 Rs.	Trend Percentage ( base year – 1988 )		
				1986	1987	1988
<b>A) Current Assets</b>						
Inventory	20,000	30,000	25,000	100	150	125
Debtor	30,000	50,000	60,000	100	167	200
Cash balance	20,000	55,000	30,000	100	175	150
<b>Total (A)</b>						
<b>B) Fixed Assets</b>	<b>70,000</b>	<b>1,15,000</b>	<b>1,15,000</b>	<b>100</b>	<b>164</b>	<b>164</b>
Building						
Plant						
Investment	250,000	300,000	3,00,000	100	120	120
<b>Total (B)</b>	<b>1,25,000</b>	<b>150,000</b>	<b>1,60,000</b>	<b>100</b>	<b>120</b>	<b>128</b>
<b>Total Assets (A + B)</b>	<b>80,000</b>	<b>1,00,000</b>	<b>1,20,000</b>	<b>100</b>	<b>125</b>	<b>150</b>
	<b>4,55,000</b>	<b>5,50,000</b>	<b>5,80,000</b>	<b>100</b>	<b>121</b>	<b>127</b>
	<b>5,25,000</b>	<b>6,65,000</b>	<b>6,95,000</b>	<b>100</b>	<b>127</b>	<b>132</b>

### 3.3.6 Illustration:

Calculate trend percentage from the following figures of X L td, taking 1979 as the base and interpret.

Year	Sales	Stock	Profit before tax
1979	1,881	709	321
1980	2,340	781	435
1981	2,655	816	458
1982	3,021	944	527
1983	3,768	1,154	672

**Solution :**  
**Trend percentage**

Years before	Sales (Rs. Lakhs)	Stock (Rs. Lakhs)	Profit before Tax (Rs. Lakhs)	Sales	Stock	Profit Tax
1979	1,881	709	321	100	100	100
1980	2,340	781	435	124	110	136
1981	2,655	816	458	141	115	143
1982	3,021	944	527	161	133	164
1983	3,768	1,154	672	200	162	209

**Interpretation:**

The study of the above given statement of Trend percentage reveals that –

- i) The sales of the firm have continuously increased over a period of a five year commencing from 1979. However there has been a substantial increase in the amount of sales in the 1983 when it increased by 39%.
- ii) The trend of Stock is also upward although the increase in this item has been constant yet in 1983 the increased has been exceptionally.
- iii) The Profit of the firm has increased at much higher rate in comparison to increase in Sale and Stock during the period under study.

The overall analysis of the financial items indicated that the firm is doing well, and therefore, its financial position is bound to be good.

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### **3.4 COMPARATIVE STATEMENT**

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#### **3.4.1 Meaning and Definition:**

The comparative statements are an important tool of horizontal financial analysis. Financial data become more meaningful when compared with similar data for previous period or a number of previous periods. Such analysis helps as in forming an opinion regarding the progress of the enterprise.

Comparative statements are defined as:

**Foulke** has defined these statement as “statement of financial position of business so designed as to provide time perspective to the consideration of various elements of financial position embodied in such statement.”

In any comparative statement columns for more than one year's position or working can be drawn and figures may be provided. The annual date can be compared with similar monthly or quarterly data or can be compared with similar data for the same monthly or quarterly data of the previous years.

In such statement the figure can be shown at the following value.

- a. Absolute date (money values or rupee amount).
- b. Increase or decrease in absolute values
- c. By the way of percentages
- d. By the way of common—size statement

Two comparable units can be compared regarding profitability and financial position. The two organization may not have the identical heads of account In order to get over the difficulty, the data must first be property set before comparison In the preparation of comparative financial statement, uniformity is essential.

### **3.4.2 Importance of Comparative Statement:**

Following points explain the importance of these statements:

1. These statements are very useful in measuring the effect of the conduct of a business enterprise over the period under consideration. Regardless of its financial strength at a given point of time, the enterprises must operate successfully if it hopes to continue as a going concern.
2. The income statement measures the effects of operation. But the progress of these operations may be viewed over number of periods by preparing the income statement in a comparative form.
3. Similarly the effect of operation of financial position and the progress of a business in term of financial position can be presented by means of a comparative balance sheet.
4. The accounting authorities in U. S. A. have strongly recommended and encouraged the preparation of financial statement in the comparative form Recognising the importance of comparative financial date for two years.
5. The Indian companies Act 1956 has made this fact compulsory that in the balance sheet of a company the figure for the previous year should also be given to facilitate comparison. Though the balance sheet is a useful statement, the comparative balance sheet is even more useful for the contains not only the data of a single balance sheet but also for the past years which may be useful in studying the trends.

### **3.4.3 Preparation of Comparative Statements:**

The form of comparative balance sheet consists of two or more columns according to the number of year we prepare the balance sheet, for the date of original balance sheet and columns for the increases or decreases in various items.

Proforma of comparative balance sheet for two years

**ABC Co. Ltd.**  
**Specimen of Comparative Balance Sheet**  
**As on 31<sup>st</sup> December 1980 and 1981**

(Amount in Lakhs of rupees)

	31 <sup>st</sup> Dec. 1980	31 <sup>st</sup> Dec. 1981	Increase (+) /Decrease (-) Amount	%	Rate
<b>Assets :</b>					
<b>Current Assets :</b>					
Cash	240	80	- 160	- 66	1.24
Debtors less reserve for doubtful debts	120	96	- 24	- 40	1.60
Merchandise Inventory	260	320	+ 66	+ 46	2.46
Prepaid Expenses	100	80	- 20	- 40	1.60
Total Current Assets	720	656	- 64	- 18	1.82
<b>Fixed Assets :</b>					
Land and Building less Depreciation	480	720	+ 240	+100	2.0
Furniture & Fixture less Depreciation	60	80	+ 20	+ 66	2.66
Plant and Machinery less Depreciation	240	480	+ 240	+ 200	4.00
Total fixed Assets	780	1,280	+ 500	+ 128	2.20
<b>Total Assets</b>	<b>1,500</b>	<b>1,936</b>	<b>+ 436</b>	<b>+ 58</b>	<b>2.58</b>
<b>Liabilities and Capital:</b>					
<b>Current Liability :</b>					
Trend creditors	234	510	+ 276	+ 108	3.08
Accrued Expenses	400	360	- 40	- 20	1.08
Total Current liabilities	634	870	+ 236	+ 74	2.74
Equity Capital	400	500	+ 100	+ 50	2.50
Retained Earnings	466	566	+ 100	+ 42	2.42
Total Capital	866	1,066	+ 200	+ 46	2.46
<b>Total Liabilities and Capital</b>	<b>1,500</b>	<b>1,936</b>	<b>+ 436</b>	<b>+ 58</b>	<b>2.58</b>

#### 3.4.4 Preparation of a Comparative Income Statement:

An Income Statement shows the Net Profit or Net Loss from business operation of a definite accounting period. Like a balance sheet, a comparative income statement show the operating results for a number of accounting periods so that the changes in absolute date from one period to another may be explained and analysis.

The Comparative income statement contains the some columns as the comparative balance sheet and provides the same in the figures.

Specimen of a Comparative Income Statement

**ABC Co. Ltd.**  
**Comparative Income Statement**  
**For the year ended 31<sup>st</sup> Dec. 1980 and 1981**  
 (Amount in Lakhs of Rupees)

	31 <sup>st</sup> Dec. 1980	31 <sup>st</sup> Dec. 1981	Increase (+) / Decrease (-) Amount	%
Net Sales	1370	1442	+ 72	+0.6
Less : Cost of Goods Sold	838	926	+ 88	+ 21
<b>Gross Profit</b>	<b>532</b>	<b>516</b>	<b>- 16</b>	<b>- 6.4</b>
Operating Expenses :				
Selling Expenses	188	182	- 6	- 6.4
Gen. and Admn. Expenses	94	92	- 2	- 4.2
Total Operating Expenses	282	274	- 8	- 5.6
<b>Operating Profit</b>	<b>250</b>	<b>242</b>	<b>- 8</b>	<b>- 6.4</b>
Add : Other Income				
Dividend	44	50	+ 6	+ 2.8
	<b>294</b>	<b>292</b>	<b>- 2</b>	<b>- 1.4</b>
Less : Other Deduction				
Interest Paid	44	44	Nil	Nil
	<b>250</b>	<b>248</b>	<b>- 2</b>	<b>- 1.6</b>
Less : Income Tax	124	124	Nil	Nil
<b>Net Profit after Tax</b>	<b>126</b>	<b>124</b>	<b>- 2</b>	<b>- 3.2</b>

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### 3.5 COMMON SIZE STATEMENT

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#### 3.5.1 Meaning

Financial statements that depict financial data in the shape of vertical statement percentage are known as common size statements. Such statements provide readers with vertical analysis of the profit and loss account and balance sheet. In such statement all figure are converted to a common unit by expressing than as percentage of a key figure in the statement. The total of financial statement is reduced to 100 and each item is shown as component to the whole. For example profit and loss account, the figure of each item of the financial year expressed as a percentage of sales

likewise, assets and liabilities can be shown as percentage of total assets and total equities respectively in common sized balance sheet. Thus expressing each monetary item of financial statement as a percentage of some total of which that item as apart transforms a financial statement what is referred as common size statement such a statement show the relative significance of the items contend in the financial statement and facilitate comparisons. It point out efficiencies and in efficiencies that are otherwise difficult to see and of this reason is a valuable management tool a common size statement is especially useful when data for more than one year are used.

**Vertical analysis** is the procedure of preparing and presenting *common size statements*. **Common size statement** is one that shows the items appearing on it in percentage form as well as in dollar form.

*Common size statements* are particularly useful when comparing data from different companies.

Common size statements are also very helpful in pointing out efficiencies and inefficiencies that might otherwise go unnoticed

### Illustration 1

The balance sheet of Shaheen Ltd are given for the year 2007 and 2008 convert them into common size balance size balance sheet and interpret the changes.

### Balance Sheet

Liabilities	2007 Rs	2008 Rs.	Assets	2007 Rs.	2008 Rs.
Equity share	1,46,800	1,91,000	Buildings	1,80,000	2,00,000
Capital reserve	50,000	70,000	Plant and machinery	40,000	55,000
Revenue reserve & surplus	20,000	30,000	Furniture	10,000	20,000
			Freehold property	20,000	12,000
Trade creditors	30,000	40,000	Goodwill	25,000	30,000
Bills payable	80,000	60,000	Cash balance	25,000	20,000
Bank overdraft	90,000	80,000	Sunday debtors	30,000	35,000
Provisions	30,000	20,000	Inventories Bills receivable(temporary)	70,000	57,000
	<b>4,46,800</b>	<b>4,91,000</b>		<b>4,46,800</b>	<b>4,91,000</b>

## Common size Balance Sheet

Assets	1987		1987	
	Amt. (Rs.)	Percentage	Amt. (Rs.)	Percentage
<b>A. Current Assets</b>				
Sundry Debtor	30,000	6.71	35,000	7.13
Cash balance	25,000	5.59	20,000	4.07
Inventories	70,000	15.71	57,000	11.60
Investment (Temporary)	36,500	8.17	42,000	8.55
Bill Receivable	10,300	2.30	20,000	4.08
<b>Total (A)</b>	<b>1,71,800</b>	<b>38.44</b>	<b>1,74,000</b>	<b>35.43</b>
<b>B. Fixed Assets</b>				
Building	1,80,000	40.29	2,00,000	40.75
Plant and Machinery	40,000	8.95	55,000	11.20
Furniture	10,000	2.24	20,000	4.07
Freehold Property	20,000	4.48	12,000	2.44
Goodwill	25,000	5.60	30,000	6.11
<b>Total (B)</b>	<b>2,75,000</b>	<b>61.5</b>	<b>3,17,000</b>	<b>64.57</b>
<b>Total Assets (A+B)</b>	<b>4,46,800</b>	<b>100.00</b>	<b>4,91,000</b>	<b>100.00</b>
<b>Liabilities</b>				
<b>C. Current Liabilities</b>				
Trade Creditors	30,000	6.17	40,000	8.15
Bill Payable	80,000	17.91	60,000	12.22
Bank Overdraft	90,000	20.14	80,000	16.29
Provision	30,000	6.71	20,000	4.07
<b>Total (C)</b>	<b>2,30,000</b>	<b>51.47</b>	<b>200,000</b>	<b>40.73</b>
<b>D. Long-term Liabilities</b>				
Equity Share	1,46,800	32.86	1,91,000	38.90
Capital Reserve	50,000	11.19	70,000	14.26
Revenue Reserve and Surplus	20,000	4.48	30,000	6.11
<b>Total (D)</b>	<b>2,16,800</b>	<b>48.53</b>	<b>2,91,000</b>	<b>59.27</b>
<b>Total Liabilities (C+D)</b>	<b>4,46,800</b>	<b>100.00</b>	<b>4,91,000</b>	<b>100.00</b>

**Interpretation:**

1. Out of every rupee of sales 60.72 per cent in 1986 and 63.63 per cent in 1987 account for cost of goods sold.
2. The percentage ratio of gross profit to sales was 39.28 per cent in 1986 which was reduced 36.37 percent 1987.
3. The operating expenses increased from 15.71 per cent of sales in 1986 to 16.37 per cent in 1987 All this reduced the percentage ratio of net income after tax to sales from 14.15 per cent in 1986 to 12.00 per cent in 1987.
4. The operating expenses increased from 15.71 per cent of sales in 1986 to 16.37 per cent in 1987 All this reduced to percentage ratio of net income after tax to sales from 14.15 per cent in 1987.

In the ultimate analysis it can be said that the operating efficiency of the concern has not been satisfactory during the period under study.

**Illustration 2 :** Following the Balance Sheet of X Co. Ltd and Y Co. Ltd as on 31.12.1990.

Particulars	X Co. Ltd	Y Co. Ltd
<b>Assets</b>	27	72
Sundry Debtors	220	226
Stock	100	174
Prepaid Expenses	11	21
Other Current Assets	10	21
Total Current Assets	368	514
Fixed Assets (Net)	635	513
<b>Total</b>	<b>1,003</b>	<b>1,027</b>
<b>Liabilities</b>		
Sundry Creditors	42	154
Other	78	62
Total Current Liabilities	120	216
Fixed Liabilities	225	318
Total Liabilities	345	534
Capital	658	493
<b>Total</b>	<b>1,003</b>	<b>1,027</b>

**Solution:****Common Size Balance Sheet (as on 31<sup>st</sup> December 1992)**

	X Co. Ltd Amount (Rs. in Lakhs) percentage		Y Co. Ltd Amount (Rs. in Lakhs) percentage	
<b>Assets :</b>				
A) Current Assets				
Cash	27	2.69	72	7.01
Sundry Debtor	220	21.93	226	22.01
Stock	100	9.97	174	16.94
Prepaid Expenses	11	1.10	21	2.04
Other	10	1.00	21	2.04
Total (A)	368	36.69	514	50.04
B) Fixed Assets	635	63.61	513	49.96
Total (B)	635	63.31	513	49.96
<b>Total Assets (A+B)</b>	<b>1003</b>	<b>100.00</b>	<b>1027</b>	<b>100.00</b>
<b>Liabilities :</b>				
C) Current Liabilities				
Sundry Debtor				
Others	42	4.19	154	14.99
Total (C)	78	7.78	62	6.04
D) Long Term Liabilities	120	11.97	216	21.03
Fixed Liabilities				
Capital	225	22.43	318	30.97
Total (D)	658	65.60	493	48.00
<b>Total liabilities (C+D)</b>	<b>883</b>	<b>88.03</b>	<b>811</b>	<b>78.97</b>
	<b>1003</b>	<b>100.00</b>	<b>1027</b>	<b>100.00</b>

**Comments:**

1. The study of common size balance sheet show that 63.31 per cent of total assets of X company Ltd were fixed whereas the same percentage for Y Co was 49.96.
2. The current liability of X Co L td were 11.97 per cent of total liability and for Y Co L td this percentage was 21.03 both the companies have used more equity capital.

**Illustration 3:** From the income statement give below you are required to prepare common – sized income statement.

Particulars	1986 Rs.	1987 Rs.
Sales	1,40,000	1,65,000
Less : Cost of Goods Sold	85,000	1,05,000
Gross Profit	55,000	60,000
Operating Expenses		
Selling and Distribution Expenses	12,000	16,000
Administrative Expenses	10,000	11,000
Total Operating Expenses	22,000	27,000
Net Income before Tax	33,000	33,000
Income Tax (40%)	13,000	13,200
Net Income	19,800	19,800

**Solution:**

**Common size income statement  
(For the year ending 1986 and 1987)**

Particulars	1986		1987	
	Amt. (Rs.)	Percentage	Amt. (Rs.)	Percentage
Sales	1,40,000	100.00	1,65,000	100.00
Less : Cost of Sales	85,000	60.72	1,05,000	63.63
Gross Profit	55,000	39.28	60,000	36.37
Selling & Distribution Expenses	12,000	8.57	16,000	9.70
Administrative Exp.	12,000	7.14	11,000	6.67
Total operating Exp.	22,000	15.71	27,000	16.67
Net Income before Tax	33,000	23.57	33,000	20.00
Income Tax (40%)	13,000	9.42	13,200	8.00
Net Income after Tax	19,800	14.15	19,800	12.00

**Interpretation:**

- The study of common size balance show that 61.56 per cent total asset in 1986 were fixed This percentage increased 64.57 per cent 1987 if concern requires considerable investment in fixed assets these percentage might be acceptable if the company needs be acceptable if the company need liquid assets the interested parties might have cause to be concerned about the decreasing trend liquidity.
- There was a wide shift from the use of creditor provided fund to the use of owner equity fund in 1986 external equity (current liability) and owner equity (long term liability) accounted from

51.47 per cent and 48.73 per cent for external equities and 59.27 per cent for owner equity. These changes indicate that the concern has started to use internal sources more frequently than external sources more frequently than external sources in the generation of fund for this business.

3. The concern has not only succeeded in getting its current liability down from 51.47 per cent in 1986 to 40.73 per cent in 1987 of their respective of the total equity. In but it has also increased the percentage of its revenue and surplus from 4.48 per cent in 1986 to 6.11 per cent in 1987 of other respective total equities.

**Illustration 4:** You have given the following common size percentage of AB Company Ltd for 1997 and 1988.

	1997	1998
Inventory	5.20	5.83
Debtors	10.39	?
Cash	?	7.35
Machinery	49.35	45.35
Building	27.27	29.59
Creditors	20.78	?
Overdraft	?	10.81
Total Current Liabilities	31.17	?
Capital	51.95	49.67
Long-term loan	16.88	17.91
Total Liabilities	3,85,000	4,63,000

From the above information, compute the missing common size percentage. Also calculate the value of all assets and liabilities.

**Solution:**

**Common Size Balance Sheet  
(As on 31 December 1997 and 1998)**

Assets	1997		1998	
	Amt. (Rs.)	Percentage	Amt. (Rs.)	Percentage
<b>Assets :</b>				
<b>A. Current Assets</b>				
Inventory	20,000	5.20	27,000	5.83
Debtors	40,000	10.39	55,000	11.88
Cash	30,000	7.79	34,000	7.35
<b>Total (A)</b>	<b>90,000</b>	<b>23.38</b>	<b>1,16,000</b>	<b>25.06</b>
<b>B. Fixed Assets</b>				
Machinery	1,90,000	49.35	2,10,000	45.35

Building	10,05,000	27.27	1,37,000	29.59
<b>Total (B)</b>	<b>2,95,000</b>	<b>76.62</b>	<b>3,47,000</b>	<b>74.94</b>
<b>Total Assets (A+B)</b>	<b>3,85,000</b>	<b>100.00</b>	<b>4,63,000</b>	<b>100.00</b>
<b>Liabilities :</b>				
<b>C. Current Liabilities</b>				
Creditors	80,000	20.78	1,00,000	21.59
Overdraft	40,000	10.39	50,000	10.81
<b>Total (C)</b>	<b>1,20,000</b>	<b>31.17</b>	<b>1,50,000</b>	<b>32.40</b>
<b>D. Long-term Liabilities</b>				
Capital	2,00,000	51.95	2,30,000	49.67
Loan	65,000	16.88	83,000	17.91
<b>Total (D)</b>	<b>2,65,000</b>	<b>68.83</b>	<b>3,13,000</b>	<b>67.55</b>
<b>Total Liabilities (C+D)</b>	<b>3,85,000</b>	<b>100.00</b>	<b>4,63,000</b>	<b>100.00</b>

**Note :** Calculation have been made to the nearest rupee.

(i) Calculation of percentage of Cash for 1997

$$\begin{aligned} \text{Cash} &= 23.38^* - 15.59^* \\ &= 7.79 \end{aligned}$$

$$\begin{aligned} * \text{ Current Assets} &= \text{Total Assets} - \text{Fixed Assets} \\ &= 100 - 76.62 \\ &= 23.38 \end{aligned}$$

$$** \text{ Inventory + debtor} = 5.20 + 10.39 = 15.59$$

(ii) Calculation of Percentage of overdraft for 1997

$$\text{Total Current Liability} - \text{Creditor} = 31.17 - 20.78 = 10.39$$

(iii) Calculation of percentage of Debtors for 1998

$$\text{Debtor} = 25.06^* - 13.18 = 11.88$$

$$\begin{aligned} * \text{ Current Assets} &= \text{Total Assets} - \text{Fixed Assets} \\ &= 100 - 74.94 \\ &= 25.06 \end{aligned}$$

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### 3.6 EXERCISE

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1. Define common size financial statement and explain their usefulness during financial statement analysis.
2. What are the steps involved in the financial statement analysis?
3. Discuss various techniques of financial statement.
4. Write short note on
  - a. Comparative financial statement
  - b. Trend analysis
  - c. Qualification of financial analysis

5. What do you understand by comparative financial statement? What information is required to prepare a comparative balance sheet?
6. Explain the procedure of preparing common size balance sheet.
7. The following are the balance sheet of a concern as on 31<sup>st</sup> December, 1987 and 1988.
8. Critically examine the various tools available to the financial analysis. What are the limitations of such tool?

9. **Objective Type Questions**

- A. Rewrite the following sentences by selecting correct choice.
- a) An asset which is shown in the balance sheet but it has no real balance.
    - (i) Fixed Asset
    - (ii) Current Asset
    - (iii) Wasting Asset
    - (iv) Intangible Asset
  - b) An expenditure from which no future benefit is expected.
    - (i) Capital Expenditure
    - (ii) Revenue Expenditure
    - (iii) Deferred Revenue Expenditure
    - (iv) Misc. Expenditure
  - c) Which of the following is not a financial statement?
    - (i) Balance Sheet
    - (ii) Profit & Loss account
    - (iii) Funds Flow Statement
    - (iv) Trial Balance
  - d) The comparative income statement shows the increase or decrease over\_\_\_\_\_
    - (i) Previous Year
    - (ii) Future Year
    - (iii) Current Year
    - (iv) Percentage
  - e) In common size balance sheet analysis, the total assets are taken as
    - (i) 100 %
    - (ii) 50 %
    - (iii) 10 %
    - (iv) 0 %

(Answers: a)- (iii), b)- (ii), c)- (iv), d)- (i), e)- (i) )

B. Fill in the blanks :-

- a) In a common size income statement \_\_\_\_\_ is taken as 100.
- b) \_\_\_\_\_ form of balance sheet shows the assets on the right side and the liabilities on the left side.

- c) \_\_\_\_\_ Reserves are not available for distribution of dividend.
- d) Receipts from customer for sale of goods are known as \_\_\_\_\_ receipts.
- e) The excess of current assets over current liabilities is known as \_\_\_\_\_.

(Answers: i) Total Assets, ii) Horizontal, iii) Capital, iv) Revenue, v) Working Capital)

C. Match the following:-

Group A	Group B
1. Bank overdraft	a) Reserve and Surplus
2. Owned Funds	b) Fixed Asset
3. Intangible Asset	c) Non-operating Expenditure
4. Loss on sale of fixed assets	d) Current Liability
5. Depreciation	e) goodwill

(Answer: 1. d), 2. a) 3. e), 4. c), 5. b) )

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

- (i) Issue of shares is an internal source of Finance.
- (ii) A comparative balance sheet is prepared for the purpose of intra-firm comparison
- (iii) Common size statements are used for vertical analysis only.
- (iv) Analysis of profit & loss account means breaking down the profit & loss account into its various components.
- (v) Accounting principles are generally accepted guidelines used by accountants for the purpose of preparing the financial statements.

( Answers: (i) True, (ii) False, (iii) False, (iv) True, (v) False )

### 10. Practical Problems:

1. Prepare a comparative balance sheet of the concern and study its financial position.

Liability	1987 Rs.	1988 Rs.	Assets	1987 Rs.	1988 Rs.
Sundry Creditors	55,000	83,000	Cash	25,000	18,000
Bills Payable	20,000	16,000	Sundry Debtors	1,60,000	2,00,000
Proposed Dividend	40,000	50,000	Bills Receivable	20,000	30,000
Proposed Dividend	42,000	50,000	Stock in trend	77,000	1,09,000
6% Debenture	1,50,000	1,00,000	Machinery	80,000	2,00,000
General Reserve	40,000	70,000	Building	2,00,000	1,70,000
Profit and Loss A/c	30,000	48,000	Goodwill	1,15,000	90,000
Capital	3,00,000	4,00,000			
	<b>6,77,000</b>	<b>8,17,000</b>		<b>6,77,000</b>	<b>8,17,000</b>

2. From the following information prepare a comparative statement and make brief comments.

**Income Statement**  
(For the year ended 31<sup>st</sup> March 1987 and 1988)

Particulars	1987 Rs.	1988 Rs.
Sales	2,80,000	3,10,000
<b>Less</b> : Cost of Good Sold	1,92,000	2,22,000
Gross Profit	88,000	88,000
<b>Less</b> : Administrative Expenses	15,000	12,000
Selling and Distribution Expenses	18,000	18,000
Total Operating Expenses	33,000	30,000
Net Income before Tax	55,000	58,000
<b>Less</b> : Tax (40%)	22,000	23,200
Net Income after Tax	33,000	34,800

3. Convert the following balance sheet into common size balance sheet and make brief comments.

**Balance Sheet (as on 31 March 1983 and 1984)**

Liabilities	1983 Rs.	1984 Rs.	Assets	1983 Rs.	1984 Rs.
Share Capital	5,00,000	6,50,000	Machinery	2,80,000	3,20,000
6% Debenture	3,40,000	2,00,000	Building	3,50,000	3,50,000
Sundry creditor	1,60,000	67,000	Investment	2,65,000	2,65,000
Provision for doubtful debtor	45,000	3,000	Goodwill	70,000	55,000
Profit and loss A/c	75,500	1,65,000	Bank balance	40,000	30,000
			Inventory	60,000	40,000
			Bill receivable	40,000	25,000
	<b>10,80,000</b>	<b>10,85,000</b>		<b>10,80,000</b>	<b>10,85,000</b>

4. Following income statement of a business is given the for the year ending 31<sup>st</sup> December, 1987 and 1988 prepare a common size statement and make comments on the business result.

**Income Statement (for the ending on 31<sup>st</sup> Dec. 1987 and 1988)**

Particulars	1987 Rs.	1988 Rs.
Gross Sales	7,20,000	8,40,000
Sales Return and Allowance	40,000	50,000
Net Sales	6,80,000	7,90,000
Cost of Good Sold	5,00,000	5,80,000
Gross Profit from Sales	1,80,000	2,10,000
<b>Operating Expenses :</b>		
<b>Selling Expenses</b>	10,000	12,000

Advertising Expenses	12,000	16,000
Sales Salary	7,000	5,000
Delivery Expenses	10,000	16,000
Depreciation Expenses	39,000	49,000
Total Selling Expenses		
<b>General and Administrative Expenses</b>	50,000	
Office Salaries	20,000	75,000
Insurance	5,000	35,000
Depreciation	3,000	16,000
Bad Debs	78,000	12,000
Total General and Administrative Expenses	1,17,000	1,38,000
<b>Total Operating Expenses</b>	63,000	1,87,000
Operating Income		23,000



## RATIO ANALYSIS AND INTERPRETATION – I

### Unit Structure:

- 4.0 Objectives
- 4.1 Introduction
- 4.2 Meaning and Objectives of Ratios
  - 4.2.1 Meaning
  - 4.2.2 Objectives
- 4.3 Modes of Expressing an Accounting Ratio
- 4.4 Classification of Ratios
  - 4.4.1 Traditional Classification
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  - 4.4.3 Classification from the view point of user
- 4.5 Balance sheet Ratio
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- 4.6 Revenue Statement Ratio
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  - 4.6.3 Expenses Ratio
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  - 4.6.6 Stock Turnover Ratio
- 4.7 Combines Ratio / Composite Ratios
  - 4.7.1 Return on Capital Employed
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  - 4.7.4 Earning per Share
  - 4.7.5 Dividend Payout Ratio
  - 4.7.6 Debt Service Ratio
  - 4.7.7 Creditors' Turnover Ratio
  - 4.7.8 Debtors' Turnover Ratio
- 4.8 Limitation of Ratio
- 4.9 Exercise

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## **4.0 OBJECTIVES:-**

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After studying the unit the students will be able to

- Understand meaning of Ratios.
- Know the modes of expressing ratios.
- Know the objectives of ratios analysis.
- Classify the ratios.

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## **4.1 INTRODUCTION:-**

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During the half of the 19th century, the bankers have started using accounting ratios for analyzing credit standing of prospective buyer (debtors). But the ratios analysis of bankers was very much restricted to the study of current ratios only.

In 1919, Alexander was has criticized such restrictions and narrow analysis and pointed out the possible dangers of such analysis. He expressed in his view that in order is get clear picture of financial health of the business enterprise, one has to take into account various other relationships other than current ratios. Then the ratio analysis is considered as strong and efficient tools of analyzing the financial statement.

Ratio analysis is the method or process of expressing relationship between items or group of items in the financial statement are computed, determined and presented. It is an attempt to draw quantitative measures or guides concerning the financial health and profitability of an enterprise. It can be used in trend and static analysis.

It is the process of comparison of one figure or item or group of items with another, which make a ratio, and the appraisal of the ratios to make proper analysis of the strengths and weakness of the operations of an enterprise.

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## **4.2 MEANING AND OBJECTIVES OF RATIOS:-**

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### **4.2.1 Meaning**

A ratio is one figure expressed in terms of another figure. It is mathematical yardstick of measuring relationship of two figures or items or group of items, which are related, is each other and mutually inter-dependent. It is simply the quotient of two numbers. It can be expressed in fraction or in decimal point or in pure number.

Accounting ratio is an expression relating to two figures or two accounts or two set accounting heads or group of items stated in financial statement.

#### 4.2.2 Objectives

The accounting ratios are very useful in assessing the performance of business enterprise i.e. financial position and profitability. This is possible to achieve by comparison of ratios of the year or with the previous year.

The ratios are worked out to analyse the following aspect or areas of business organization.

1. Solvency: -
  - a. Long-term solvency
  - b. Short-term solvency
  - c. Immediate solvency
2. Stability
3. Profitability
4. Operational efficiency
5. Credit standing
6. Structural analysis.
7. Utilization of resources and
8. Leverage or external financing.

The ratios are useful for the following parties.

- 1) Investors, both present as well as potential investors.
- 2) Financial analyst.
- 3) Stock broker and stock exchange authorities.
- 4) Government.
- 5) Tax Department.
- 6) Competitors
- 7) Research analyst and students.
- 8) Creditors and supplier.
- 9) Banks and financial institutions.
- 10) Company's management.
- 11) Finance managers
- 12) Mutual funds.
- 13) Other interested parties like credit rating agencies.

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### 4.3 MODES OF EXPRESSING AN ACCOUNTING RATIO

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An accounting ratio may be expressed in different ways as under.

- 1) **Simple or pure ratio:** - It is merely a quotient arrived by simple division of one number by another.

**Example :** When current assets of the business enterprise are Rs. 1, 00,000 and current liabilities are Rs. 25,000. The ratio between current assets and current liabilities will be expressed as  $\frac{1,00,000}{25,000} = 04$  OR it is expressed as 4:1.

**II) Percentages :-** It is expressed as percentage relationship when simple or pure ratio is multiplied by 100.

**Example :** The current ratio in above example is expressed in percentage by multiplying 4 by 100.  
i.e.  $100 \times 4 = 400\%$

**III) Rate :-** The ratio is expressed as rates which refer to the ratio over a period of time.

**Example :** Stock has turned over 8 times a year.

**IV) Number of days or week or month :-** Certain items of the financial statements are expressed better in the form of days or weeks or months.

**Example :** Debtors' collection period, credit payment period, movement of stock, etc are expressed in days or weeks or months in a year.

If stock turnover ratio is 8 times, they movement of stock is expressed as under :

$$\frac{360}{8} = 45 \text{ days, } \frac{52}{8} = 6.5 \text{ weeks or } \frac{12}{8} = 1.5 \text{ months}$$

**V) Rupees :-** In this case numerator is divided by denominator and figure of result is expressed in rupees.

**Example :** Earnings per share, dividend per share etc are expressed in rupees.

It net profit after tax is Rs. 12,500 and number of shares of a company are 1250.

$$\text{Earning per share} = \frac{\text{NPAT}}{\text{No. of shares}} = \frac{12,500}{1,250} = \text{Rs.10 per share}$$

**Check your progress:**

1. Define the following terms.

- |                        |          |
|------------------------|----------|
| a) Percentages         | c) Rates |
| b) Simple / Pure Ratio | d) Ratio |

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2. Explain the objectives of Ratio analysis.

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#### **4.4 CLASSIFICATION OF RATIOS: -**

The ratios are used for different purposes, for different users and for different analysis.

The ratios can be classified as under:

- a) Traditional classification
- b) Functional classification
- c) Classification from user's point of view

##### **4.4.1 Traditional classification :**

As per this classification, the ratios readily suggest through their names, their respective resources. From this point of view, the ratios are classified as follows.

- a) **Balance Sheet Ratio:** - This ratio is also known as financial ratios. The ratios which express relationships between two items or group of items mentioned in the balance sheet at the end of the year.

**Example:** Current ratio, Liquid ratio, Stock to Working Capital ratio, Capital Gearing ratio, Proprietary ratio, etc.

- b) **Revenue Statement Ratio:** - This ratio is also known as income statement ratio which expresses the relationship between two items or two groups of items which are found in the income statement of the year.

**Example:** Gross Profit ratio, Operating ratio, Expenses Ratio, Net Profit ratio, Stock Turnover ratio, Operating Profit ratio.

- c) **Combined Ratio :-** These ratios shows the relationship between two items or two groups of items, of which one is from balance sheet and another from income statement (Trading A/c and Profit & Loss A/c and Balance Sheet).

**Example :** Return on Capital Employed, Return on Proprietors' Fund ratio, Return on Equity Capital ratio, Earning per Share ratio, Debtors' Turnover ratio, Creditors Turnover ratio.

##### **4.4.2 Functional Classification of Ratios :**

The accounting ratios can also be classified according their functions as follows.

a) **Liquidity Ratios** :- These ratios show relationship between current assets and current liabilities of the business enterprise.

**Example** : Current Ratio, Liquid Ratio.

b) **Leverage Ratios** :- These ratios show relationship between proprietor's fund and debts used in financing the assets of the business organization.

**Example** : Capital gearing ratio, debt-equity ratio, and proprietary ratio.

This ratio measures the relationship between proprietors fund and borrowed funds.

c) **Activity Ratio** :- This ratio is also known as turnover ratio or productivity ratio or efficiency and performance ratio. These ratios show relationship between the sales and the assets. These are designed to indicate the effectiveness of the firm in using funds, degree of efficiency, and its standard of performance of the organization.

**Example** : Stock Turnover Ratio, Debtors' Turnover Ratio, Turnover Assets Ratio, Stock working capital Ratio, working capital Turnover Ratio, Fixed Assets Turnover Ratio.

d) **Profitability Ratio** :- These ratios show relationship between profits and sales and profit & investments. It reflects overall efficiency of the organizations, its ability to earn reasonable return on capital employed and effectiveness of investment policies.

**Example** : i) Profits and Sales : Operating Ratio, Gross Profit Ratio, Operating Net Profit Ratio, Expenses Ratio etc. ii) Profits and Investments : Return on Investments, Return on Equity Capital etc.

e) **Coverage Ratios** :- These ratios show relationship between profit in hand and claims of outsiders to be paid out of profits.

**Example**: Dividend Payout Ratio, Debt Service Ratio and Debt Service Coverage Ratio.

#### 4.4.3 Classification from the view point of user:

Ratios from the users' point of view are classified as follows.

a) **Shareholders' point of view** :- These ratios serve the purposes of shareholders. Shareholders, generally expect the reasonable return on their capital. They are interested in the safety of shareholders investments and interest on it.

**Example**: Return on proprietor's funds, Return on capital, Earning per share.

- b) Long term creditors:** - Normally leverage ratios provide useful information to the long term creditors which include debenture holders, vendors of fixed assets, etc. The creditors interested to know the ability of repayment of principal sum and periodical interest payments as and when they become due.

**Example:** Debt equity ratio, return on capital employed, proprietary ratio.

- c) Short term creditors:** - The short-term creditors of the company are basically interested to know the ability of repayment of short-term liabilities as and when they become due. Therefore, the creditors has important place on the liquidity aspects of the company's assets.

**Example:** a) Liquidity Ratios - Current Ratio, Liquid Ratio.  
b) Debtors Turnover Ratio.  
c) Stock working capital Ratio.

- d) Management:** - Management is interested to use borrowed funds to improve the earnings.

**Example:** Return on capital employed, Turnover Ratio, Operating Ratio, Expenses Ratio.

## 4.5 BALANCE SHEET RATIOS

### 4.5.1 Current Ratio :

This ratio is also known as **Working Capital Ratio**. This expresses the relationship between current assets and current liabilities. This ratio is calculated by dividing current assets by current liabilities. It is expressed as pure ratio. Standard current ratio is 2:1. It Means current assets should be double the current liabilities.

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

- a) Current assets** includes I) Inventories of raw materials, finished goods, work-in-progress, stores & spare, loose tools, II) Sundry debtors, III) Short-term loan, deposits, advance, IV) Cash on hand and bank, V) Prepaid expenses, accrued income, VI) Bills receivables, VII) Marketable investments, short term securities.
- b) Current liabilities** includes sundry creditors, bills payables, outstanding expenses, unclaimed dividends, interest accrued but not due on secured and unsecured loans, advances received, income received in advance, provision for tax, purposed dividend loan installment of secured and unsecured loan payable within 12 months.

**c) Significance:**

- 1) This ratio tests the credit strength and solvency of an organization.
- 2) It shows strength of working capital,
- 3) It indicates ability to discharge short term liabilities.

**4.5.2 Liquid Ratio:**

This ratio expresses the relationship between liquid assets and liquid liabilities. This ratio is also known as **Quick Ratio or Acid Test Ratio**. This ratio is calculated by dividing liquid assets by liquid liabilities. Standard quick ratio is 1:1.

$$\text{Liquid Ratio} = \frac{\text{Liquid Assets / Quick Assets}}{\text{Quick or Current Liabilities}}$$

**a) Liquid assets** = Current assets less (Stock, prepaid expenses and advance tax etc)

**b) Liquid liabilities** = Current liabilities less (Bank overdraft and cash credit etc)

**c) Significance :-**

- 1) Indicate immediate solvency of enterprise.
- 2) Unlike CR it is more qualitative concept
- 3) As it eliminates inventories, it is rigorous test of liquidity.
- 4) More important for financial institutions.

**4.5.3 Proprietary Ratio:**

Proprietary ratio is a test of the financial and credit strength of the business. It establishes relationship between proprietors to total assets. This ratio determines the long term solvency of the company.

Alternatively this ratio is also known as Worth Debt Ratio, Net worth to Total Assets Ratio, Equity Ratio, Net Worth Ratio or Assets Backing Ratio, Proprietor's funds to Total Assets Ratio or Share holders Funds to Total Assets Ratio.

This ratio is expressed in percentage.

**a) Formula :-**

$$\text{Proprietary Ratio} = \frac{\text{Proprietors' or Shareholders' Fund}}{\text{Total Assets}} \times 100$$

**b) Components:-**

- 1) **Proprietors Funds** = Paid up equity + Reserves and surplus less accumulated loss + paid up preference capital.
- 2) **Total assets** = Fixed assets + investment + current assets.

c) **Purpose:** - This ratio is exercised to indicate the long term solvency of the business.

d) **Significance:** -

This ratio shows general financial strength of the business.

- 1) It determines the extent of trade on equity.
- 2) It indicates long term solvency of business.
- 3) It tests credit strength of business.
- 4) It can be used to compare proprietary ratio with others firms or industry.

#### 4.5.4 Stock-Working Capital Ratio:

This ratio establishes relationship between stock and working capital. Alternatively it is known as "**Inventory-working capital ratio**".

a) **Formula :-**

$$\text{Stock-Working Capital Ratio} = \frac{\text{Stock}}{\text{Working Capital}}$$

b) **Components :-**

- 1) Stock (closing stock)
- 2) Working capital i.e. current assets less current liabilities.

It can be expressed in percentage also by multiplying this ratio by 100.

c) **Purpose:** - This ratio shows the extent to which the working capital is blocked in inventories.

d) **Significance:-**

- 1) This ratio highlights the predominance of stocks in current financial position of organization.
- 2) A higher ratio indicates week working capital.
- 3) This ratio is the indicator of the adequacy of working capital.

e) **Standard Ratio:** - Standard stock working capital ratio is 1:1.

#### 4.5.5 Capital Gearing Ratio :

This ratio brings out the relationship between capital carrying fixed rate of interest or fixed dividend and capital that doesn't carry fixed rate of interest or fixed dividend. This ratio indicates degree to which capital has been geared in the capital structure of the company.

Alternatively this ratio is also known as "**Leverage ratio**" or "**Financial leverage ratio**" or "**Capital structure ratio**".

**a) Formula :-**

$$\text{Capital Gearing Ratio} = \frac{\text{Capital bearing Fixed Interest or dividend}}{\text{Capital not bearing Fixed Interest or dividend}}$$

**b) Components :-**

- 1) Capital bearing fixed interest or dividend comprises of debentures, secured and unsecured loans, and preference share capital.
- 2) Capital not bearing fixed interest or dividend is equity share capital and reserve & surplus.

This ratio also can be expressed in %age by multiplying this ratio by 100.

**c) Purpose :-** This ratio is used to understand the effective capital structure of the company.**d) Significance :-**

- 1) It is mechanism to ascertain the extent to which the company is practicing trade or equity.
- 2) It brings one balanced capital structure.

**4.5.6 Debt Equity Ratio :**

This ratio express the relationship between external equities and external equities i.e. owners' capital and borrowed capital.

**a) Formula :-**

$$\text{Debt equity ratio} = \frac{\text{Debt}}{\text{Equity}} \text{ OR } \frac{\text{Long Term Debts}}{\text{Shareholders Fund}} \text{ OR}$$

$$\frac{\text{Long Term Debts}}{\text{Shareholders Funds} + \text{Long Term Debts}}$$

**b) Components :-**

- 1) Debts include all liabilities including short term & long term i.e. mortgage loan and debentures.
- 2) Shareholders' funds consist of Preference share capital, Equity share capital, Capital and Revenue Reserves, Surplus, etc.

**c) Significance:-**

- 1) It shares favorable or non favorable capital structure of the company.
- 2) It shows long term capital structure.
- 3) It reveals high margin of safety to creditors.
- 4) It makes us understand the dependence on long terms debts.

- d) **Standard:** - Standard debt- equity ratio is 2:1. It means debts should be double the shareholders funds.

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#### 4.6 REVENUE STATEMENT RATIOS: -

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Revenue statement ratios are the ratios which highlights the relation between two items from revenue statements i.e. Trading Account and Profit and Loss Account.

##### 4.6.1 Gross profit ratio :

Gross profit ratios express the relationship between gross profit and net sales. This ratio is also known as "**Turnover ratio**" OR "**Margin ratio**" OR "**Gross margin ratio**" OR "**Rate of gross profit**". This ratio is expressed in percentage of net sales. This ratio says about %age gross profit to net sales.

##### a) Formula :-

$$\text{Gross Profit Ratio} = \frac{\text{Gross Profit}}{\text{Sales}} \times 100$$

##### b) Components of this ratio are :-

- 1) Net sales = Total sales less sales return
- 2) Gross profit = Sales - Cost of sales
- 3) Cost of sales = (opening stock + purchases + direct labour + other direct charge) - closing stock

##### c) Significance:-

- 1) This ratio analyse the basic profitability of business.
- 2) It shows the degree to which the selling price per unit may decline without resulting in loss from operations.
- 3) Yearly comparisons of gross profit ratio reveal the trend of trading results.

##### 4.6.2 Operating Ratio :

This ratio studies the relationship between cost of activities and net sales i.e. cost of goods sold and net sales. This ratio shows the percentage of cost of goods sold with net sales.

##### a) Formula :-

$$\text{Operating Ratio} = \frac{\text{Operating Cost}}{\text{Net Sales}} \times 100$$

##### b) Components: -

Operating cost = Cost of goods sold + Other Operating Expenses (administrative expenses, selling & distribution expenses etc.) - Finance Expenses ( income taxes, loss on sale of assets, etc.)

c) **Purpose :-** Purpose of operating ratio is to ascertain the efficiency of the management regarding operation of business concern.

d) **Significance :-**

- 1) It is used to test operational efficiency of business.
- 2) This ratio is the yardstick which measures the efficiency of all operational activities of business i.e. production, management, administration, sales, etc.

e) **Limitation of operating ratio :-**

- 1) It cannot test profitability of business without considering extra - ordinary items.
- 2) The utility of operating ratio is limited owing to its vulnerability to changes in management decisions.

#### 4.6.3 Expenses Ratio :

This ratio explains relationship of items or group of expense to net sales. Such ratios are collectively known as expenses ratio. This is calculated and expressed in percentage. This ratio expresses the percentage of items of expenses with net sales.

a) **Formula :-**

$$\text{Expenses Ratio} = \frac{\text{Item or Group of Expenses}}{\text{Net sales}} \times 100$$

b) **Various expenses ratios are as follows :-**

- 1) Administrative expenses ratio =  $\frac{\text{Administrative expenses}}{\text{Net sales}} \times 100$
- 2) Selling & Dist. expenses ratio =  $\frac{\text{Selling \& Dist. expenses}}{\text{Net sales}} \times 100$
- 3) Cost of material consumed ratio =  $\frac{\text{Cost of material consumed}}{\text{Net sales}} \times 100$
- 4) Manufacturing expenses ratio =  $\frac{\text{Manufacturing expenses}}{\text{Sales}} \times 100$
- 5) Non-operating expenses ratio =  $\frac{\text{Non operating expenses}}{\text{Net sales}} \times 100$

c) **Purpose and significance:-**

- 1) This ratio helps us to know the cause behind overall changes in operating ratio
- 2) Purpose of this ratio is to take corrective action.
- 3) It indicates the efficiency of management in controlling expenses and improving profitability.

- 4) This ratio enables the income tax department to judge the correctness and reliability of income disclosed in income tax returns.
- 5) Analytical study of this ratio can be judged by trend of expenses.
- 6) Comparative study of year to year expenses can be possible.

#### 4.6.4 Net Profit Ratio:-

Net profit ratio indicates the relationship between net profit and net sales. Net profit can be either operating net profit or net profit after tax or net profit before tax. Alternatively this ratio is also known as "**Margin on sales ratio**". Normally this ratio is calculated & expressed in percentage.

##### a) Formula :-

$$\text{Net profit ratio} = \frac{\text{Net profit}}{\text{Net sales}} \times 100 \quad \text{OR} \quad \frac{\text{NPAT}}{\text{Net sales}} \times 100$$

$$\text{OR} \quad \frac{\text{NPBT}}{\text{Net sales}} \times 100 \quad \text{OR} \quad \frac{\text{ONP}}{\text{Net sales}} \times 100$$

##### b) Significance :-

- 1) It measures overall profitability of business.
- 2) It is very useful in judging return on investments.
- 3) It provides useful inferences as to the efficiency and profitability of business.
- 4) It indicates the portion of net sales is available for proprietors.
- 5) It is clear index of cost control, managerial efficiency, sales promotion, etc.

#### 4.6.5 Net Operating Profit Ratio:

Operating Profit Ratio indicates the relationship between operating profit and net sales. This ratio is expressed in percentage.

##### a) Formula :-

$$\text{Net operating profit ratio} = \frac{\text{Net operating profit}}{\text{Net sales}} \times 100$$

##### b) Components:-

- 1) Net Operating Profit = Gross Profit - All Operating Expenses  
or Sales - Cost Of Goods Sold and Operating Expenses.
- 2) Net sales = Sales - Sales Returns.

**c) Significance :-**

- 1) It signifies higher operating efficiency of management and control over operating cost.
- 2) It indicates profitability of various operations of the organization i.e. buy, manufacture, sales, etc.
- 3) It shows ability of organization to generate operating profit out of its daily operations.

**4.6.6 Stock Turnover Ratio:**

Stock turnover ratio shows relationship between costs of goods sold and average stock. This ratio is also known as "**Inventory Ratio**" or "**Inventory Turnover Ratio**" or "**Stock Turn Ratio**" or "**Stock Velocity Ratio**" or "**Velocity of Ratio**".

This ratio measures the number of times of stock turns or flows or rotates in an accounting period compared to the sales affected during that period. This ratio indicated the frequency of inventory replacement. This ratio is expressed as rate.

**a) Formula :-**

$$\text{Stock Turnover Ratio} = \frac{\text{Cost of goods sold}}{\text{Average stock}}$$

**b) Components :-**

- 1) Cost of goods sold = Sales – Gross Profit
- 2) Average Stock =  $\frac{\text{Opening stock} + \text{closing stock}}{2}$

\* If opening stock is not given, the closing stock is treated as average stock.

**c) Alternative method of stock turnover ratio :-** This ratio can be calculated by using average stock at selling price as the denominator. Under this method, average stock at selling price is related to net sales.

$$\text{Stock Turnover Ratio} = \frac{\text{Net sales}}{\text{Average inventory at selling price}}$$

**d) Purpose: -** Purpose of stock turnover ratio is to

- 1) Calculate the speed at which the stock is being turned over into sales.
- 2) Calculate the stock velocity to indicate the period takes by average stock to be sold out.
- 3) Judge how efficiently the stock are managed and utilised to generate sales.

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## 4.7 COMBINES RATIO / COMPOSITE RATIOS :-

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Combined or composite ratios relate two items or group of items of which one is from balance sheet and another from revenue statements of an enterprise.

### 4.7.1 Return on Capital Employed (including Long Term Borrowings):

This ratio explains the relationship between total profit earned by business and total investment made or total assets employed. It is expressed in percentage. This ratio is also known as "**Return on Investment**", or "**Return on Total Resources**".

#### a) Formula :-

$$\text{Return on capital employed} = \frac{\text{Profit before tax Interest}}{\text{Capital Employed}} \times 100$$

#### b) Components :-

- 1) Net profit before tax, interest & dividends (PBIT)
- 2) **Capital employed** = Equity Share Capital+ Preference Share Capital + Reserve & Surplus+ Long term borrowings (Term loan + Debentures) - Fictitious assets like miscellaneous expenses not written off - Profit & Loss A/c Debit Balance (loss)

#### c) Purpose:-

- 1) Purpose of this ratio is to measure overall profitability from the total funds made available by owners and leaders.
- 2) Purpose of this ratio is to judge how efficient the business concern is in managing the funds at its disposal.

#### d) Significance: -

- 1) This ratio is effective tools to measure overall managerial efficiency of business.
- 2) Comparison of this ratio with other company and this information can be obtained for determining future course of action.
- 3) This ratio indicates the productivity of capital employed and measures the operating efficiency of the business.

### 4.7.2 Return on Proprietors Funds (Share Holders Fund and Preference Capital):

This ratio measures the relationship between net profit after tax & interest and proprietors fund. This ratio is alternatively known as "**Return on proprietors' equity**" or "**Return on shareholders' investment**" or "**Investors' ratio**". This ratio is expressed in percentage.

**a) Formula :-**

$$\text{Return on Proprietor's Fund} = \frac{\text{Net profit after tax \& Interest (NPATI)}}{\text{Proprietors' Fund}} \times 100$$

**b) Components :-**

- 1) Net profit after tax and interest
- 2) Proprietors' Funds  
(Term Proprietors Fund is explained in para 4.5.3 - b)

**c) Purpose: -**

- 1) Purpose of this ratio is to measure the rate of return on the total fund made available by the owners.
- 2) This ratio helps to judge how efficient the concern is in managing owners' funds at its disposal.

**d) Significance: -**

- 1) This ratio is very significant to prospective investors and shareholders.
- 2) With the help of this ratio company can decide to raise finance from external sources even from public deposit if ratio is satisfactory.
- 3) Shareholders can expect to capitalize its reserves and issue bonus shares when ratio is higher for reasonable period of time.

**4.7.3 Return on Equity Share Capital :**

This ratio explains relationship between net profit (after tax and interest and dividend on preference share) and equity share holders' funds. This ratio is expressed in percentage.

**a) Formula :-**

$$\text{Return on Equity Capital} = \frac{\text{Net profit after tax less preference dividend}}{\text{Equity share capital}} \times 100$$

Alternatively this ratio may be calculated by using following formula for calculating the return per equity shares.

$$\text{Return on Equity Shares} = \frac{\text{Net profit after tax less preference dividend}}{\text{Number of Equity share}}$$

**b) Components :-**

- 1) Net profit after tax & interest and preference dividend.
- 2) Equity share capital by adding reserves or deducting miscellaneous expenditures.

**c) Purpose :-**

Purpose of this ratio is to calculate amount of profit available to take care of equity dividend, transfer to reserves, etc.

**d) Significance :-**

- 1) It is useful to the investors while deciding whether to purchase or sale of shares.
- 2) This ratio helps to make comparative study of equity capital with other company and it will be appreciate if there is high return.

**4.7.4 Earning Per Share :**

Earning per share is calculated to find out overall profitability of the organization. It represents earnings of the company whether or not dividends are declared.

Earning per share is determined by dividing net profit by the number of equity shares.

**a) Formula :-**

$$\text{Earning per shares (EPS)} = \frac{\text{Net profit after tax - preference dividend}}{\text{Number of Equity share}}$$

**b) Components :-**

- 1) Net Profit after Tax & Interest - Preference Dividend.
- 2) Number of equity shares.

**c) Purpose :-**

Purpose of this ratio is to calculate the amount of profits available on each equity share to take care of equity dividend, transfer to reserves, etc.

**d) Significance :-**

- 1) This ratio helps the investors or shareholders to take decision while purchasing or selling shares.
- 2) This ratio shows the possibilities of issue of bonus shares.
- 3) Higher ratio indicates overall profitability.

**4.7.5 Dividend Payout Ratio :**

This ratio shows relationship between dividends paid to equity shareholders out of profit available to the equity share holders.

**a) Formula: -**

This ratio is calculated as follows.

$$\text{Dividend payout ratio} = \frac{\text{Dividend per equity shares}}{\text{Earning per shares}}$$

**b) Components: -**

- 1) Dividend per equity shares means total dividend paid to equity shareholder dividend by number of equity shares.
- 2) Earning per shares (as per Para 4.7.4 a)

c) **Purpose:** - Purpose of this ratio is to measure the dividend paying capacity of the company.

d) **Significance:** -

- 1) Higher ratio signifies that the company has utilized the larger portion of its earning for payment of dividend to equity shareholders.
- 2) It says lesser amount of earning has been retained.

#### 4.7.6 Debt Service Ratio :

Debt service ratio shows relationship between net profit and interest payable on loans. This ratio is also called as **Interest Coverage Ratio**. This ratio is expressed as a pure number.

a) **Formula :-**

$$\text{Debt service ratio} = \frac{\text{Net profit before interest \& tax}}{\text{Interest charges}}$$

b) **Components :-**

- 1) Profit Before Interest & Tax means net profit before payment of interest on loan and tax.
- 2) Interest means interest on long term loans.

c) **Purpose :-**

- 1) Purpose of this ratio is to measure the interest paying capacity the company.
- 2) The purpose of this ratio is to find out the number of times the fixed financial charges are covered by income before interest and tax.

d) **Significance :-**

- 1) It is important from the lenders' point of view.
- 2) It indicated whether the company will earn sufficient profits to pay periodical interest charges.
- 3) It shows that the company will be able is pay interest regularly.

#### 4.7.7 Creditors' Turnover Ratio :

This ratio shows relationship between the net credit purchases and the average creditors. This ratio is express as a rate.

a) **Formula :-**

$$\text{Creditors' Turnover Ratio} = \frac{\text{Net credit purchases}}{\text{Average creditors}} \text{ OR } \frac{\text{Credit purchases}}{\text{Creditors + Bills payable}}$$

$$\text{Credit payment period OR (Creditors velocity)} = \frac{365 \text{ day or } 12 \text{ months}}{\text{Creditors turnover ratio}} \text{ OR}$$

$$= \frac{\text{Creditors + Bills payable}}{\text{Daily credit purchases}}$$

**b) Components: -**

- 1) Credit Purchases = Gross Credit Purchases - Purchases Returns.
- 2) Average creditors mean average of opening and closing amount of creditors. If details are not given then only closing creditors may be considered as average creditors.
- 3) Amount of bills payable.

**c) Purpose: -**

- 1) Calculate the speed with which creditors are paid off on an average during the year.
- 2) Calculate the creditors' velocity to indicate the period taken by the average creditors to be paid off.
- 3) Judge how efficiently the creditors are managed.

**4.7.8 Debtors' Turnover Ratio:**

This ratio shows relationship between credit sales and average trade debtors. Alternatively this ratio is known as "**Accounts Receivable Turnover Ratio**" or "**Turnover of Debtors' Ratio**". This ratio is expressed as a rate.

**a) Formula :-**

$$\text{Debtors turnover ratio} = \frac{\text{Credit sales}}{\text{Average debtors}} \text{ OR } \frac{\text{Credit sales}}{\text{Accounts receivable}}$$

$$\text{OR } \frac{\text{Credit sales}}{\text{Debtors + Bills receivable}}$$

$$\text{Average collections period} = \frac{\text{Debtors + Bills Receivable}}{\text{Daily credit sales}} \text{ OR}$$

$$\frac{365 \text{ days or 12 months}}{\text{Debtors turnover ratio}} \text{ OR } \frac{365 \text{ days}}{\text{Credit sales}} \times \text{Average debtors}$$

**b) Components :-**

- 1) Sundry debtors
- 2) Accounts receivables i.e. bills receivables.
- 3) Average daily sales.

**c) Purpose :-** Purpose of this ratio is to.

- 1) Calculate the speed with which debtors get settled on an average during the year.
- 2) Calculate debtors' velocity to indicate the period of credit allowed to average debtors.
- 3) Judge how efficiently the debtors are managed.

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**4.8 LIMITATIONS OF RATIOS: -**

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1. Ratios are mainly based on financial statements therefore weaknesses of financial statements are carried forward in the ratios.
2. Ratios calculated between two unrelated items or groups would be useless. e.g. ratio between cost of goods sold and preliminary expenses.
3. Ratios are just indicators. Just calculation of ratios cannot improve the financial position. Corrective and preventive steps should be taken to improve financial position and profitability of business.
4. Standard ratios changes from industry to industry. Maintenance of ratios is not only the objective but improving the financial stability and solvency and profit maximization should be the objective.
5. Increase or decrease in the ratio may be due to change in the economic factors of the country or due is inflation. Such increase or decrease not due to efficiency or inefficiency of the management of the business organization.
6. It is very difficult make correct inter-comparison of the firm because two firms are not similar in age, size and in system of following accounting policies.
7. Financial statements are prepared at ending the year. It might be subject to window dressing for covering bad financial position and ratios are not reliable which are based on manipulated financial statement.

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**4.9 EXERCISE**

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1. Explain the term Ration and explain its advantages and limitations.
2. Give the formula and significance of the following ratios.
  - a) Debtor's Turnover Ratio
  - b) Earnings per share Ratio
  - c) Return on Proprietors Ratio
  - d) Operating Ratio
  - e) Capital Gearing Ratio
3. Give the formula and components of the following ratios.
  - a) Stock Turnover Ratio
  - b) Net Profit Ratio
  - c) Debt Equity Ratio
  - d) Proprietary Ratio
  - e) Debt Service Ratio

## 4. Objective type Questions

## A. Re –write the following sentences by selecting correct choice.

- i) An Accounting ratio is an expression relating to two \_\_\_\_\_  
 (a) Accounts (b) Figures (c) Balance (d) Assets.
- ii) The Balance sheet ratios deal with the relationship between two \_\_\_\_\_.  
 (a) Assets (b) Liabilities (c) Items (d) Capital
- iii) The relationship between capital entitled to fixed rate of return and the capital not so entitled to fixed rate of return is known as:  
 (a) Fixed Capital (b) Working Capital (c) Gearing Capital  
 (d) owned Capital .
- iv) Decrease in gross profit ratio may be due to  
 a) Decrease in cost of goods sold  
 b) Increase in selling price  
 c) Overvaluation of Stock (closing)  
 d) Decrease in cost of materials.
- v) The relationship between net operating profit and net sales is expressed in \_\_\_\_\_.  
 (a) Percentage (b) Figures (c) Ratios (d) Standard Deviation.

(Answer: i –b, ii – C, iii - C, iv – b, v – a)

## B. Fill in the blanks

- a) A ratio is one figure expressed in forms of another\_\_\_\_\_
- b) Leverage ratio measures the relationship between proprietor's fund and \_\_\_\_\_.
- c) \_\_\_\_\_ is the difference between current assets and current liabilities.
- d) Those current assets which can be realized immediately at short notice are \_\_\_\_\_ assets.
- e) \_\_\_\_\_ Ratio is a test of the financial and credit strength of the business.

(Answer: a) Figure (b) Borrowed Funds (c) Working Capital (d) Quick (e) Proprietary)

## C. Match the following:

**Group A**

1. Gross profit Ratio
2. Current Ratio
3. Operating ratio
4. Capital gearing
5. Stock Turnover ratio

**Group B**

- a. Net Profit
- b. Cost of goods sold
- c. Trading results
- d. Short term liquidity
- e. Debenture capital

(Answer: 1 - c, 2 – d, 3 – a, 4 –e, 5 – b)

D. State Whether the following statements are true or false:

- a) The ratio should be expressed in percentage.
- b) Over trading means increase in activities without adequate funds.
- c) It is difficult to establish a standard inventory ratio as inventory levels differ from industry to industry.
- d) The return on capital employed measures the overall efficiency of the business operations.
- e) High debtors' turnover ratio indicates overall efficiency in collecting receivables.

**(Answer: (a) False (b) True (c) True (d) True (e) False )**



## RATIO ANALYSIS AND INTERPRETATION – II

### Unit Structure :

- 5.0 Objectives
- 5.1 Illustrations
- 5.2 Exercise

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### 5.0 OBJECTIVES

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After studying the unit the students will be able to

- Calculate the ratios if the Balance Sheet and Profit Statements are given.

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### 5.1 ILLUSTRATIONS

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1. Following is the trading A/c and profit and loss A/c for the year ended 31st December, 2009.

Particulars	Rs.	Particulars	Rs.
To Opening Stock	40,000	By Sales	9,00,000
To Purchases	4,00,000	By Closing Stock	1,60,000
To Wages	1,00,000		
To Factory Expenses	1,40,000		
To Gross Profit c/d	3,80,000		
	10,60,000		10,60,000
To Administrative Expenses	1,20,000	By Gross Profit b/d	3,80,000
To Selling Expenses	80,000	By Interest Received	10,000
To Interest on Loan	10,000		
To Debenture Interest	16,000		
To Net Profit c/d	1,64,000		
	3,90,000		3,90,000
To Tax Provision	40,000	By net profit b/d	1,64,000
To Proposed Dividend	40,000		
To Balance Profit	84,000		
	1,64,000		1,64,000

**Balance sheet as on 31st December, 2009**

<b>Liabilities</b>	<b>Rs.</b>	<b>Assets</b>	<b>Rs.</b>
Equity share capital (Rs.10)	4,00,000	Land and building	3,50,000
9% preference share capital	3,00,000	Machinery	3,00,000
8% debentures	2,00,000	Furniture	2,00,000
Reserves	1,00,000	Goodwill	1,00,000
Profit & Loss A/c	60,000	Patents	1,00,000
Short term loan (Repaid within one year)	2,00,000	Vehicles	2,80,000
Bank overdraft	1,50,000	Investment	1,00,000
Sundry creditors	2,80,000	Stock	1,60,000
Bills payable	60,000	Debtors	1,80,000
Provision for tax	40,000	Bills receivable	60,000
proposed dividend	40,000		
	<b>18,30,000</b>		<b>18,30,000</b>

Market price of equity share is Rs. 8 calculate the following ratios.

- Current ratio
- Acid test ratio
- Capital gearing ratio
- Stock turnover ratio
- Debtors turnover ratio
- Creditors turnover ratio
- Return on capital employed ratio
- Stock working capital ratio
- Operating ratio
- Earnings per share
- Price earnings ratio
- Net profit ratio
- Gross profit ratio
- Debt equity ratio
- Proprietary ratio
- Operating profit ratio
- Debtors' collection period.

**Solution :**

$$a) \text{ Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}} = \frac{4,00,000}{7,70,000} = 0.519 : 1$$

$$b) \text{ Acid Test Ratio} = \frac{\text{CA} - \text{Stock}}{\text{CL} - \text{Bank Overdraft}} = \frac{4,00,000 - 1,60,000}{7,70,000 - 1,50,000}$$

$$= \frac{2,40,000}{6,20,000} = 0.387 : 1$$

c) Capital Gearing Ratio

$$\begin{aligned}
 &= \frac{\text{Pref. Share Capital + Borrowed Funds}}{\text{Equity Share Capital + Reserve} - \text{Misc. Expenses}} \\
 &= \frac{3,00,000 + 2,00,000}{4,00,000 + 1,00,000 + 60,000 - \text{NIL}} \\
 &= \frac{5,00,000}{5,60,000} = 0.893
 \end{aligned}$$

d) Stock Turnover Ratio =  $\frac{\text{Cost of Goods Sold}}{\text{Average Stock}}$

$$= \frac{5,20,000}{1,00,000} = 5.20 \text{ times}$$

\* Cost of Goods Sold = Sales – Closing Stock

$$\begin{aligned}
 &= 9,00,000 - 3,80,000 \\
 &= 5,20,000
 \end{aligned}$$

\* Average stock =  $\frac{\text{Opening Stock} + \text{Closing Stock}}{2}$

$$\begin{aligned}
 &= \frac{40,000 + 1,60,000}{2} \\
 &= \frac{2,00,000}{2} = 1,00,000
 \end{aligned}$$

e) Debtor Turnover Ratio =  $\frac{\text{Credit Sales}}{\text{Debtors} + \text{B.R.}}$

$$= \frac{9,00,000}{1,80,000 + 60,000} = 3.75$$

f) Debtor Collection Period =  $\frac{\text{Debtors} + \text{B.R.}}{\text{Credit Sales}} \times \text{No. of working days in a year}$

$$\begin{aligned}
 &= \frac{1,80,000 + 60,000}{9,00,000} \times 360 \\
 &= \frac{2,40,000}{90,000} \times 360 = 96 \text{ days}
 \end{aligned}$$

g) Creditors Turnover Ratio =  $\frac{\text{Credit Purchases}}{\text{Creditors} + \text{BP}}$

$$\begin{aligned}
 &= \frac{4,00,000}{2,80,000 + 60,000} \\
 &= \frac{4,00,000}{3,40,000} = 1.716
 \end{aligned}$$

h) Return on Capital Employed Ratio

$$\begin{aligned}
 &= \frac{\text{Profit before Interest \& Tax}}{\text{Capital Employed}} \times 100 \\
 &= \frac{(1,64,000 + 16,000)}{10,60,000} \times 100 \\
 &= \frac{1,80,000}{10,60,000} \times 100 = 16.98\%
 \end{aligned}$$

i) Stock Working Capital Ratio =  $\frac{\text{Closing Stock}}{\text{Working Capital}}$

$$\begin{aligned}
 &= \frac{1,60,000}{3,70,000} = 0.43
 \end{aligned}$$

j) Operating Ratio =  $\frac{(\text{Cost of Goods Sold} + \text{Operating Expenses})}{\text{Sales}} \times 100$

$$\begin{aligned}
 &= \frac{(5,20,000 + 1,20,000 + 80,000 + 10,000)}{9,00,000} \times 100 \\
 &= \frac{7,30,000}{9,00,000} \times 100 = 81.11\%
 \end{aligned}$$

k) Earnings per Share =  $\frac{\text{Net Profit after Tax and Preference Dividend}}{\text{No. of Equity Shares}}$

$$\begin{aligned}
 &= \frac{1,64,000 - 40,000 - 27,000}{40,000} \\
 &= \frac{97,000}{40,000} = \text{Rs.2.425}
 \end{aligned}$$

l) Price Earning Ratio =  $\frac{\text{Market price of Equity Shares}}{\text{Earning per Shares}}$

$$\begin{aligned}
 &= \frac{8}{2.425} = 3.298
 \end{aligned}$$

m) Net Profit Ratio =  $\frac{\text{Net Profit after Tax \& Interest}}{\text{Sales}} \times 100$

$$\begin{aligned}
 &= \frac{1,64,000 - 40,000}{9,00,000} \times 100 \\
 &= \frac{1,24,000}{9,00,000} \times 100 = 13.78\%
 \end{aligned}$$

$$\begin{aligned} \text{n) Gross Profit Ratio} &= \frac{\text{Gross Profit}}{\text{Sales}} \times 100 \\ &= \frac{3,80,000}{9,00,000} \times 100 = 42.22\% \end{aligned}$$

$$\begin{aligned} \text{o) Proprietary Ratio} &= \frac{\text{Proprietors Fund}}{\text{Total Assets}} \times 100 \\ &= \frac{8,60,000}{18,30,000} \times 100 = 46.99\% \end{aligned}$$

$$\begin{aligned} \text{p) Debt Equity Ratio} &= \frac{\text{Borrowed Fund}}{\text{Proprietor's Fund}} \\ &= \frac{2,00,000}{8,60,000} \\ &= 0.232 : 1 \end{aligned}$$

$$\begin{aligned} \text{q) Operating Profit Ratio} &= \frac{\text{Operating Profit}}{\text{Sales}} \times 100 \\ &= \frac{1,70,000}{9,00,000} \times 100 \\ &= 18.89\% \end{aligned}$$

**Working Notes: -**

**W.N.1** Vertical income statement for the year ended 31st December, 2009.

Particulars	Rs.	Rs.	Rs.
1. Net Sales			9,00,000
2. Less: Cost of Goods Sold			
Opening Stock	40,000		
Purchases	4,00,000		
Wages	1,00,000		
Factory Expenses	1,40,000	6,80,000	
Less: Closing Stock		1,60,000	
cost of Cost sold			5,20,000
3. Gross Profit			3,80,000
4. Less: Operating Expenses			
a) Administrative Expenses	1,20,000		
b) Selling Expenses	80,000		
c) Financing Expenses			
- Interest on Share Term Loan	10,000	2,10,000	2,10,000
5. Operating Profit			1,70,000
6. Add: Non-operating Income			
- Interest received			10,000
7. Net Profit interest & Tax			1,80,000
8. Less: Interest on Debenture			16,000

9. Net Profit before Tax			1,64,000
10. Less: Income Tax			40,000
11. Net Profit after Tax			1,24,000
12. Less: Preference Dividend (9% of 3, 00,000)			27,000
13. Net Profit available for Equity shareholders.			97,000
14. Less: Equity Dividends (40,000 - 27,000)			13,000
15. Retained Earnings			84,000

**W.N.2** Vertical balance sheet as on 31st December, 2009.

Particulars	Rs.	Rs.	Rs.
<b>. Sources of Funds</b>			
<b>I. Owner's / shareholder's funds</b>			
a) Equity Share Capital		4,00,000	
b) Reserves & Surplus			
Reserve	1,00,000		
P & L A/c	60,000	1,60,000	
c) Preference Share Capital		3,00,000	8,60,000
<b>II. Borrowed / Loan Funds</b>			
8% Debentures			2,00,000
<b>CAPITAL EMPLOYED (I + II)</b>			<b>10,60,000</b>
<b>B. Application of funds</b>			
<b>I. Fixed Assets</b>			
Land & Building		3,50,000	
Machinery		3,00,000	
Furniture		2,00,000	
Vehicles		2,80,000	
Goodwill		1,00,000	
Patents		1,00,000	13,30,000
<b>II. Investments</b>			1,00,000
<b>III. Working Capital</b>			
a) Current Assets			
Quick Assets			
Debtors	1,80,000		
Bills Receivables	60,000		
Non-quick Assets	2,40,000		
Closing Stock	1,60,000	4,00,000	
b) Less: Current Liabilities			
Quick Liabilities			
Creditors	2,80,000		
Bills Payable	60,000		
Provision for Tax	40,000		
Proposed Dividends	40,000		
Short Term Loan	2,00,000		
	6,20,000		
Non-quick Liabilities			
Bank Overdraft	1,50,000	(7,70,000)	
Working Capital (CA-CL)			(3,70,000)
<b>CAPITAL EMPLOYED (I+II+III)</b>			<b>10,60,000</b>

2. M/s Raj & Sons presents you the following balance sheet as on 31st December, 2008.

Liabilities	Rs.	Assets	Rs.
Share capital		Fixed assets	10,00,000
Equity share of Rs. 10 each	10,00,000	Stock	4,00,000
Reserve fund	1,00,000	Debtors	3,00,000
7% debentures	3,00,000	Cash	2,00,000
Overdraft	2,00,000		
Creditors	3,00,000		
	<b>19,00,000</b>		<b>19,00,000</b>

Calculate - I) Liquidity ratios  
II) Solvency ratios  
III) Debt-equity ratio

**Solution :**

**1) Liquidity ratios :-**

$$\text{a) Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}} = \frac{9,00,000}{5,00,000} = 1.8 : 1 \text{ or } 1.8$$

$$\begin{aligned} \text{b) Acid Test Ratio} &= \frac{\text{Liquid Assets}}{\text{Liquid Liabilities}} \\ &= \frac{\text{Current Assets} - \text{Stock}}{\text{Current Liabilities} - \text{Overdrafts}} \\ &= \frac{9,00,000 - 4,00,000}{5,00,000 - 2,00,000} = \frac{5,00,000}{3,00,000} = 1 : 66 : 1 \end{aligned}$$

OR

If Liquid Liabilities = Current Liabilities, then Acid Test Ratio is as under –

$$\therefore \frac{5,00,000}{5,00,000} = 1 : 1$$

$$\begin{aligned} \text{c) Stock Working Capital Ratio} &= \frac{\text{Stock}}{\text{Working Capital}} \\ &= \frac{4,00,000}{9,00,000 - 5,00,000} \\ &= \frac{4,00,000}{4,00,000} = 1 : 1 \end{aligned}$$

**2) Solvency ratios :-**

$$(a) \text{ Proprietary Ratio} = \frac{\text{Shareholders Funds}}{\text{Total Tangible Assets or Total Assets}}$$

$$= \frac{11,00,000}{19,00,000} = 0.58 : 1 \text{ or } 0.58 \times 100 = 58\%$$

**Note:** I) Shareholders Fund = Eq. Share Capital + Reserve  
 $= 10,00,000 + 1,00,000$   
 $= 11,00,000$

II) Total Tangible Assets = Total Assets = Rs.19,00,000

$$(b) \text{ Equity to Fixed Assets Ratio} = \frac{\text{Shareholders' Funds}}{\text{Fixed Assets}}$$

$$= \frac{11,00,000}{10,00,000} = 1.1 : 1$$

OR

$$= 1.1 \times 100 = 11.1\%$$

$$(c) \text{ Equity to Current Assets Ratio} = \frac{\text{Shareholders' Funds}}{\text{Current Assets}}$$

$$= \frac{11,00,000}{10,00,000} = 1.1 : 1$$

OR

$$= 1.1 \times 100 = 100\%$$

$$\mathbf{3) Debt Equity Ratio} = \frac{\text{Outsiders' Funds}}{\text{Shareholder's Fund}} = \frac{8,00,000}{11,00,000} = 0.73 : 1$$

Outsider's Fund = Debentures + Creditors + Overdraft  
 $= 3,00,000 + 3,00,000 + 2,00,000$   
 $= \text{Rs. } 8,00,000$

OR

It outsiders fund = Debentures only

$$\text{Then Debt Equity Ratio} = \frac{\text{Outsiders' Funds}}{\text{Shareholder's Fund}} = \frac{3,00,000}{8,00,000} = 0.373 : 1$$

**3. From the following financial statements of M/s Sunny Ltd. calculate.**

- 1) Current Ratio
- 2) Liquid Ratio
- 3) Gross Profit Ratio
- 4) Net Profit Ratio
- 5) Net Profit to Capital Employed Ratio
- 6) Fixed Assets Turnover Ratio
- 7) Sales to Capital Ratio
- 8) Debtors Turnover Ratio

**Balance sheet as on 31st March, 2009.**

<b>Liabilities</b>	<b>Rs.</b>	<b>Assets</b>	<b>Rs.</b>
Share capital	1, 50,000	Fixed Assets (Net)	80,000
Reserve	60,000	Current Assets	
Profit & Loss A/c	24,000	Stock	1, 88,000
Debentures	60,000	Debtors	1, 64,000
Current Liabilities	1, 52,000	Cash	14,000
	4, 46,000		4, 46,000

**Income statement for the year ending 31st March, 2009**

<b>Particulars</b>	<b>Rs.</b>	<b>Rs.</b>
Sales : Cash	64,000	
Credit	6,84,000	7,48,000
Less: cost of sales		5,96,000
Gross profit		1,52,000
Less: Expenses		
Warehouse & Transport	48,000	
Administration	38,000	
Selling & Distribution	28,000	
Debenture Interest	4,000	1,18,000
Net profit before tax		34,000
Less: Income tax		4,000
Net profit after tax		30,000

**Solution :**

$$\begin{aligned}
 1) \text{ Current Ratio} &= \frac{\text{Current Assets}}{\text{Current Liabilities}} \\
 &= \frac{1,88,000 + 1,64,000 + 14,000}{1,52,000} \\
 &= \frac{3,66,000}{1,52,000} = 2.4078 : 1 \\
 &= 2 : 41 : 1
 \end{aligned}$$

$$\begin{aligned}
 2) \text{ Liquid Ratio} &= \frac{\text{Liquid Assets}}{\text{Liquid Liabilities}} \\
 &= \frac{\text{Current Assets} - \text{Stock}}{\text{Liquid Liabilities} = \text{Current Liabilities}} \\
 &= \frac{1,88,000 + 1,64,000 + 14,000 - 1,88,000}{1,52,000} \\
 &= \frac{3,66,000 - 1,88,000}{1,52,000} = \frac{1,78,000}{1,52,000} = 1.171:1 \\
 &= 1.17:1
 \end{aligned}$$

$$\begin{aligned}
 3) \text{ Gross Profit Ratio} &= \frac{\text{Gross Profit}}{\text{Sales}} \times 100 \\
 &= \frac{1,52,000}{7,48,000} \times 100 = 20.3208\% \\
 &= 20.32\%
 \end{aligned}$$

$$\begin{aligned}
 4) \text{ Net Profit Ratio} &= \frac{\text{Net Profit after Tax}}{\text{Sales}} \times 100 \\
 &= \frac{30,000}{7,48,000} \times 100 = 4.010\% \\
 &= 4.01\%
 \end{aligned}$$

OR

$$\begin{aligned}
 &= \frac{\text{Net Profit before Tax}}{\text{Sales}} \times 100 \\
 &= \frac{34,000}{7,48,000} \times 100 = 4.545\% \\
 &= 4.55\%
 \end{aligned}$$

$$\begin{aligned}
 5) \text{ Net Profit to Capital Employed} &= \frac{\text{Net Profit after Tax}}{\text{Capital Employed}} \times 100 \\
 &= \frac{30,000}{2,94,000} \times 100 \\
 &= 10.20\%
 \end{aligned}$$

OR

If Net Profit before Tax is considered then Net Profit to Capital employed will be as under.

$$= \frac{\text{Net Profit before Tax}}{\text{Capital Employed}} \times 100$$

88

$$= \frac{34,000}{2,94,000} \times 100$$

$$= 11.56\%$$

$$\begin{aligned} \text{Capital Employed} &= \text{Fixed Assets} + \text{Investment} + \text{Working Capital} \\ &= 80,000 + 0000 + (3,66,000 - 1,52,000) \\ &= 80,000 + 2,14,000 \\ &= 2,94,000 \end{aligned}$$

$$6) \text{ Fixed Assets Turnover Ratio} = \frac{\text{Cost of Goods Sold}}{\text{Fixed assets}}$$

$$= \frac{5,96,000}{80,000}$$

$$= 7.45 \text{ Times}$$

$$7) \text{ Sales to Capital Employed} = \frac{\text{Sales}}{\text{Capital Employed}}$$

$$= \frac{7,48,000}{2,94,000}$$

$$= 2.54 \text{ Times}$$

$$8) \text{ Debtors Turnover Ratio} = \frac{\text{Net Credit Sales}}{\text{Debtors}}$$

$$= \frac{6,84,000}{1,64,000}$$

$$= 4.17 \text{ Times}$$

4. From the following financial statement of X co. Ltd. for the year ended 31st December, 2009, calculated the following ratios.

- I) Current Ratio
- II) Liquid Ratio
- III) Operating Ratio
- IV) Stock-Turnover Ratio
- V) Turnover to Fixed Assets Ratio
- VI) Return on Total Resources
- VII) Return on Proprietors Fund
- VIII) Net Profit to Capital Employed
- IX) Debtors Velocity
- X) Creditors' Turnover Ratio.

**Balance sheet as on 31st March, 2009.**

<b>Liabilities</b>	<b>Rs.</b>	<b>Assets</b>	<b>Rs.</b>
Equity Share capital	5,00,000	Land & Buildings	3,50,000
General Reserve	3,00,000	Plant & Machinery	2,50,000
Profit & Loss A/c	2,00,000	Stock	3,00,000
Sundry Creditors	2,00,000	Sundry debtors	2,00,000
		Cash & Bank	1,00,000
	12,00,000		12,00,000

**Trading and profit & Loss A/c for the ended 31st December 2009.**

<b>Particulars</b>	<b>Rs.</b>	<b>Particulars</b>	<b>Rs.</b>
To Opening Stock	1,00,000	By Sales	16,00,000
To Purchases (Credit)	8,00,000	By Closing Stock	2,00,000
To Gross Profit	9,00,000		
	18,00,000		18,00,000
To Office & Administrative Expenses	2,00,000	By Gross Profit	9,00,000
To Selling & Distribution Expenses	1,00,000	By Profit on Sale of Assets	25,000
To Other Expenses	25,000		
To Net Profit	6,00,000		
	9,25,000		9,25,000

**Solution :**

$$\begin{aligned} \text{I) Current ratio} &= \frac{\text{Current Assets}}{\text{Current Liabilities}} = \frac{3,00,000 + 2,00,000 + 1,00,000}{2,00,000} \\ &= \frac{6,00,000}{2,00,000} = 3 : 1 \end{aligned}$$

$$\begin{aligned} \text{II) Liquid Ratio} &= \frac{\text{Liquid Assets}}{\text{Liquid Liabilities}} = \frac{2,00,000 + 1,00,000}{2,00,000} \\ &= \frac{3,00,000}{2,00,000} = 1.5 : 1 \end{aligned}$$

$$\text{III) Operating Ratio} = \frac{\text{Cost of Goods Sold} + \text{Operating Expenses}}{\text{Sales}}$$

$$= \frac{7,00,000 + 3,25,000}{16,00,000} = \frac{10,25,000}{16,00,000} = 0.64 : 1$$

OR

$$0.64 \times 100 = 64\%$$

$$\text{IV) Stock Turnover Ratio} = \frac{\text{COGS}}{\text{Averages Stock}} = \frac{7,00,000}{\frac{(1,00,000 + 2,00,000)}{2}}$$

$$= \frac{7,00,000}{1,50,000} = 4.67 \text{ Times}$$

$$\text{V) Turnover to Fixed Assets Ratio} = \frac{\text{Turnover}}{\text{Fixed Assets}}$$

$$= \frac{16,00,000}{6,00,000} = 2.67 : 1$$

$$\text{VI) Return on Proprietors Fund} = \frac{\text{Net profit after Tax \& Interest}}{\text{Proprietor's Fund}}$$

$$= \frac{6,00,000}{10,00,000} = 0.60 : 1$$

OR

$$= 0.60 \times 100 = 60\%$$

$$\text{VII) Net Profit to Capital Employed} = \frac{\text{Net Profit after Tax \& Interest}}{\text{Capital Employed}}$$

$$= \frac{6,00,000}{10,00,000} = 0.60 : 1$$

OR

$$= 0.60 \times 100 = 60\%$$

$$\text{VIII) Debtors Velocity Ratio} = \frac{\text{Debtors}}{\text{Credit Sales}} \times 365$$

$$= \frac{2,00,000}{16,00,000} \times 365$$

$$= 46 \text{ Days}$$

$$\begin{aligned}
 \text{IX) Creditors Velocity} &= \frac{\text{Creditors}}{\text{Credit Purchases}} \times 365 \\
 &= \frac{2,00,000}{8,00,000} \times 365 \\
 &= 91 \text{ Days}
 \end{aligned}$$

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## 5.2 EXERCISE

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1. From the following financial statement of Sanket Ltd. calculate the following ratios.
- Current Ratios
  - Liquid Ratios
  - Stock Turnover Ratio
  - Debtors Turnover Ratio
  - Operating Ratio
  - Capital Gearing Ratio
  - Net Profit Ratio
  - Stock Working Capital Ratio
  - Earnings per Equity Share
  - Interest Coverage Ratio
  - Creditors Turnover Ratio
  - Dividend Payout Ratio
  - Gross Profit Ratio

**Trading and profit & Loss Account for the year ended 31st  
December, 2009.**

Particulars	Rs.	Particulars	Rs.
To Opening Stock	1,50,000	By Sales	15,00,000
To Purchases	12,90,000	By Closing Stock	1,50,000
To Gross Profit c/d	2,10,000		
	16,50,000		16,50,000
To Administrative Expenses	20,000	By Gross Profit b/d	2,10,000
To Rent & Taxes	14,000	By Profit on Sale of Fixed Assets	27,500
To Interest	22,500		
To Selling Expenses	11,000		
To Depreciation	50,000		
To Income Tax Provision	60,000		
To Net Profit	60,000		
	2,37,500		2,37,500

**Balance sheet as at 31st December 2009**

<b>Liabilities</b>	<b>Rs.</b>	<b>Assets</b>	<b>Rs.</b>
Equity Share Capital of Rs. 10 each	2,50,000	Fixed Assets	6,50,000
10% Preference Share Capital	50,000	Bank Balance	25,000
General Reserve	2,00,000	Short term Investment	75,000
12% Debentures	3,50,000	Debtors	1,00,000
Creditors	30,000	Stock	1,50,000
Outstanding Expenses	55,000		
Income Tax Provision	65,000		
	10,00,000		10,00,000

The company declared dividend on Equity Shares @ 20%.

2. The condensed balance sheet of Dixit Ltd. as on 31st March 2006 is as follows:

<b>Liabilities</b>	<b>Rs.</b>	<b>Assets</b>	<b>Rs.</b>
Equity Share Capital	6,00,000	Fixed Assets	9,00,000
Reserve	2,00,000	Stock	3,00,000
6% Debentures	5,00,000	Marketable Investment	1,00,000
Current Liabilities	2,00,000	Debtors	1,50,000
Bank Overdraft	1,00,000	Cash and Bank balance	1,00,000
		Preliminary Expenses	50,000
	16,00,000		16,00,000

Net profit for the years was Rs.75,000/-.

Prepare a statement suitable for analysis and indicate the soundness of the financial positions of the company by calculating the following ratios and comment on the same.

- Current Ratio
- Liquid Ratio
- Proprietary Ratio
- Return on Capital Employed
- Return on Proprietors Equity
- Return on Equity Capital
- Stock Working Capital Ratio

(M.U.B.Com. April 1999)

3. The following is the Balance Sheet of Swapnaja Ltd. as on 31st December 2009.

Liabilities	Rs.	Assets	Rs.
Paid up Capital (Rs.10)	2, 00,000	Fixed Assets	3, 00,000
Reserves & Profit	1, 38,000	Stock	1, 00,000
Debentures	2, 00,000	Debtors	1, 22,000
Creditors	32,000	Bills Receivable	8,000
Bills Payable	12,000	Bank Balance	52,000
	5, 82,000		5, 82,000

Sales Rs.4,00,000/-; Gross Profit Rs.1,20,000/-; Net Profit Rs.80,000/-. Rearrange the above Balance Sheet in suitable form for analysis and workout the following ratios.

- Net Profit Ratio
- Gross Profit Ratio
- Current Ratio
- Liquid Ratio
- Return on Capital Employed
- Debtors Turnover Ratio
- Earnings per Share
- Stock Turnover Ratio.

**Answer :-**

- Current Ratio = 1.72:1
  - Liquid Ratio = 0.97:1
  - Stock Turnover Ratio - 8.6 Times
  - Debtors Turnover Ratio - 15
  - Operating Ratio - 89%
  - Capital Gearing Ratio - 1.012:1
  - Net Profit Ratio - 4%
  - Stock Turnover Ratio - 1.034
  - Earnings per Share - Rs.2.2 per share
  - Interest Coverage Ratio - Rs.6.33
  - Creditors Turnover Ratio - 43
  - Dividend Payout Ratio - 0.909
  - Gross Profit Ratio - 14%
- Current Ratio - 1.83:1
  - Liquid Ratio - 1.25:1
  - Proprietary Ratio - 46.88%
  - Return on Capital Employed - 6%
  - Return on Proprietors Equity - 10%
  - Return on Equity Capital - 12.5%
  - Stock Working Capital Ratio - 1.2:1

- 3.
- a) Net Profit Ratio - 20%
  - b) Gross Profit Ratio - 33%
  - c) Current Ratio - 6.41:1
  - d) Liquid Ratio - 4.14:1
  - e) Return on Capital Employed - 14.87%
  - f) Debtors Turnover Ratio - 3.077
  - g) Earnings per Share - Rs.04 per share
  - h) Stock Turnover Ratio - 2.8

**Note:** - Closing Stock = Average Stock



## WORKING CAPITAL MANAGEMENT - I

### Unit Structure:

- 6.0 Objectives
- 6.1 Introduction
- 6.2 Meaning and Definition of Working Capital
  - 6.2.1 Meaning
  - 6.2.1 Definition
- 6.3 Types of working capital
- 6.4 Factors Determining Working Capital Requirement
- 6.5 Sources of working capital
- 6.6 Projection of Working Capital Requirements
  - 6.6.1 Methods of projecting working capital requirements
  - 6.6.2 Projection of working capital requirements
- 6.7 Exercise

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### 6.0 OBJECTIVES :

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After studying the unit the students will be able to:

- Define Working Capital.
- Explain types of working capital.
- Elaborate the determinants of working capital.
- Know the sources of working capital.
- Understand the concept projection of working capital

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### 6.1 INTRODUCTION

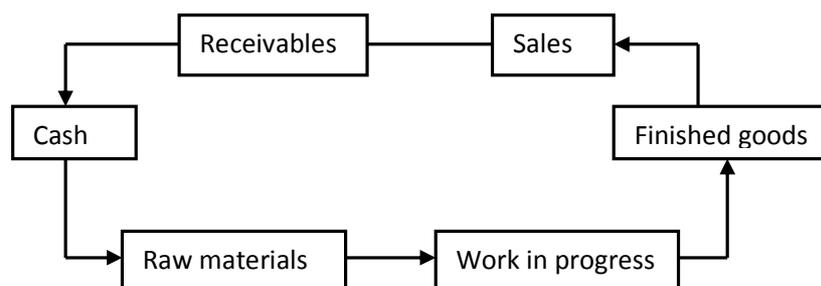
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Capital required for a business can be divided into two categories i.e. Fixed Capital and Working Capital. Fixed capital is the part of total capital which is used for purchasing permanent a fixed asset like land, Buildings, Plant and machinery, furniture and fixtures, vehicles, etc. This capital is invested by organization in the beginning of running the business. In addition to fixed capital an organization requires additional capital for financing day to day activities like purchase of Raw materials, payment of direct and indirect expenses, carrying out production, investment in stocks and stores, receivables and assets to be maintained in the form of cash is generally known as working capital (fluctuating capital). In other words, this capital refers to the investment in current assets such as cash inventory, receivables, etc. All such assets are likely to be convertible into cash within one a year.

## 6.2 MEANING AND DEFINITION OF WORKING CAPITAL

### 6.2.1 Meaning

The capital used for performing day to day activities i.e. purchases of Raw material, making payment of direct and indirect expenses, carrying out of production of goods and services, investment in stocks, stores, etc is called as working capital. All assets consisting of working capital revolve around cash. Firstly, cash is used to purchase of raw materials, which when certain expenses are in carried on it gets itself converted into semi finished goods and finally into inventory of finished products. Inventory (finished goods), after adding certain profit margin to it, is sold to the customers, which may take the form of cash or receivables or debtors. Receivables or debtors when realized again take the form of cash and the cycle goes on. The revolving nature of current assets consisting of working capital has been cleared with the help of following chart:



Because of this revolving nature of the assets consisting working capital, later is also known as 'fluctuating' or 'floating' or 'circulating' capital.

### 6.2.2 Definition

**J.M. Mill:** - "The sum of the current assets is the working capital of the business"

**Shubin:** - "Working capital is the amount of funds necessary to cover cost of operating the enterprise."

**Hoaglandi:** - "Working capital is descriptive of that capital which is not fixed. But the more common use of the working capital is to consider it as the difference between the block value of the current assets and current liabilities."

**Gerestenber:** - "Circulating capital wears current assets of a company that are changed in the ordinary course of business from one to another, as for example, from cash to inventories, inventories to receivables, and receivables to cash."

**The accounting principles of board of American institute of Certified Public Accountants** has defined the working capital as: "Working capital is represented by the excess of current assets or current liabilities and identifies the relatively liquid portion of the total enterprise capital which constitutes a margin or buffer for maturing obligations within the ordinary operating cycle of the business."

Thus working capital means investment made by a business organization in short-term current assets like cash, debtors, etc.

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### **6.3 TYPES OF WORKING CAPITAL**

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The working capital is classified as under:

1. **Gross Working Capital:** Gross working capital means the total current assets without deducting current liabilities. This equal to the cash balance and the amount blocked in debtors and stocks, etc.
2. **Net Working Capital:** Net working capital means total current assets minus total current liabilities. It means net current assets. This capital indicates the amount available to meet short term liabilities or debt of the business organizations.
3. **Permanent or Fixed Working Capital:** This capital represents the value of the current assets required on continuing basis over the entire year and for several years. Permanent working capital is the minimum amount of current assets which is needed to conduct business even during the dullest season of the year. Thus, the minimum level of current assets is called permanent or fixed working capital is the part of capital permanently blocked in current assets. This amount changes from year to year depending on growth of the company and the stage of the business cycle in which it operates. It is used to produce goods necessary to satisfy the customer's demand.

It has the following characteristics:

- a) It is classified on the basis of time.
  - b) It constantly changes from one asset to another and continuously remains in the business.
  - c) Size of this capital increases with the growth of business operations.
4. **Temporary or Variable Working Capital:** This component represents a certain amount of fluctuations in current assets during a short period. These fluctuations are increases or decreases in current assets. Generally these are in cyclical nature. This is called as additional capital required at different times during the operating year. This capital is used to meet

seasonal needs of a firm or organization is called seasonal or variable working capital. Additional funds or capital specifically used to meet extraordinary needs or contingencies arising due to strikes, fire, unexpected competition, rising price tendencies launching of advertisement campaigns.

It has the following features:

- a) It is not always gainfully employed, though it may change from one asset to another, as permanent working capital does.
- b) It is particularly suited to business of a seasonal or cyclical nature.
- c) It is arranged from temporary source i.e. short term loan, deposits, bank over drafts etc.

**5. Balance Sheet Working Capital:** Usually this capital is determined on the basis of current assets and current liabilities shown in closing balance sheet of the concern. It means the net current assets as on last date of the balance sheet.

**6. Cash Working Capital:** This capital is the net current assets if realized at its book value. The cash realized from current assets is really less than the book value because i) Debtors includes profit margin ii) Depreciation included in over valuation of stock of finished goods. The concept of this capital makes proper adjustment in balance sheet working capital for the items to arrival at cash working capital. The cash working capital indicates the working capital at cost because stocks and debtors are at cost.

**7. Positive Working Capital:** When a net current asset is in positive figure, it is called as positive working capital. It means the current assets are more than the current liabilities. This working capital shows favorable liquidity solvency position of the company.

**8. Negative Working Capital:** In this case, difference between current assets and current liabilities is negative figure. Therefore, it is called are negative working capital. It means current liabilities are more than the current assets. This capital indicates lack of liquidity and adverse solvency position of the company.

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## 6.4 FACTORS DETERMINING WORKING CAPITAL REQUIREMENT

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Normally following factors determines the need of working capital:

1. **Nature of business:** - Working capital requirements of an enterprise are basically related to conduct of the business. Public utility undertakings like electricity, water supply,

Railways, etc need very limited working capital because they offer cash sales only and supply services, not products, and as such no funds are tied up in inventories and receivables. But at the same time, trading firm need large amount of working capital in current assets like inventories, cash, receivables etc but they have less investment in fixed assets.

2. **Terms of purchases and sales:** - Credit terms granted by the concerns to its customers as well as credit terms granted by its supplier also affect the working capital. If credit terms of purchases are more favorable and those sales less liberal, less cash will be invested in the inventory. Working capital requirement can be reduced if terms of credit are more. The ratio of credit and cost purchases or sales affects the level of working capital. If firm purchases on credit and sales on cash then it requires less working capital and if firm purchases on cash and sales on credit, then it requires large working capital. This means funds are tied up in debtors and bills receivables.
3. **Manufacturing cycle:** - The quantum of work capital needed is influenced by the length of manufacturing cycle. The manufacturing process always involves time lag between the time when raw materials are fed into the production line and finished products are finally turned out by it. The length of period of manufacture in turn needs on the nature of product as well as production technology used by a concern.
4. **Size of business unit:** - Amount of working capital requirement depends on the scale of operation of the business organization. Large business organization performs large business activities which require huge working capital than small scale organization.
5. **Turnover of inventories:** - A business organization having low turnover of inventory would need more working capital where as high turnover of inventory need small or limited working capital.
6. **Turnover of circulating capital:** - The speed with which circulating capital completes its cycle if conversion of cash into inventory of raw material, raw material into finished goods, finished goods into debts and debts into cash, which decides need of working capital in the organization. Slow movement of working capital cycle necessitates large provision of working capital.
7. **Seasonal variations production:** - In case of seasonal production in the industries like sugar, oil mills, etc need more working capital during peak seasons.
8. **Degree of mechanization:** - In highly mechanized concerns having low degree of independence on labour, requires less

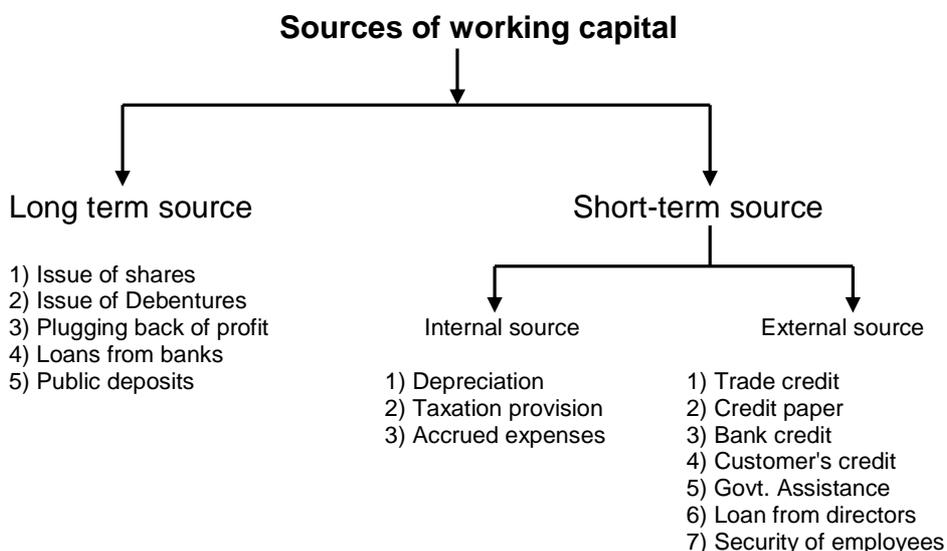
working capital. Conversely, in labour intensive industries greater sum of working shall be required to pay wages and related facilities.

9. **Growth and expansion:** - Every firm wants to grow over a period of time and with the increase in its size, the working capital requirements are bound to increase. The growing company would need therefore, larger amount of working capital.
10. **Policy regarding dividend:** - Dividend policy of a firm will also influence the working capital position. The company which declares large amount of dividends in the form of cash requires large working capital to pay off such dividends. But sometimes, companies' issues bonus shares by way of dividend in such cases working capital requirements will be comparatively less. This is depending on Psychology of shareholders i.e. whether they prefer cash income or capital appreciation.
11. **Inflation:** - A business concern requires more working capital during the inflation period. This factor may be compensated to some extent by rise in selling price of inventory.
12. **Changes in technology:** - Changes in production technology have an impact on the need of more working capital.
13. **Depreciation policy:** - Charges of depreciation on assets do not involve any cash outflows. Depreciation affects tax liability and retention profits. It is allowable expenditure while calculating net profits. Higher depreciation will mean lower disposal of profit and therefore dividend will be paid in smaller amount. Thus cash will be preserved.

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## 6.5 SOURCES OF WORKING CAPITAL :

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## 6.6 PROJECTION OF WORKING CAPITAL REQUIREMENTS

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### 6.6.1 Methods of projecting working capital requirements

1. **Conventional method:** In this method cash flow i.e. inflow and out flow are matched with each other. Greater emphasis is laid down on liquidity of a business organization.
2. **Operating cycle method:** This method refers to working capital in a realistic way. The working capital is decided on the basis of length of the operating cycle. It is calculated by dividing operating expenditures by the number of operating cycle.

### 6.6.2 Projection of working capital requirements

The businessman mainly faces the problem of determination of working capital requirements for financing particular level of activity. The finance manager has to perform the activities of forecasting working capital requirements. This process involves the following aspects.

1. **Level of activity:** - Estimation of working capital begins with the level of activity. Therefore the finance manager has to ascertain the required quantum of production in advance on the basis of past experience, installed and utilized capacity of the factory and demand.
2. **Raw materials:** - The finance manager has to estimate the quantity and cost of raw materials. Lengths of time of raw materials remain in the store before issue for production is considered longer period of stay of raw material need greater working capital. This must be valued at cost.
3. **Labour and overheads:** - Expenses incurred on wages and overheads are considered while ascertaining raw materials.
4. **Work-in-progress:** - While ascertaining work-in-progress the 'period of processing' or 'period of production cycle' has to be considered. Longer the production cycle, greater the working capital requirement. Therefore, the finance manager has to consider the amount required for raw materials, wages and overheads while estimating volume of production.
5. **Finished Goods:** - The period of storing finished goods before sale has to be taken into consideration. This is depending on season, sales forecasting, etc. If the sales are seasonable and production is throughout the year, then working capital requirement would be the higher during the slack seasons.

6. **Sundry Debtors:** - While calculating amount of sundry debtors, period credit allowed to customers is to be taken into consideration. This period is known as "time lag in payment by debtors". If this period is longer, required working capital will be higher in the absence of similar time lag in payment to creditors. The sundry debtors are value at sales price while calculating working capital.
7. **Cash and bank balance:** - As per past experience every businessman is suppose to know the amount cash float or bank balance necessary to pay day is day payments. This amount is given in the information and added in the amount of working capital required.
8. **Prepaid Expenses:** - There may be some expenses i.e. insurance, sales promotion would be paid in advance and in this case working capital requirement would be higher is that extent.
9. **Sundry Creditors:** - The period of credit allowed by supplier has to be taken in to consideration while estimating required amount of working capital. It longer the period credit from suppliers, lower will be the working capital requirements.
10. **Creditors for expenses:** - Time lag in payment of wages and overheads also should be considered while deciding amount of working capital requirements. If there is no time lag in payment of wages and overheads, more working capital will be required and there will be less requirement of working capital when there is time-lag in payment of wages and overheads.
11. **Advance from customers:** - If and when advance required from customers then there will be lower working capital requirements.
12. **Contingencies:** - After calculating the amount of working capital as discussed above, a provision for contingencies may be made to make allowances for likely variations. This is the sort of cushion against uncertainties involved in estimating working capital.

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## 6.7 EXERCISE

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1. Define Working Capital. Explain the types of Working Capital.
2. Which are the Determinants of Working Capital?
3. Write short note on Projection of Working Capital Requirements.
4. Objective type questions:

**A. Rewrite the following sentences by selecting correct choice-**

- 1) The period required for the whole operation starting with cash and ending up with Cash plus –
  - i) Operating cycle
  - ii) Trading Cycle
  - iii) Working Cycle
  - iv) Main Cycle
- 2) Cross working Capital is equal to –
  - i) Total Current Assets
  - ii) Total fixed assets
  - iii) Total Assets
  - iv) Net Assets
- 3) The cost to be excluded from the cost of goods sold for the purpose of determining working in process and finished goods is –
  - i) Interest
  - ii) Depreciation
  - iii) Taxation
  - iv) Dividend
- 4) The primary objective of Working Capital Management is to manage –
  - i) Current Assets
  - ii) Current Liabilities
  - iii) Current Assets and Current Liabilities
  - iv) Fixed Assets
- 5) It is a normal principle that current assets should be valued at cost or market value whichever is
  - i) Higher
  - ii) Lower
  - iii) More
  - iv) earlier

(Answer: . 1) - i, 2) - iii, 3) - ii, 4) - iii, 5) – ii)

**B. Fill in the blanks**

- 1) Advances received from customer will ----- the working capital requirements.
- 2) Provision for contingencies may be made to make allowances for likely variations or for ----- expenses.
- 3) In valuation of work in progress labor & overhead are assumed to be incurred to the extent of -----
- 4) It would be more practical if investment in debtors is a cetined at cost of sales, not as ----- price.
- 5) The Capital required to meet seasonal requirements is called as ----- working capital.

Answer: 1) – Reduce 2) –unforeseen 3) – 50% 4) – selling 5)- circulating

**C. Match the following****Group A**

- 1) Gross working capital
- 2) Negative working capital
- 3) Debtors
- 4) Bank Balance
- 5) Net working capital

**Group B**

- a. Receivables
- b. Excess of current Assets
- c. Total current Assets
- d. Excess of current liabilities
- e. Quick Assets

(Answer: 1) – c 2) – d 3) – a 4) – e 5)- b )

**D. State whether the following statements are true or false**

- a) Closing stock of raw material is a liquid asset.
- b) Profit included in debtors is an expense hence; it is a part of current asset.
- c) Finished goods stock should be valued at FIFO basis.
- d) Working capital management aims to strike a judicious balance between current assets & current liabilities.
- e) Prepaid expenses increase the amount of working capital.

**(Answer: a – False, b – False, c – False, d – True, e- True)**



## WORKING CAPITAL MANAGEMENT - II

### Unit Structure:

- 7.0 Objectives
- 7.1 Introduction
- 7.2 Calculation of Figures Required for Working Capital Projection
  - 7.2.1 Calculations
  - 7.2.2 Proforma of Working Capital Statement
- 7.3 Solves Problems
- 7.4 Exercise

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### 7.0 OBJECTIVES

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After studying the unit the students will be able to:

- Calculate the figures required for Working Capital Projection.
- Draw the statement of Working Capital.
- Solve the practical problems on Working Capital requirement.

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### 7.1 INTRODUCTION

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In the previous unit we have studied the concept Working Capital in detail. That unit have already explained the types of working capital, elaborate the determinants and sources of working capital. That unit also explained the concept projection of working capital. In this unit we are going to study how to estimate the requirement of working capital and related calculations.

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### 7.2 CALCULATION OF FIGURES REQUIRED FOR WORKING CAPITAL PROJECTION

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#### 7.2.1 Calculations

1. **Stock of raw materials:** - The cost of raw materials ascertained as under.

$$\left( \begin{array}{l} \text{Budgeted production} \\ \text{(units) p.a} \end{array} \right) \times \left( \begin{array}{l} \text{cost of material} \\ \text{per unit} \end{array} \right) \times \left( \begin{array}{l} \text{Raw material} \\ \text{holding period} \\ \text{(365 days or 52} \\ \text{Weeks or 12 months)} \end{array} \right)$$

2. **Work-in-progress:** - The value of work-in-progress is decided as follows:

$$\left( \begin{array}{l} \text{Budgeted production} \\ \text{p.a (units)} \end{array} \right) \times \left( \begin{array}{l} \text{per unit cost} \\ \text{material 100\% +} \\ \text{Labour 50\% +} \\ \text{overhead 50\%} \end{array} \right) \times \left( \begin{array}{l} \text{Process period} \\ \text{(365 days or 52} \\ \text{weeks or 12 months)} \end{array} \right)$$

3. **Stock of finished goods:** - The investment in finished stock by a firm is decided as follows:

$$\left( \begin{array}{l} \text{Budget production} \\ \text{p.a (units)} \end{array} \right) \times \left( \begin{array}{l} \text{Cost of goods} \\ \text{Produced p.u.} \end{array} \right) \times \left( \begin{array}{l} \text{Finished goods} \\ \text{holding period} \\ \text{(365 days or 52 weeks} \\ \text{or 12 months)} \end{array} \right)$$

4. **Investment in debtors:** - Debtors are calculated at sales prices as well as at cost price as follows:

**At sales price**

$$\left( \begin{array}{l} \text{Budgeted credit sales} \\ \text{p.a units} \end{array} \right) \times \left( \begin{array}{l} \text{Selling Price} \\ \text{per unit} \end{array} \right) \times \left( \begin{array}{l} \text{Debtors collections period} \\ \text{(365 days or 12 months} \\ \text{or 52 weeks)} \end{array} \right)$$

**At Cost Price**

$$\left( \begin{array}{l} \text{Budgeted credit sales} \\ \text{p.a units} \end{array} \right) \times \left( \begin{array}{l} \text{Cost of sale} \\ \text{per unit} \end{array} \right) \times \left( \begin{array}{l} \text{Debtors collections period} \\ \text{365 days or 12 months} \end{array} \right)$$

5. **Cost and bank balance:** - Required amount of cash & bank can be determined on the basis of cash budget. This budgeted cash and bank balance should be enough to meet day to day expenses. This is readily given in the problem and included in the list of current assets.

6. **Advance payment:** - The payment of expenses for the period which is not expired. It is calculated as follows.

$$\left( \begin{array}{l} \text{Expenses} \\ \text{(365 days or 52 weeks} \\ \text{or 12 months)} \end{array} \right) \times \left( \begin{array}{l} \text{Period of prepayment} \end{array} \right)$$

7. **Sundry Creditors:** - The amount of creditors depends on the credit purchases and the period of credit allowed by supplier is calculated as follows:

$$\left( \begin{array}{l} \text{Budgeted production} \\ \text{p.a units} \end{array} \right) \times \left( \begin{array}{l} \text{Cost per unit} \\ \text{of raw material} \end{array} \right) \times \left( \begin{array}{l} \text{Period of credit allowed} \\ \text{365 days or 52 weeks or} \\ \text{a. 12 months} \end{array} \right)$$

8. **Creditors for wages & overheads:** - It is not necessary to pay wages and expenses immediately which will ease working capital requirements. This amount is calculated as follows:

$$\left( \begin{array}{l} \text{Budgeted production} \\ \text{p.a. unit} \end{array} \right) \times \left( \begin{array}{l} \text{Wages or expenses} \\ \text{per unit} \end{array} \right) \times \left( \begin{array}{l} \text{Lag in payment} \\ 365 \text{ days or } 52 \\ \text{Weeks or } 12 \text{ months} \end{array} \right)$$

9. **Advance from customer:** - The amount received from customer in advance along with purchases result into less working capital requirement. This amount is given in the problem.

### 7.2.2 Proforma of Working Capital Statement :

**XYZ Co. Ltd.**

**Statement of Working Capital Requirement for the period \_\_\_\_\_**

Particulars	Working	Rs.	Rs.
<b>A. Current Asset</b>			
1. Stock of Raw Material	(Units x Rate x Period of holding)		xxx
2. Stock of WIP			
a) Raw Material Labour	(Units x Rate x Processing period)	xxx	
b) Labour	(Units x Rate x Processing period x 1/2)	xxx	
c) Overheads	(Units x Rate x Processing Period x 1/2)	xxx	xxx
3. Stock of Finished Goods			
a) Raw Material	(Units x Rate x Period of holding)	xxx	
b) Labour	(Units x Rate x Period of holding)	xxx	
c) Overheads	Units x Rate x Period of holding)	xxx	xxx
4. Debtors at S.P.	(Units X S.P. x Period of Credit)		xxx
<b>OR</b>			
Debtors at Cost			
a) Raw Materials	(Unit x Rate x Period of credit)	xxx	
b) Labour	(Unit x Rate x Period of credit)	xxx	
c) Overhead	(Unit x Rate x Period of credit)	xxx	xxx
5. Prepaid Expenses	Units x Rate x Period of Payment		xxx
6. Advance to Supplier			xxx
7. Cash & Bank			xxx
<b>Total Current Assets</b>			<b>xxxx</b>

<b>B. Less: Current Liabilities</b>			
1. Creditors for Materials	(Units x Rate X period of credit)	xxx	
2. Lag in payment Wages			
a) Wages	(Units x Rate x Lag in Payment)	xxx	
b) Overheads	(Units x Rate x Lag in Payment)	xxx	
3. Advance from Customers		xxx	
<b>Total Current Liabilities</b>			<b>xxxx</b>
<b>C. Net Current Assets</b>			<b>xxxx</b>
Add: - Margin of Safety	(A - B)		xxx
D. Working Capital			<u>xxxx</u>

### 7.3 SOLVED PROBLEMS

#### Illustration 1.

Sanket Ltd. had an annual sale of 50,000 units, at Rs.100 per unit. The company works for 50 weeks in the year.

The cost details of the company are as follows:

Elements of cost	Cost per unit Rs.
Raw Materials	30
Labour	10
Overheads	<u>20</u>
	60
Profit per unit	<u>40</u>
Sales price per unit	<u>100</u>

The company has to practice of storing raw materials for 4 week's requirements. Wages and other expenses are paid after a lag of 2 weeks. Further the debtors enjoy a credit of 10 weeks and company gets a credit of 4 weeks from the suppliers. The processing time is 2 weeks and finished goods inventory is maintained for 4 weeks. From the above information prepare a working capital estimates, allowing for a 15% contingency.

#### Solution:-

#### Working notes:

a) Sales per week  $\frac{50,000}{50} = 1,000$  units per week.

b) Debtors are valued at selling price and finished goods at sales less profits.

- c) It has been assumed that the labour and overheads accrue on an average, so half the labour and overheads would be included in work in progress.

**Statement Showing Estimation of Working Capital.**

Particulars	Working (unit x Rate x Period)	Rs.	Rs.
<b>A. Current Assets</b>			
<b>I. Stock</b>			
Raw Materials	(1000 x 80 Rs. x 4 week)		1,20,000
Work-in-progress			
Raw materials	(1000 x 30 Rs. x 2 week)	60,000	
Labour	(1000 x 10 x 2 weeks x 1/2)	10,000	
Overheads	(1000 x 20 x 2 weeks x 1/2)	20,000	90,000
Finished goods	(1000 x 60 x 4 weeks)		2,40,000
II. Debtors	(1000 x Rs. 100 x 10 week)		10,00,000
Total Current Assets			14,50,000
<b>B. Less: - Current Liabilities</b>			
I) Creditors	(1000 x 30 Rs. x 4 weeks)		1,20,000
II) Outstanding wages	(1000 x Rs.10 x 2 week)		20,000
III) Outstanding Overheads	(1000 x 20 x 2 weeks)		40,000
			1,80,000
Working Capital (A-B)			1,27,000
Add. 15% Con. Reserve			1,90,500
Net working capital			14,60,500

**Illustration 2.**

A factory produces 48,000 units during the year and sells them for Rs. 50 per unit. The cost structure of a product is as follows.

Raw Materials	60%
Labour	15%
Overheads	10%
	85%
Profit	15%
	100%
Selling price	100%

The following additional information is available.

- The activities of purchasing producing and selling occur evenly through and the year.
- Raw materials equivalent to 1 months supply is stored in godown.
- The production process takes are month.
- Finished goods equal to three month's production are carried in stock.
- Debtors get two month's credit.

- f) Time lag in payment of wages and overheads in 1/2 months.  
 g) Cash and bank balance is to be maintained at 10% of the working capital.  
 h) 10% of sales are made at 10% above the normal selling price.

Draw the statement showing working capital requirement of the factory.

**Solution:**

**Statement showing working capital requirement.**

Particulars	Working (units x Rate x period)	Rs.	Rs.
<b>A. Current Assets</b>			
<b>I. Stock</b>			
Raw Materials	$(48,000 \times \frac{1}{12} \times \text{Rs.}30 \times 1\text{m})$	1,20,000	1,20,000
Work-in-progress	$(48,000 \times \frac{1}{12} \times \text{Rs.}30 \times 1\text{m})$	15,000	
- Raw Materials			
- Labour	$(48,000 \times \frac{1}{12} \times \text{Rs.}7.5 \times \frac{1}{2}\text{m})$	10,000	
- Overheads	$(48,000 \times \frac{1}{12} \times \text{Rs.}5 \times \frac{1}{2}\text{m})$		1,45,000
Finished Goods at cost	$(48,000 \times \frac{1}{12} \times \text{Rs.}42.5 \times 3\text{m})$	3,60,000	5,10,000
<b>II. Debtors at selling price</b>			
Normal	$(48,000 \times \frac{1}{12} \times 90\% \times \text{Rs.}50 \times 2\text{m})$	44,000	
Higher S.P.	$(48,000 \times \frac{1}{12} \times 10\% \times \text{Rs.}55 \times 2\text{m})$		4,04,000
Total		1,80,000	11,79,000
<b>B. Current Liabilities</b>			
<b>I. Sundry Creditors</b>			
	$(48,000 \times \frac{1}{12} \times \text{Rs.}30 \times 1.5\text{m})$	15,000	
<b>II. O/S wages</b>			
	$(48,000 \times \frac{1}{12} \times \text{Rs.}7.50 \times \frac{1}{2}\text{m})$	10,000	
<b>III. O/S Overheads</b>			
	$(90\%)$		2,05,000
	$(10\%)$		9,74,000
<b>C. Working capital (A-B)</b>			
Add : 10% for cash & Bank balance			1,08,222
i.e. 10% of cost			10,82,222
Required working capital	$(100\%)$		

**Working notes.**

1)	Cost Structure	%age	Cost per unit
	Raw material	60	30.00
	Labour/Wages	15	7.50
	Overheads	10	5.00
		<hr/>	<hr/>
		85	42.50
	Add. Profits	15	7.50
	Selling price		<b>50.00</b>

- 2) Sundry debtors  
 Normal selling price Rs.50.00  
 10% above normal selling price Rs.55.00  
 $\left(\frac{5 \times 1}{10} = 5 \therefore 50 + 5 = 55\right)$
- 3) Cash & Bank balance  

$$\left. \begin{array}{l} \frac{974000 \times 10}{90} = \\ = 10,8,222.222 \end{array} \right\} \text{Rs. 1, 08,222}$$
- 4) M = Months

**Illustration 3.**

The Board of Directors of Century Rayon Ltd. requests you to prepare a statement showing requirements of working capital for a forecast level of activity of 52,000 units in the ensuing year (52 weeks) from the following information made available.

	<b>Cost per unit</b>
	<b>Rs.</b>
Raw Material	40.00
Labour	15.00
Overheads Manufacturing	20.00
Overheads Selling & Distribution	<u>10.00</u>
	<u><b>85.00</b></u>

**Additional Information:**

- a) Selling price - Rs. 100/- per unit.
- b) Raw material in stock - average 4 weeks.
- c) Work-in-progress - average 4 weeks.
- d) Finished goods in stock - average 4 weeks.
- e) Credit allowed to debtors - average 8 weeks.
- f) Credit allowed by supplier - average 4 weeks.
- g) Cash at bank is expected to be Rs. 50,000.
- h) All sales are a credit basis.
- i) All the activities are evenly spread out during the year.
- j) Debtors are to be valued at sales.

**Solution:**

**Statement of working capital requirement.**

Particulars	Working (units x Rate x period)	Rs.	Rs.
<b>A. Current Assets</b>			
I. Stock			
Raw Materials			1,60,000
Work-in-progress	$(52,000 \times \frac{1}{52} \times \text{Rs.}40 \times 4 \text{ weeks})$		
Raw Materials			
Labour			
Overheads	$(52,000 \div 52 \times \text{Rs.}40 \times 4 \text{ weeks})$	1,60,000	
Finished Goods at cost	$(52,000 \div 52 \times \text{Rs.}15 \times 4 \text{ weeks} \times \frac{1}{2})$	30,000	
II. Debtors at selling price		40,000	
III. Bank Balance	$(52,000 \div 52 \times \text{Rs.}20 \times 4 \text{ weeks} \times \frac{1}{2})$		2,30,000
<b>B. Less Current Liabilities</b>			
Sundry Creditors	$(52,000 \div 52 \times \text{Rs.}75 \times 4 \text{ weeks})$		3,00,000
<b>C. Working Capital (A-B)</b>	$(52,000 \div 52 \times \text{Rs.}100 \times 8 \text{ weeks})$		8,00,000
			50,000
			15,40,000
	$(52,000 \div 52 \times \text{Rs.}40 \times 4 \text{ weeks})$		1,60,000
			<u>13,80,000</u>

**Working Notes:**

1) Particulars	Cost per unit Rs.
Raw materials	40.00
Labour	15.00
Manufacturing overheads	<u>20.00</u>
Cost of goods produced	75.00
Add: Selling & Distribution Expenses	<u>10.00</u>
Cost of goods sold	85.00
Add: Profit	<u>15.00</u>
Sales price	<b>100.00</b>

2) W= weeks

**Illustration 4.**

From the following data, prepare a statement showing working capital requirement for the year 2009:

- Estimated activity for the year 1, 95,000 units (52 weeks).
- Stock of raw material 2 weeks and material in progress 2 weeks, 50% of wages and overheads are incurred.
- Finished goods 3 weeks storage.
- Creditors 2 weeks.
- Debtors 4 weeks.
- Outstanding wages and overheads 2 weeks each.
- Selling price per unit Rs. 30.

- h) Cost analysis per unit is as follows.
- I. Raw materials 1/3 of sales.
  - II. Labour and overheads in the ratio of 3:2 per unit.
  - III. Profit per unit is Rs. 10
- i) Cash balance Rs.50,000

Assume that operations are evenly spread throughout the year.

**Solution:**

**Working notes**

- 1) Cost structure

	Rs.	Cost per unit Rs. for 195000 unit
Raw Materials	19,50,000	10.00
Labour	11,70,000	6.00
Overheads	<u>7,80,000</u>	<u>4.00</u>
Total Cost Profit	<u>39,00,000</u>	<u>20.00</u>
Profit	<u>19,50,000</u>	<u>10.00</u>
Sales price	<u>58,50,000</u>	<u>30.00</u>

- 2) After deducting profit we get total cost per unit Rs.20.  
 3) Total cost Rs.20 includes Rs.10 cost of raw materials.  
 4) Balance Rs.10 per unit will be divided in the ratio of 3:2 i.e. Rs.6 labour and Rs.4 overheads.  
 5) W = week

**Statement of working capital requirements for the year 2009.**

Particulars	Working (units x Rate x period)	Rs.	Rs.
<b>A. Current Assets</b>			
I. Raw Materials	(19,5,000 ÷ 52 x 10 x 2w)		75,000
II. Work-in-progress			
Raw Materials	(19,5,000 ÷ 52 x 10 x 2w)	75,000	
Labour	(19,5,000 ÷ 52 x 6 x 2w x 50%)	22,500	
Overheads	(19,5,000 ÷ 52 x 4 x 2w x 50%)	15,000	11, 2,500
III. Finished Goods	(19,5,000 ÷ 52 x 20 x 2w)		1, 50,000
IV. Debtors	(19,5,000 ÷ 52 x 30 x 4w)		4, 50,000
V. Cash	Given		50,000
Total			
<b>B. Less Current Liabilities</b>			
I. Creditors	(19,5,000 ÷ 52 x 10 x 2w)	75,000	8, 37,500
II. Outstanding wages	(19,5,000 ÷ 52 x 6 x 2w)	45,000	
III. Outstanding overheads	(19,5,000 ÷ 52 x 4 x 2w)	30,000	
Total			
<b>C. Working Capital (A-B)</b>			1, 50,000 6, 87,500

**Illustration 5.**

Sangeet Swapna Ltd. Furnisher in the following information and request you to prepare a statement showing the requirement of working capital for the year ended 31st March 2009.

	<b>Budgeted for 2009</b>
Production capacity for the year	10,000 units
Production	90%
<b>Cost structure</b>	
Crude material	Rs. 30 per unit
Other direct material	Rs. 20 per unit
Wages	Rs. 25 per unit
Overheads	Fixed Rs. 9000 p.m. and Rs. 15 variable per unit
Profit	25% on sales

**Other information: -**

- a) Crude oil material remains in the stock for 2 months.
- b) Other direct material remains stock for 1 month.
- c) Finished goods remain in stock for 2 month. (to be valued at direct cost)
- d) Production process takes place 1 month work-in-progress valuation to be made crude material plus direct material at cost; plus 50% of wages and variable overheads.
- e) Time lag in payment of wages 1 month and variable overhead half month.
- f) Fixed overhead payable quarterly in advance.
- g) Crude material purchased from suppliers against advance payment of two months and other direct material suppliers allow credit of 1 month.
- h) Credit allowed to customers as under at sales price.
  - a) 50% of invoice price against acceptance of bill for 4 months.
  - b) 25% of invoice of time lag 2 months.
- i) Bank balance to be maintained Rs. 50,000.
- j) Production and sales takes place evenly throughout the year.

**Solution: -****Working notes: -**

- 1) Estimated production 90% of 10,000 = 9000 units.
- 2) Cost structure

	<b>Rs.</b>
Crude material	30.00
Other direct material	20.00
Wages	25.00



- 5) Each unit of production is expected to be in process for one month.
- 6) Credit given by suppliers is two months and allowed to customers is 3 months.
- 7) Selling price is Rs. 10 per unit.
- 8) There is regular production and sales cycle.
- 9) It is decided to maintain Rs. 30,000 cash balance.

**Solution: -**

- a) Budgeted output 1, 20,000 units (given).
- b) Budgeted sales - 1, 20,000 x 10 = Rs. 12, 00,000
- c) **Cost Structure:**  
 R. M. 60% of Rs. 10 = Rs. 6.00 per unit  
 Labour 10% of Rs. 10 = Rs. 1.00 per unit.  
 Overheads 20% of Rs. 10 = Rs. 2.00 per unit.
- d) Annual expenditure
 

Raw material (1, 20,000 x Rs. 6) =	7,20,000
Labour (1, 20,000 x Rs. 1) =	1,20,000
Overheads (1, 20,000 x Rs. 2) =	2,40,000
 Total	<u>10,80,000</u>
 Profit (1,20,000 x Rs.1)	1,20,000
Selling price	<u>12,00,000</u>
- e) M = months

**Statement of working capital requirements**

Particulars	Working (units x Rate x Period)	Rs.	Rs.
<b>A. Current Assets</b>			
I. Stock of Raw materials	$\left( \frac{1,20,000 \times 6}{12} \times 2m \right)$		1, 20,000
II. <u>Work-in-progress</u>			
Raw Materials	$\left( \frac{1,20,000 \times 6}{12} \times 1m \right)$	60,000	
Labour	$\left( \frac{1,20,000 \times 1}{12} \times \frac{1}{2}m \right)$	5,000	
Overheads		10,000	21,000
III. Finished goods	$\left( \frac{1,20,000 \times 2}{12} \times \frac{1}{2}m \right)$		2, 70,000
IV. <u>Debtors</u>			
a) Raw materials	$\left( \frac{1,20,000 \times 9}{12} \times 3m \right)$	1, 80,000	

b) Labour		30,000	
c) Overheads	$\left(\frac{1,20,000 \times 6}{12} \times 3m\right)$	60,000	2,70,000
V. Cash	$\left(\frac{1,20,000 \times 1}{12} \times 3m\right)$		30,000
	$\left(\frac{1,20,000 \times 2}{12} \times 3m\right)$		
Total			7,11,000
<b>B. <u>Less: Current liabilities</u></b>			
Creditors	$\left(\frac{1,20,000}{12} \times 6 \times 2m\right)$	1,20,000	1,20,000
<b>C. Working Capital</b>	(A – B)		5,91,000

## 7.4 EXERCISES

1. You are required to prepare a statement showing the working capital required to finance the level of activity of 27,000 units per year from the following information.

	Per unit Rs.
Raw materials	24.00
Direct labour	6.00
Overheads	<u>18.00</u>
Total Cost	48.00
Profit	<u>12.00</u>
Selling price	<b>60.00</b>

### Information:

- I. Raw materials are in stock an average for two months.
- II. Materials are in process on an average for half a month.
- III. Finished goods are in stock on an average for two months.
- IV. Credit allowed by creditors is two months of raw materials supplied.
- V. Credit allowed to debtors is three months.
- VI. Lag in payment a wages is half month.
- VII. Cash on hand Rs. 4,000 and bank balance Rs. 10,000

(Ans. Raw materials - Rs. 1,08,000; work in progress - Rs. 40,500; Finished stock - Rs. 2,16,000; Debtors Rs. 4,05,000; Creditors Rs. 10,80,000; Labour/wages Rs. 6,750; working capital Rs. 6,23,750)

2. From the following data provided by M/s Alfa Ltd. estimate working capital requirements for the year ended 31st March 2006.

- a) Estimate activity of operation for the year 2, 60,000 units (52 weeks)
- b) Raw materials remain in stock for 2 weeks and production cycle takes two weeks.
- c) Finished goods remain in stock for two weeks.
- d) Two weeks credit is allowed by supplier.
- e) Four weeks credit is allowed to debtors.
- f) Time lag in payment of wages and overheads is two weeks.
- g) Cash and bank balance to be maintained Rs. 25,000
- h) Selling price per unit is Rs. 15
- i) Analysis of cost per unit as follows:
  - i. Raw material  $33\frac{1}{3}\%$  of sales
  - ii. Labour and overheads in the ratio of 6:4 per unit.
  - iii. Profit is at Rs. 5 per unit.

Assume that operations are evenly throughout the year; wages and overheads accrue similarly. Manufacturing process required feeding a material fully at the beginning. Degree of work-in-progress is 50%. Debtors are to be estimated as selling price.

**(T.Y.B.Com March 2006)**

**(Ans. Stock Rs. 50,000 work-in-progress Rs. 75,000 debtors Rs.1,00,000, creditors Rs. 50,000, outstanding wages Rs. 30,000, outstanding overheads Rs. 20,000, working capital Rs. 4, 50,000)**

3. From the following details, prepare a statement showing working capital requirement for the year ended 31st March 2009.

Production	90,000 units
Selling price per unit	Rs. 10.00
Raw Materials	60% of selling price
Direct wages	10% of selling price
Overheads	20% of selling price
Materials in hand	2 months requirement
Production time	1 month
Finished goods in stores	4 month
Credit for material	2 month
Credit allowed to customers	3 month
Average cash balance	Rs. 30,000
Average bank balance	Rs. 20,000

Wages and overheads are paid at the beginning of the month following. In Production all the required materials are

charged in the initial stage and wages and overheads accrue evenly.

(Ans. Raw materials Rs. 90,000, WIP- Rs. 56,250, Finished goods Rs. 2,70,000, Debtors - Rs. 2, 25,000, Creditors - 90,000, O/s wages Rs. 7,500, O/s overheads Rs. 15,000 - working capital 6, 78,750)

4. From the following data, prepare a statement of working capital requirement for the year 2009

	Rs.	Rs.
Budgeted sales		3, 60,000
Less: cost of materials	1, 08,000	
Direct labour	1, 44,000	
Overheads	<u>72,000</u>	<u>3, 24,000</u>
Net profit		<b>36,000</b>

It is estimated that:

- a) Raw materials are carried in stock for one months and finished goods for 15 days only.
- b) The production cycle take one month.
- c) One month's credit is granted both for purchase of raw materials and sales of finished goods.
- d) Production and overheads are even through the year.

(Ans. Raw materials Rs, 9,000, WIP Rs. 18,000 finished goods Rs. 13,500, Debtors Rs. 30,000, Creditors Rs. 9,000, working capital Rs. 61,500)

5. The management of Fast and Thin Ltd. desires to know the working capital required with effect from 1st January, 2010 to finance. the production programme. Percentage cost structure of selling price is as follows.

Raw Materials	50%
Labour	20%
Overheads	10%

You are further informed that:

- a) Raw materials remain in the stores on an average for one month before issue to production.
- b) Finished goods remain in the godown for 2 months before sales.
- c) Each unit of production will be in process for one month.
- d) Credit allowed by creditors is one month and allowed to debtors is 2 months.
- e) Selling price per unit is Rs. 9.00
- f) Production in 2010 is expected to be 1, 00,000 units.

(Ans. Raw materials - Rs. 37,500, work-in-progress- Rs. 48,750, Finished goods - Rs. 1, 20,000, Debtors - Rs. 1, 20,000, Creditors - Rs. 37,500, working capital - Rs. 2, 88,750)



## CAPITAL BUDGETING

### Unit Structure:

- 8.0 Objectives
- 8.1 Introduction
- 8.2 Capital Budgeting Project
  - 8.2.1 Meaning
  - 8.2.2 Types / Classification of Projects
  - 8.2.3 New Concepts of Projects
- 8.3 Capital Budgeting Process
- 8.4 Capital Budgeting Techniques
- 8.5 Payback Period Methods
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  - 8.5.2 The formula is:
  - 8.5.3 Accept or reject criterion:
  - 8.5.4 Advantages
  - 8.5.5 Disadvantages
  - 8.5.6 Solved Problems
- 8.6 Accounting Rate of Return
  - 8.6.1 Meaning
  - 8.6.2 The formula is:
  - 8.6.3 Accept or reject criterion:
  - 8.6.4 Advantages
  - 8.6.5 Disadvantages
  - 8.6.6 Solved Problems
- 8.7 Net present value method
  - 8.7.1 Discounted Cash Flow Technique
  - 8.7.2 Meaning of Net present value
  - 8.7.3 How to calculate the Net Present Value
  - 8.7.4 Accept or reject criterion
  - 8.7.5 Formula
  - 8.7.6 Solved Problem
- 8.8 Profitability Index
  - 8.8.1 Meaning
  - 8.8.2 Merits
  - 8.8.3 Demerits

- 8.8.4 Procedure
- 8.8.5 Formula
- 8.8.7 Accept / Reject criterion
- 8.8.8 Solved Problem
- 8.9 Discounted payback period
  - 8.9.1 Meaning
  - 8.9.2 Procedure to calculate Discounted Payback Period
  - 8.9.3 Solved Problem
- 8.10 Model Question
- 8.11 Exercise

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## **8.0 OBJECTIVES**

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After studying the unit the students will be able to

- Know the concept of capital budgeting
- Understand the concept of project and budgeting report
- Understand the sources of project financing
- Understand the important considerations for capital budgeting

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## **8.1 INTRODUCTION:**

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The financial requirements of business can be classified as short-term and long-term financial requirements. Short-term funds are required for meeting working capital needs. It is usually required for a period up to one year. Long-term funds are required to a great extent for meeting the fixed capital requirements of the business. It is required for a period of 1 to 5 years or more. Fixed capital is required for investment in land, building, plant and machinery, vehicles and furniture etc. The long-term funds are raised by issue of shares, debentures, loans from financial institutions and banks.

Capital investment involves a cash outflow in the immediate future in anticipation of returns of a future date. The planning and control of capital expenditure is called as capital budgeting decisions. Capital budgeting is an art of finding assets that are worth more than their cost to achieve the objectives i.e. optimizing the wealth of a business enterprise. A key challenge for the companies is to identify projects which fit the objectives and promise to be profitable. Capital expenditure decisions usually involve large sums of money, long-time spans and carry some degree of risk and uncertainty. Realistic investment appraisal requires the financial evaluation of many factors such as the choice

of size, type, location, timing of investments, taxation, and opportunity cost of funds available and alternative forms of financing the projects.

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## 8.2 CAPITAL BUDGETING PROJECT

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### 8.2.1 Meaning

A Project is a scheme for investing resources. It is a proposal of something to be done, plan or scheme. Every business plan is a project. The entrepreneur has to identify an opportunity to undertake a new venture. The business opportunity can be generated through various techniques like market research observations at market places, consultation with experts and brainstorming sessions. The entrepreneur should conduct cost-benefit analysis of each and every idea. The costs can be measured in terms of resources required to implement the opportunity and the benefits can be measured in terms of sales, profits etc. Thus, a project is a business plan. It describes the future direction of the business. The entrepreneur should prepare a sound business plan in order to exploit the opportunity. A good business plan is important in determining the resources required, obtain the resources and effectively manage the business venture.

### 8.2.2 Types / Classification of Projects

There are different types of projects undertaken by the business. The important types of projects are given below:-

1. **Modernization Project:** Modernization projects involve removal of old machines and installation of new machines in their place to cope with dynamic and competitive business environment.
2. **Expansion Projects:** Expansion projects are undertaken to enlarge the plant capacity with a view to produce a large volume of production than the current level of production.
3. **Diversification Projects:** Diversification project is an investment decision to set up an entirely new project which is not connected with the exiting line of business.
4. **Balancing Projects:** New plant and machinery is installed in order to remove the bottlenecks (imbalance) and to increase the capacity utilization of the total plant. In installing balancing equipment, these would be free flow in the process and uninterrupted production is ensured and there will be increase in the revenue.
5. **Replacement Project:** Replacement of an existing asset with more economic one is a replacement project. By replacement, the operational efficiency is increased, cost of production is reduced, cost of maintenance is reduced and profitability is increased.

### 8.2.3 New Concepts of Projects

In recent economic liberalization programme in India, few projects are emerging with new concept for financing and execution of project. Such new concepts of projects are given below:

1. **Building Operate and Transfer (BOT):** Under this concept, the private sector is allowed to put the investment in bringing the project and the Government allows them to operate for certain period and then transfer the project to the Government. For example, Super Express Highways.
2. **Build, Own and Operate (BOD):** Under this concept, the private entrepreneurs are allowed to build the project from their own resources, and then they will own the project and they are also entitled to operate the project subsequent to their commercial launching. For example, power sector.
3. **Lease, Rehabilitate, Operator and Transfer (LROT):** Under LROT concept, the Government gives a running plant to the private entrepreneur for rehabilitation to put the plant on profitability track.
4. **Turnkey Projects:** When a single contractor undertakes the responsibility for the entire work and completes it so that the owner merely turns the key and operates the plant is known as "Turnkey" project. It covers the complete responsibility of engineering, design, manufacturing, supply, construction and commissioning the project.

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## 8.3 CAPITAL BUDGETING PROCESS

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Following are the major Stages of Capital Budgeting Process:

### 1. Project identification and generation:

On this stage ideas and suggestions for possible investment opportunities of enterprise resources are identified. Here the proposal for investments is generated taking into consideration the various reasons for taking up investments in a business. The reasons may be addition of a new product line or expanding the existing one. It could be a proposal to either increase the production or reduce the costs of outputs. The investment suggestions may be from inside the firm, such as from its employees, or from outside the firm, such as from a firm's advisors.

### 2. Project Screening and Evaluation:

In this phase ideas and suggestions having greatest income potential are developed into complete and detailed investment plans. This step mainly involves selecting all correct criteria's to judge the desirability of a proposal. The main object of this stage is

to avoid unnecessary wastage of resources like time, money and effort. The tool of time value of money becomes useful in this step. Also the estimation of the benefits and the costs needs to be done. The total cash inflow and outflow along with the uncertainties and risks associated with the proposal has to be analyzed thoroughly and appropriate provisioning has to be done for the same.

### **3. Project Selection:**

In the third phase, investment plans are compared, and those that appear to be in the best interest of the enterprise are selected. Here it has been checked whether the proposed investment project would add value to the firm or not. Properly defined method for the selection of a proposal for investments is not there as different businesses have different requirements.

### **4. Preparing the capital budget**

Once the proposal has been finalized, the different alternatives for raising or acquiring funds have to be explored by the finance team. This is called preparing the capital budget. The average cost of funds has to be reduced. A detailed procedure for periodical reports and tracking the project for the lifetime needs to be streamlined in the initial phase itself. The final approvals are based on profitability, Economic constituents, viability and market conditions.

### **5. The acceptance or rejection of the project:**

In this phase it has been decided whether to accept or reject a project. All information, coming from the financial appraisal and qualitative results, is collected for making decisions. Managers with experience and knowledge also consider other relevant information using their routine information sources, expertise and judgments.

### **6. Implementation and Monitoring:**

Once an investment project is accepted, then this phase involves the setting up of manufacturing facilities, project and engineering designs, negotiations and contracting, construction, and training and plant commissioning etc. Here the investment performance is monitored for any significant variations from expectations to determine if goals are being met. Money is spent and thus proposal is implemented. The different responsibilities like implementing the proposals, completion of the project within the requisite time period and reduction of cost are allotted.

### **7. Performance review or Post-implementation audit:**

This is the last phase which involves comparison of actual results with the standard ones. Post-implementation audit can provide useful feedback to project appraisal or strategy formulation. The feedback helps to identify and remove the various difficulties of the projects and for future selection and execution of the proposals.

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## 8.4 CAPITAL BUDGETING TECHNIQUES

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In order to maximize the return to the shareholders of a company, it is important that the most profitable investment projects should be selected. It is absolutely necessary that the method adopted for appraisal of capital investment proposals is a sound one. Any appraisal method should provide for the following:-

- (i) A basis of distinguishing between acceptable and non-acceptable projects.
- (ii) Ranking of projects in order of their desirability.
- (iii) Choosing among several alternatives.
- (iv) Recognizing the fact that bigger benefits are preferable to smaller ones and early benefits are preferable to later ones.

There are several methods used for evaluating and ranking the capital investment proposals. The basic approach is to compare the investment in the project with benefits derived there-from. The important methods or techniques of capital budgeting are explained below.

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## 8.5 PAY BACK PERIOD METHOD

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### 8.5.1 Meaning

It is the traditional technique of Capital Budgeting. The term pay-back period refers to the period in which the project generates the necessary cash to recoup the initial investments. The pay-back period is generally expressed in years. The method recognizes the recovery of original investment in a project. Thus, the payback period is the number of years required to recover the cost of the investment.

### 8.5.2 The formula is:

$$\text{Pay-back Period} = \frac{\text{Initial Investment (Cash outflows)}}{\text{Annual Cash Inflow}}$$

The terms used in this method:-

- Cash outflows : It means the original cost of proposal or investment
- Cash inflows: It means the profits before depreciation but after tax.

### 8.5.3 Accept or reject criterion: -

While deciding between the two or more projects, usually the project having lowest payback period is accepted.

#### 8.5.4 Advantages

1. This method is easy to calculate
2. It is simple to understand
3. Here investment recovery period is calculated therefore business unit can know about the period within which the funds will remain tied up.
4. The project having short pay- back period are accepted here this method is more suitable to the industries where risk of obsolescence is high.

#### 8.5.5 Disadvantages

1. This method completely ignores all cash inflows after the pay-back period. This can be very misleading as it does not consider the total benefits occurring from the project.
2. It ignores the time value of money. In this method money received now and receivable in future are considered as of equal value.
3. This method does not take into consideration the entire life of the project. As a result project with large cash inflows in the latter part of payback period and less cash inflows in the earlier years may be rejected.
4. This method ignores residual value.

In spite of these limitations the industries having high risk of obsolescence prefer this method. Likewise where, quick return to recover the investment is the primary goal this method is preferred.

#### 8.5.6 Solved Problems

A project requires an initial investment of Rs. 2, 00,000 and the annual cash inflows for 5 years are Rs. 60,000, Rs. 80,000, Rs. 50,000, Rs. 40,000 and Rs. 30,000 respectively. Calculate the payback period.

Here the students have to prepare the column of **Cumulative Cash Inflows** showed as below:

Year	Cash Inflows (Rs/)	Cumulative Cash Inflows (Rs.)
0	(2,00,000)	(2,00,000)
1	60,000	(1,40,000)
2	80,000	(60,000)
<b>3 X</b>	50,000	<b>(10,000) Y</b>
4	<b>40,000 Z</b>	30,000
5	30,000	60,000

- X = is the last time period where the cumulative discounted cash flow (CCF) was negative
- Y = is the absolute value of the CCF at the end of that period X
- Z = is the value of the DCF in the next period after X

### **Payback Period = X + Y / Z**

The actual pay-back period can be determined as under:-

$$\begin{aligned} \text{Pay-back Period} &= 3 + \frac{10,000}{40,000} \\ &= 3 + 0.25 \text{ years} \\ &= 3.25 \text{ years} \end{aligned}$$

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## **8.6 ACCOUNTING RATE OF RETURN**

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### **8.6.1 Meaning**

The capital investment proposals are judged on the basis of their relative profitability. The **accounting rate of return is also known as return on investment or return on capital employed**. It is normal accounting technique used to measure the increase in profit expected to result from an investment by expressing the net accounting profit arising from the investment as a percentage of that capital invested.

### **8.6.2 The formula is:**

$$\text{Accounting Rate of Return} = \frac{\text{Average Annual Profit after tax}}{\text{Average Investment}} \times 100$$

$$\text{Average Investment} = \frac{\text{Initial investment} + \text{Salvage value}}{2}$$

The term average annual net profit is the average of earning (after depreciation and tax) over the whole of the economic life of the project. The projects can be ranked on the basis of their accounting rate of return.

### **8.6.3 Accept or reject criterion: -**

The project which gives higher rate of return will be preferred for investment.

### **8.6.4 Advantages:**

1. It is very simple to understand and use.
2. It can be readily calculated using the accounting data.
3. It uses the entire stream of incomes in calculations.

**8.6.5 Disadvantages:**

1. While appraising the project it uses the accounting profits not the cash inflows.
2. It ignores the time value of money
3. This technique does not consider the lengths of project lives.

**8.6.6 Solved problem:**

A machine is available for purchase of a cost of Rs. 8,00,000. It is expected to have a life of 5 years and have a scrap value of Rs. 1,00,000 at the end of five years period. The machine will generate the following profits over its life as under:-

Year	Amount (Rs.)
1	2,00,000
2	3,00,000
3	4,00,000
4	1,50,000
5	50,000

The above estimates are profits before depreciation. You are required to calculate the accounting rate of return.

**Solution**

Total profit before depreciation over the life of machine = Rs. 11 lakhs

$$\text{Average Profit} = \frac{11,00,000}{5} = \text{Rs. } 2,20,000$$

Total Depreciation over the life of the machine = Cost - Scrap Value  
 = 8,00,000 – 1,00,000 = Rs. 7,00,000

$$\text{Average Depreciation} = \frac{7,00,000}{5} = \text{Rs. } 1,40,000$$

Profit after depreciation = Rs. 2,20,000 – 1,40,000 = Rs. 80,000

**Original Investment = Rs. 8,00,000**

$$\text{Rate of Return} = \frac{80,000}{8,00,000} \times 100 = 10\%$$

$$\text{Average Investment} = \frac{8,00,000 + 1,00,000}{2} = 4,50,000$$

$$\begin{aligned} \text{Accounting Rate of Return} &= \frac{80,000}{4,50,000} \times 100 \\ &= 17.78\% \end{aligned}$$

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## 8.7 NET PRESENT VALUE METHOD

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### 8.7.1 Discounted Cash Flow Technique:

The discounted cash flow technique is an improvement on the payback period method. It takes into account the interest factor as well as the return after the pay-back period. This method involves the following stages:

- (a) Calculation of cash flows i.e. cash inflows as well as cash outflows, over the full life of an asset.
- (b) Discounting the cash flows by a discount factor.
- (c) Aggregating the discount cash inflows and comparing them with the total discounted cash outflows.

### 8.7.2 Meaning of Net present value

The net present value is obtained by discounting all cash inflows and outflows attributable to a capital investment project. For this purpose, rate of discount is chosen suitably. The difference between the present value of cash inflows and present value of cash outflows is called net present value (NPV).

### 8.7.3 How to calculate the Net Present Value

Net present value method (NPV) is the most suitable method used for evaluating the capital investment projects. Net present value is calculated as below:

1. Firstly the cash inflows and outflows associated with each project are worked out.
2. The present value of the cash flows is calculated by discounting the cash flows at the rate of return acceptable to the management.
3. The rate of return is considered as a cut-off rate. It is generally determined on the basis of cost of capital suitably adjusted to allow for the risk element involved in the project.
4. The cash outflows represent the investment and commitments of cash in the project at various points of time. The working capital is taken as a cash outflow in the initial year.
5. The **cash inflow represents the net profit after tax but before depreciation**. As depreciation is non-cash expenditure, it is added back to the net profit after tax in order to determine the cash inflows.
6. The cash inflows and outflows are discounted at a certain rate and present value of cash flows is calculated.
7. The difference between the present value of cash inflows and present value of cash outflows is called net present value (NPV).

**8.7.4 Accept or reject criterion:**

If the NPV is positive, the project is accepted and if it is negative, the project is rejected.

**8.7.5 Formula:**

Discounted cash flow is an evaluation of the future net cash flows generated by a project. This method considers the time value of money concept and hence it is considered better for evaluation of investment proposals. If there are mutually exclusive projects, this method is more useful. Thus, the following formula is used to determine the net present value:

**Net present value (NVP)** = Present value of future cash inflows – Present value of cash outflows.

**8.7.6 Solved Problem****Illustration**

An investment project costs Rs. 1,00,000 initially. It is expected to generate cash flow as follows:

Year	Cash inflows (Rs.)
1	50,000
2	40,000
3	30,000
4	20,000

(a) What is the net present value of the project assuming a 10 % risk-free rate? Should the project be accepted?

(b) If the project is risky and it is decided to use a higher rate to allow for the perceived risk. Assuming that rate is 15%, what will be the net present value of the project? Should the project be accepted?

The discounted factor @10% is:

Year	1	2	3	4
Discount factor	0.9091	0.8254	0.7513	0.6830

The discounted factor @15% is:

Year	1	2	3	4
Discount factor	0.8696	0.7561	0.6575	0.5718

**Solution:**

(a)

Net Present Value at 10% discounting rate			
Year	Cash inflows (Rs)	Discount factor at 10%	Present value (Rs.)
1	50000	0.9091	45455
2	40000	0.8254	33056
3	30000	0.7513	22539
4	20000	0.6830	13660
Present value of cash inflows			114710
- Present value of cash outflow			100000
Net present value			14700

The project should be accepted at risk free rate of 10% because net present value is positive.

(b)

Net Present Value at 15% discounting rate			
Year	Cash inflows (Rs)	Discount factor at 15%	Present value (Rs.)
1	50000	0.8696	43480
2	40000	0.7561	30244
3	30000	0.6575	19725
4	20000	0.5718	11436
Present value of cash inflows			104885
- Present value of cash outflow			100000
Net present value			4885

The project can be accepted at 15% because net present value is positive

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## 8.8 PROFITABILITY INDEX

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**8.8.1 Meaning**

The net present value method uses discounted cash flows. It expresses cash flows in present rupees. The NPV of different

projects can be compared. It implies that each project can be evaluated independent of others on its own merit. Sometimes we have to compare a number of projects each involving different amount of cash inflows and outflows. If the cash flows are different and period of the project are also different and two or more projects give positive net present value, then we have to use the technique of profitability index. It represents a ratio of the present value of future cost benefit at the required rate of return to the initial cash outflow of the investment.

#### 8.8.2 Merits

1. This method is helpful in comparing the project having different amounts of investment therefore it is superior to Net Present Value method.
2. It considers the time value of money.
3. It considers all cash inflows.

#### 8.8.3 Demerits

1. It is difficult to understand and to calculate.
2. In case of mutually exclusive nature investment the Present Value Method is superior to this method.

#### 8.8.4 Procedure

1. Calculate Cash outflows and its present value.
2. Calculate the present value of Cash Inflows.
3. Calculate the ratio of present value of cash inflows to the present value of cash outflows. This ratio is called as profitability index.

#### 8.8.6 Formula -

$$\text{Profitability Index} = \frac{\text{Present value of cash inflows (PVC I)}}{\text{Present value of cash outflows (PVC O)}}$$

#### 8.8.7 Accept / Reject criterion:-

The selection of project has based on ranking i.e. the project with the highest Profitability Index is given the first rank followed by others.

#### 8.8.8 Solved Problem

##### Illustration

X Ltd is considering purchase of a machine in replacement of an old one. Two models viz. 'modern' and 'sky' are offered at price of Rs. 22.5 lakhs and Rs. 30 lakhs respectively. Further particulars regarding these models are given below:-

Particulars	Modern	Sky
(I) Economic life in years	5	6
(II) After tax annual cash inflows		
Years	Rs. Lakhs	Rs. Lakhs
1	5.00	6.00
2	7.50	8.00
3	10.00	10.00
4	9.00	12.00
5	8.50	10.50
6	-	9.50
(III) Present value factors at 12% per annum are as follows		
Years	P.V.Factor	
1	0.893	
2	0.797	
3	0.712	
4	0.636	
5	0.567	
6	0.507	

- (a) Evaluate the two proposals.  
 (b) Which model would you recommend any why?

**Solution:**

**Calculation of Net Present Values**

Years	P.V.Factor	Modern		Sky	
		CFAT	PV	CFAT	PV
1	0.893	5.00	4.465	6.00	5.358
2	0.797	7.50	5.977	8.00	6.376
3	0.712	10.00	7.120	10.00	7.120
4	0.636	9.00	5.724	12.00	7.632
5	0.567	8.50	5.954	10.50	5.953
6	0.507	-		9.50	6.084
				2.50	
Less	Present Value of Cash inflows		29.240		38.523
	Present value of cash outflows		22.500		30.000
	Net present value		6.740		8.523

- (b) Considering net present value method, both the models have positive net present value and their initial investments are different. Hence, the decision will be based on Profitability Index which is calculated as follows:-

$$\text{Profitability Index} = \frac{PVCI}{PVCO} = \frac{\text{Modern } 29.240}{22.500} = 1.299 \quad \frac{\text{Sky } 38.523}{30.00} = 1.284$$

(c) As the profitability index of model 'Modern' is higher, it is recommended

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## 8.9 DISCOUNTED PAYBACK PERIOD

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### 8.9.1 Meaning

The discounted payback period is a modified version of the payback period that considers the time value of money. Both metrics are used to calculate the amount of time that it will take for a project to "break even", or to get the point where the net cash flows generated cover the initial cost of the project. Both the payback period and the discounted payback period can be used to evaluate the profitability and feasibility of a specific project.

### 8.9.2 Procedure to calculate Discounted Payback Period

There are two steps:

1. First, we must discount (i.e., bring to the present value) the net cash flows that will occur during each year of the project.
2. Second, we must subtract the discounted cash flows from the initial cost figure in order to obtain the discounted payback period. Once we've calculated the discounted cash flows for each period of the project, we can subtract them from the initial cost figure until we arrive at zero.

$$\text{Discounted Pay - back Period} = \frac{\text{Discounted Cash outflows}}{\text{Discounted Cash Inflow}}$$

### 8.9.3 Solved Problem

#### Illustration 1

ABC Ltd., is considering a given project. Below are some selected data from the discounted cash flow model created by the company's financial analysts:

The initial investment is Rs 75,000/-

Year	Discounted Cash inflows Rs.
1	10,000
2	15,000
3	20,000
4	30,000
5	30,000

Solution

Year	Discounted Cash Flow Rs.	Cumulative Cash inflows Rs.
0	(75,000) Initial investment	(75,000)
1	10,000	(65,000)
2	15,000	(50,000)
3	20,000	(30,000)
<b>4 X</b>	30,000	<b>0 Y</b>
5	30,000 <b>Z</b>	30,000

- X = is the last time period where the cumulative discounted cash flow (CCF) was negative
- Y = is the absolute value of the CCF at the end of that period X
- Z = is the value of the DCF in the next period after X

**Discounted Payback Period = X + Y / Z**

= 4 + 0 / 30,000

**= 4Years**

In this case, we see that the project's payback period is 4 years. Since the project's life is calculated at 5 years, we can infer that the project returns a positive NPV. Thus, the project will likely add value to the business if pursued.

### Illustration 2

Calculate the Discounted Payback Period from the following details. The initial investment is Rs. 23,40,000

Year	Cash inflows Rs.	Present Value Factor @ 10%
1	6,00,000	0.9009
2	6,00,000	0.8116
3	6,00,000	0.7312
4	6,00,000	0.6587
5	6,00,000	0.5935
6	6,00,000	0.5346

Year	1. Cash inflows Rs.	2. Present Value Factor @ 10%	3. Discounted Cash Flow (Cash inflow * PV.)	4. Cumulative Discounted Cash Flow
0	(23,40,000)	1	(23,40,000)	(23,40,000)
1	6,00,000	0.9009	5,40,541	(17,99,456)
2	6,00,000	0.8116	4,86,973	(13,12,486)
3	6,00,000	0.7312	4,38,715	(8,73,771)
4	6,00,000	0.6587	3,95,239	(4,78,532)
5 X	6,00,000	0.5935	3,56,071	(1,22,461) Y
6	6,00,000	0.5346	3,20,785 Z	1,98,324

- X = is the last time period where the cumulative discounted cash flow (CCF) was negative
- Y = is the absolute value of the CCF at the end of that period X
- Z = is the value of the DCF in the next period after X

**Discounted Payback Period = X + Y / Z**

$$= 5 + (1,22,461 \div 3,20,785)$$

$$= 5 + 0.38$$

$$= 5.38 \text{ years}$$

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## 8.10 MODEL QUESTIONS

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Q.1 Arvind Ltd. is currently analyzing capital expenditure proposals for the purchase of equipment. The company uses the net present value technique to evaluate projects. The capital budget is limited to Rs. 5,00,000 which the company believe is the maximum capital it can raise. The initial investment and projected net cash flows for each project are given below. The cost of capital of the company is 12%. You are required to compute the NPV of the different projects.

Projects	A	B	C	D
Initial Investment (Rs.)	2,00,000	2,00,000	2,40,000	2,10,000
Cash inflows				
1 <sup>st</sup> Year	50,000	40,000	75,000	75,000
2 <sup>nd</sup> Year	50,000	50,000	75,000	75,000
3 <sup>rd</sup> Year	50,000	70,000	60,000	60,000
4 <sup>th</sup> Year	50,000	75,000	80,000	40,000
5 <sup>th</sup> Year	50,000	75,000	1,00,000	20,000

Q.2 Which project would you recommend and why?

Calculate Payback period of the investment of Rs. 1,36,000 which yields the following cash flows:-

Year	Cash inflows (Rs.)
1	30,000
2	40,000
3	60,000
4	30,000
5	20,000

Q.3 A choice is to be made between two competing projects which require an equal investment of Rs. 50,000 and are expected to generate net cash flow as under:

Year	Project A (Rs.)	Project B (Rs.)
1	25,000	10,000
2	15,000	12,000
3	10,000	18,000
4	10,000	25,000
5	12,000	8,000
6	6,000	4,000

---

The cost of capital of the company is 10%. The following are the present value factors @ 10%.

Year	PV Factors @ 10 %
1	0.9091
2	0.8264
3	0.7513
4	0.6830
5	0.6209
6	0.5645

Which project should be selected and why? Evaluate the project under:

- a) Payback method
- b) NPV method.
- c) Discounted Payback Period

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### 8.11 EXERCISE

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1. Explain the major Stages of Capital Budgeting Process.
2. Discuss the different types of projects undertaken by the business.
3. Explain in short the various techniques of Capital budgeting.
4. Write Short notes:
  - a) Payback Period Method
  - b) Accounting rate of Return
  - c) Present Value Method
  - d) Discounted Pay back Period



**Section II****9****INTRODUCTION TO AUDITING****Unit Structure:**

- 9.0 Objectives
- 9.1 Introduction
- 9.2 Financial Statements
- 9.3 Definition and Objectives of Auditing
- 9.4 Errors and Frauds
- 9.5 Advantages and Disadvantages of Audit
- 9.6 Distinction
- 9.7 Principals of Audit
- 9.8 Summary
- 9.9 Exercise

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**9.0 OBJECTIVES**

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After studying this chapter the students will be able to:

- Understand the Basics of auditing,
- Explain the errors and frauds,
- Discuss about the limitations of audit,
- Know the Auditors duties and responsibilities in respect of frauds,
- Understand the principles of auditing and different auditing concepts.

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**9.1 INRODUCTION**

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Origin of the term Audit is said to be in the Latin term auditor which means to listen. In the Middle Ages whenever any fraud or misappropriation was suspected in the books of accounts, there was a system of appointment of an outside expert to verify the accounts. Such expert used to first listen to what the concerned person in the accounts department or The Manager has to say on the issue. In those days the scope of Auditing was restricted to detecting errors and frauds in the books of accounts only.

In simple terms auditing is nothing but verification of the correctness of the books of accounts. After completing writing of books of accounts, somebody else will go through them to check their correctness. This is audit. So it is said auditing starts after accounting job is over.

Auditor is an expert in accounts and he will check whether the books of accounts are properly written and principles and rules of Book-keeping and Accounts are strictly followed. Entries in the books of accounts should be properly supported by different documents like bills, receipts, vouchers etc.

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## 9.2 FINANCIAL STATEMENTS

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### 9.2.1 Meaning

After the books of accounts like journal, subsidiary books, ledger etc. are written financial statements like Trial balance, Trading and Profit and Loss account and Balance Sheet etc. are prepared. In addition these days cash flow statement is also prepared. These different financial statements are read not only by the owners of the business like the proprietors, partners and shareholders, but also by the investors, Tax Authorities, Bank officials, Trade Unions etc. From the point of view of all these people, maintenance of books of accounts correctly is important. Owners want to know whether their capital is being properly utilised, and adequate profits are being earned. Trade union leaders are interested in knowing that correct profits are shown by the company so that they can demand a reasonable bonus and rise in salary. Tax authorities are interested in knowing the correct profit of the business and that proper tax on the same is paid. Bankers who lend money, want to know that their loans are being properly utilised and can be recovered easily on due date, So, from the point of all these people maintenance of books of accounts correctly is important. So, after writing the accounts they are checked by an independent outside expert i.e. the auditor. All these people go through the financial statements from their own different point of view.

Even the customers of the products are also interested in the correctness of the accounts because if the company is making huge profits, they can demand for lowering the prices of the products produced by the company. Thus all these persons read the financial statements and all of them are interested in the correctness of them. This brings out the importance of audit of the accounts.

### 9.2.2 Users of Financial Statements

Financial statement satisfy the information requirements of a wide cross-section of the society representing corporate managers, executives, bankers, creditors, shareholders investors, labourers, consumers, and government institution. Following are the users of Financial Statements:

1. **Executives:** Financial statements provide sufficient accounting information to the executives and managers to enable them to

decide on important issues facing by them. The common issues faced by the corporate managers are: efficient capital utilization, maintaining the profitability through cost control, dividend paying capacity of the company and observing credit standards. The upper level management uses the financial statements to tackle such issues effectively.

2. **Bankers:** Bankers take precautions before advancing loans to their consumers. Every banker, before sanctioning credit, wishes to be assured the borrower's ability to repay the loans when they become due. The bankers use the financial statements to ascertain the company's ability of repaying the dues and also the ability to pay interest on time. Financial statements are useful to the bankers to ascertain the liquidity, solvency, profitability of borrower's business and his financial strength.
3. **Trade Creditors:** The information obtained from the financial statements becomes useful to ascertain the creditworthiness of the company. The manufactures or wholesalers would not provide credit facilities indiscreetly to everyone. Before providing such facilities the manufacturer and wholesaler studies the financial statements of the trader.
4. **Shareholders and Prospective Investors:** Shareholders, who have permanent interest in the life and operations of the company, are ever desirous of knowing about the company's financial affairs. The financial statements provide the shareholders all the information they require.
5. **Labourers:** Labourers contribute to the earnings of the company and they are the people who work on raw materials with the aid of capital goods to produce wealth. They are also interested in their wages and salaries, bonus and working conditions. As far as bonus, working conditions and other incentives are concerned, they largely depend on the company's profitability and liquidity. The financial statements become useful toe labourers to know the financial position of the entity.
6. **Consumers and society:** Consumers attempt to find out whether they are being exploited by the producers. Society is interested in an enterprise's that result in the increase of employment opportunities, wealth and standard of living of the people. They are also concerned about the enterprise's contribution to social welfare, environment and national wealth and prestige. Study of financial statements enables the consumers and the society to gain knowledge on these matters.

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## **9.3 DEFINITION AND OBJECTIVES OF AUDITING**

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### **9.3.1 Meaning and Definition**

Different authors have defined auditing in different words. We may consider the following few important selected definitions :

#### **1) Spicer and Pegler :**

“Auditing is an examination of books of accounts and voucher of a business as will enable the auditor to satisfy himself that the balance sheet is properly drawn up, so as to give a true and fair view of the state of affairs of the business and the profit and loss account gives a true and fair view of the profit or loss for the financial year or period.”

#### **2) Prof. Dickers :**

“Audit is an examination of accounting records, undertaken with a view to establishing whether they correctly and completely reflect the transactions to which they purport to relate.”

#### **3) Arthur W. Holme :**

“Long range objectives of an audit should be to serve as a guide to management’s future decisions in all financial matters such as controlling, forecasting analysing and reporting. These objectives help the business unit to improve its performance.”

#### **4) R. R. Mautz :**

“Auditing is concerned with the verification of accounting data, determining the accuracy and reliability of accounting statements and reports.”

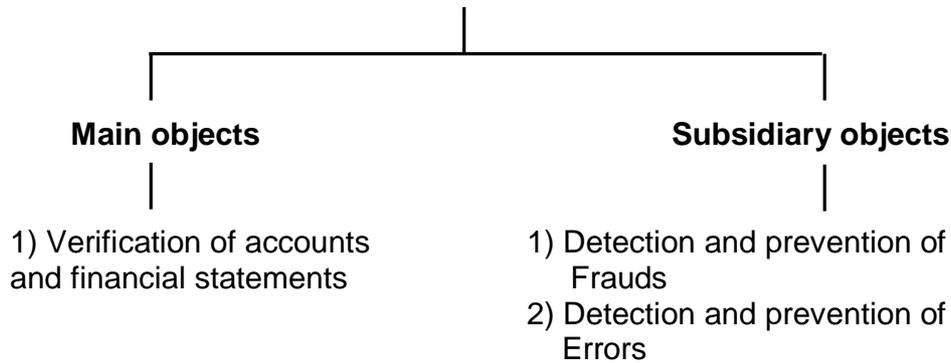
Longrange objectives of an audit should be to serve as a guide to the management’s future decisions in all financial matters such as controlling, forecasting, analyzing, and reporting.

To put it in a nutshell, auditing is a through intelligent systematic and critical examination of books of accounts. Audit may be done throughout the year or periodically.

### **9.3.2 Objectives of Auditing :**

Objectives of auditing are changing with the changes in the business techniques. Earlier it was only checking of correctness of accounts. It was then expanded to detection of frauds. The main objective of audit is to find the reliability of financial position and profit and loss statement. Objectives of audit can be divided in to two parts. Main and subsidiary or secondary objectives.

## Objectives of Audit



### A) Main objects of Audit:

#### 1. Verification of Accounts and Financial Statements:

The main or principal objective of audit is to verify and establish that at a given date the balance sheet presents true and fair view of financial position of the business and the profit and loss account gives the true and fair view of profit or loss for the accounting period.

Under the Indian Companies Act Books of accounts must be kept according to the provisions of the Act and they should reveal true and fair view of the state of affairs of the company.

#### 2. Checking of the entries with the relevant documentary evidences:

Audit involves checking the entries in the books of accounts with the relevant vouchers and other supporting documents. This is the main job of the auditor. Entries in the books of accounts are verified with the bills vouchers and receipts. He will also check whether all the money received is accounted for or not and all payments made have proper supporting vouchers. During such routine checking errors and frauds can be detected.

#### 3. Taking independent review of the financial statements:

He conducts an independent review of financial statements. He has to be personally satisfied about their reliability and he should be able to form his opinion about them. He must examine the existing internal control and internal check system prevalent in the organisation. He must check the arithmetical accuracy of the books of accounts. These days this aspect has lost its relevance as machines and computers are mostly used for this purpose by almost all organisations. Auditor has also to check the physical existence of various assets shown in the accounts and see that they are valued correctly.

In short, he has to assess the internal check system, check posting balancing etc. and verify the correctness of the entries with supporting documents. Capital and revenue items should be correctly classified. In the case of certain institutions, there are specific laws which contain rules regarding maintenance of accounts. Then the auditor should see that those legal provisions are complied in maintaining the books of accounts.

## **B) Subsidiary or Secondary objects of Audit :**

### **1) Detection and prevention of errors and frauds:**

The main difference between the two is that errors are committed due to negligence or lack of knowledge and the frauds are committed knowingly for some ulterior motive of getting some benefit.

### **2) Expression of Opinion:**

After going through the accounts the auditor should express his opinion on the maintenance of books of accounts. If he finds any lacuna or defect in the same, he must be frank enough to express his real opinion and suggest to the managements the steps to be taken to set right the same. Auditor should not come under anybody's pressure. He should be bold enough to call a spade.

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## **9.4 ERRORS AND FRAUDS**

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### **9.4.1 Meaning of Error**

Generally they are committed due to negligence or lack of knowledge or ignorance of the principles of writing accounts of the person writing the accounts. This is an important objective of an audit. Error is generally taken to be innocent and not deliberate.

### **9.4.2 Reasons and Circumstances**

R. K. Mautz, has classified the reasons and circumstances of errors and he has include fraud in the broad category of errors. The classifications are the following.

1. Ignorance on the part of employees of accounting development, generally accepted accounting principles, appropriate account classification of the necessary reconciling subsidiary ledgers with controlling accounts and of good accounting practices in general.
2. Carelessness on the part of those doing the accounting work.
3. A desire to conceal the effect of defalcations of shortage of one kind or another.
4. A tendency of the management to permit prejudice or bias to influence the interpretation of transactions or events or their presentation in the financial statements.
5. An ever presents desires to hold taxes on income to minimum.

A sixth cause may be added to those Mr. Mautz has listed and that is more serious in nature. It is the intentional effort committed by persons in positions of authority to:

- I. Show up the picture depicted by the statements;
- II. Depress the picture depicted by the statements; and
- III. Convert the error to a personal benefit.

### 9.4.3 Types of Errors

Errors can be classified in to following five categories:

- 1) Errors of principle
- 2) Errors of omission
- 3) Errors of commission
- 4) Errors of duplication
- 5) Compensating errors

#### 1. Errors of Principle :

These errors are usually committed due to lack of knowledge of science of Book-keeping. E.g. wrong classification of expenses into capital and revenue, treating personal income or expenditure as those of business or vice versa, providing less or more depreciation than reasonably necessary, not taking into account all outstanding income or expenditure etc. Such errors are not disclosed in the trial balance. They can only be detected by thorough checking of each and every transaction in the books of accounts. Errors of principle affect the correctness and reliability of financial statements. To prevent occurrence of such errors, the job of writing accounts should be assigned to a duly qualified person only. He must have good knowledge and experience in the field of dealing with accounts.

#### 2. Error of Omission:

Here a particular transaction is not at all recorded in the books of accounts. Such errors may be committed through oversight or even intentionally. They affect the profit or loss of the year. Trial balance will tally in spite of such errors. Hence it is difficult to detect them.

#### 3. Error of Commission :

Here the transaction is recorded but recorded incorrectly. E.g. amount received from A may be credited to B's account or Rs. 890 received may be recorded as Rs. 980. Some such errors may not affect the agreement of the trial balance.

#### 4. Errors of duplication :

Here the same transaction is written twice. This will also not affect the agreement of the trial balance. Auditor can detect such errors only by carefully conducting the process of vouching. Such errors may be committed due to oversight or even intentionally.

## 5. Compensating errors :

Here there are two mistakes of the same amount, one on the debit side and the other on the credit side. The total effect of one or more errors on either side is the same. Such errors are difficult to detect as the trial balance will tally in spite of such mistakes. Careful conduct of procedure of audit alone can detect such errors.

### 9.4.4 Meaning and Types of Frauds :

Fraud refers to intentional misrepresentation of financial information by persons in the management, employees or third parties. It may involve manipulation or falsification of accounts, misappropriation of assets, suppression of transactions, or misapplication of accounting policies etc. Frauds are intentionally committed by people in the higher authority. So it is more difficult to detect them than errors. Detection of frauds is one of the principal functions of the auditor.

Frauds may be classified as follows:

- 1) Misappropriation or embezzlement of cash.
- 2) Misappropriation of goods.
- 3) Manipulation of accounts.

#### 1. Embezzlement of cash :

Usually this is done by theft of cash receipts, Petty cash, cheques or by showing bogus payments to workers, creditors etc. Fictitious purchases may be shown and the payment for the same may be embezzled. This type of fraud is very easy where there is no proper control over the cash box. So in a smaller concern the cash box is handled either by the owner or his nearest relative or by a very senior trusted employee. In a large business there is no direct control of the owner in the day to day receipts and payments of cash. So embezzlement on a small scale can be easily done. However it is difficult in a smaller business where there is direct control of the owner on the day to day transactions.

Embezzlement is done either by not accounting for the whole amount received from a particular party or a lesser amount is shown in the accounts and the difference is pocketed by the cashier. Secondly false payments may be shown and the amount is pocketed. To avoid such frauds, there should be strict control on the receipt and payment of cash and the work of one should be routinely checked by the other. This is called internal check system. Another method of reducing such loss of cash by embezzlement is to insure the fidelity of the cashier. You can take an insurance policy and insure the fidelity or honesty of the cashier. If there is embezzlement, then the insurance company will make good the loss.

Different innovative methods are used to embezzle cash. Fictitious purchases may be shown. Wages are shown as paid to dummy workers. Old debt recovered or amount received by selling the scrap may not be shown in the accounts. When an amount is received from a debtor or customer, a lesser amount is shown as received in the counter foil of the receipt book. Some of the cash sales may not be shown in the accounts and so on.

## **2. Teaming and Lading :**

This is method of temporary misappropriation of cash. Teaming and lading means when an amount is received from one customer say A, it is not accounted for in the books and the cash is used by the cashier for his personal purpose. When the next customer say B, pays his dues it is shown as received from A and so on. However, finally before closing the accounts at the end of the year the money used is paid back and the cash balance is correctly shown. Thus here there is only a temporary misappropriation of cash. Auditor should not allow or condone even such frauds. They must be brought to the notice of the owner. The auditor can easily detect such frauds by comparing the date on the receipt and the date on which the transaction is written in the books of accounts, carefully.

## **3. Misappropriation of goods :**

Where the goods produced or sold are small in size and light in weight but of high value, such frauds are commonly committed. Normally in any business there is higher and stricter control over cash than on goods. This is a wrong policy. After all goods represent cash. To prevent such frauds, it is absolutely necessary to maintain proper record of purchases and sales of goods in prices as well as quantities. There should be a good internal control system regarding the movement of goods. Goods should not be allowed to leave the premises without the proper permission of some responsible official. Stock on hand should be physically checked from time to time. If there are any discrepancies, causes for the same should be thoroughly investigated immediately. Bin card system should be used to maintain proper control over the stock. Remedial measures wherever necessary should be immediately taken. Auditor should undertake surprise check of the physical stock and tally it with the stock shown in the accounts.

## **4. Manipulation of Accounts :**

This type of fraud is committed by higher level management to mislead certain parties. Such frauds usually involve a huge amount and are intentionally committed after adequate preparation. Managers, Directors etc. commit such frauds.

Here accounts are falsified but no cash or goods are misappropriated. False, incorrect or fictitious entries are made in

the books of accounts. For example bogus sales, purchases or expenses are recorded in the books, closing stock is not correctly valued. It may be over or under valued. Profitability of the business or the financial position of the business is not correctly shown.

Profits may be shown as loss to reduce or avoid payment of income tax and other taxes or to deter entering of view units in the business. Value of the shares of the company in the stock Exchange may also be inflated or deflated. Profits may be shown higher than what they are to get more commission or remuneration to the Manager. Another purpose may be to deceive the investors and make them invest more funds in the company. Prices of the shares of the company in the market may be artificially pushed up to sell the shares with the management and make more profits. Financial institutions may be made to lend more money.

Falsification of accounts may also be done by showing purchases or sales more or less than what really they are. Closing stock may be over or under valued, outstanding or prepaid expenses and outstanding and received in advance income are intentionally ignored or necessary adjustment for them may not be made in the accounts. Assets may be over or under depreciated, capital expenditure may be treated as revenue or vice – versa.

#### 5. **Window – Dressing :**

Showing the financial position better than what it is called window dressing. It is done to attract more capital in the business or get more remuneration for the manager etc.

#### 6. **Secret – Reserve :**

Showing the financial position worse than what it is, is called creating secret reserve. It is done to reduce tax burden or to see that no new competitors enter in the field.

Thus these manipulations are done with different motives and by using number of different methods. So it is rather difficult to detect the manipulation of accounts as it is systematically committed with the connivance of the top management. But never the less, it is an important duty of the Auditor to detect manipulation in accounts. If he fails to do this, he will be held responsible for certifying the false accounts and legal action may be taken against him.

### 9.4.5 **Risk of Frauds and Error in Audit**

The following events may increase the risk of fraud or error -

1. **Internal Control Faults:** Weaknesses in the design of internal control system and non-compliance with laid down control

procedures, e.g. a single person being responsible for receipt of all posts/ mails and marking it in the relevant sections or two persons responsible for receipt of all posts/ mails but the same is not followed in the practice.

2. **Doubts about the integrity or competence of the management**, e.g. domination by one person, high rate of employee turnover, frequent change of legal counsels of Auditors, significant and prolonged understaffing of the accounts department, etc.
3. **Unusual pressures within the entity**, e.g. industry is doing well but the Company's performance is poor, heavy dependence on a single line of product, inadequate working capital, need to show more profit to support the share market price, etc.
4. **Unusual transactions** e.g. transactions with related parties, excessive payment for certain services to lawyers, etc.
5. **Problems in obtaining sufficient and appropriate audit evidence:** E.g. inadequate documentation significant differences between the figures as per accounting records and confirmation received from third parties. Etc.

#### **9.4.6 Auditor's Duties and Responsibilities in respect of Fraud**

The primary objective of an auditor is to express an opinion on the financial statements. However, the auditor while conducting the audit is required to consider the risk of material misstatements in the financial statements resulting from fraud or error.

An audit conducted in accordance with the auditing standards generally accepted in India is designed to provide reasonable assurance that the financial statements taken as a whole are free from material misstatement, whether caused by fraud or error. The fact that an audit is carried out may act as a deterrent, but the auditor is not and cannot be held responsible for the prevention of fraud and error.

Following are the **Duties and Responsibilities of an Auditor:**

1. In planning and performing his examination the auditor should take into consideration the risk of material misstatements of the financial information caused by fraud or error.
2. He should inquire with the management as to any fraud or significant error which has occurred in the reporting period, and modify his audit procedures, if necessary.

3. If circumstances indicate the possible existence of fraud and error, the auditor should consider the potential effect of the suspected fraud and error on the financial information. If he is unable to obtain evidence to confirm, he should consider the relevant laws and regulations before expressing his opinion.
4. The auditor also has the responsibility to communicate the misstatement to the appropriate level of management on a timely basis and consider the need to report to it then changed with governance.
5. He may also obtain legal advice before reporting on the financial information or before withdrawing from the engagement.
6. The auditor should satisfy himself that the effect of fraud is properly reflected in the financial information or the error is corrected in case the modified procedures performed by the auditor confirm the existence of the fraud.
7. The auditor should also consider the implications of the frauds and errors, and frame his report appropriately. In case of a significant fraud, the same should be disclosed in the financial statement. If adequate is not made, there should be a suitable disclosure in his audit report.

**Check your progress:**

1. Enlist the objectives of Auditing.

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2. Define the following terms:
  - a. Auditing
  - b. Error
  - c. Frauds
  - d. Secret-Reserve
  - e. Window-dressing
  - f. Teaming and lading

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3. Fill in the Blanks:
- a. Recording of bogus sales, purchases or expenses in the books means -----.
  - b. Maintaining proper record of purchases and sales of goods in prices as well as quantities is essential to avoid the -----of goods.
  - c. -----system should be used to maintain proper control over the stock.
  - d. Fraud refers to-----of financial information.
  - e. Teaming and lading means temporary misappropriation of-----.
  - f. If the same transaction is written twice it is the error of -----.

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4. Give the examples of following type of errors;
- a. Error of commission
  - b. Error of omission
  - c. Error of duplication
  - d. Compensating errors

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## 9.5 ADVANTAGES AND DISADVANTAGES OF AUDIT

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### 9.5.1 Advantages of Audit :

Audit of accounts by a duly qualified Chartered Accountant is compulsory for the registered joint stock companies, public trusts, bigger co-operative societies only. Auditing has also been made mandatory these days for Income Tax and VAT payers above a particular limit. The limit for Income Tax payers is income above Rs. 25 lakhs and for VAT payers the limit is a turnover of above Rs. 1 Crore. These days even cost Accounts are to be audited by a qualified Cost Accountant if the turnover is above Rs. 1 Crore. In other words, it is not compulsory for all. However though not legally compulsory, many business units these days, get their accounts Audited because there are number of advantages of Auditing.

They can be enumerated as follows:

- 1) **Audited accounts are considered more reliable** by the general public, Government authorities and financial institutions like banks.
- 2) **Errors and frauds are detected in time and immediately rectified.** Remedial action can be taken in time to avoid or prevent them in future. Quick action can be taken against inefficient or negligent staff and possible future loss can be avoided.
- 3) **Employers will write the accounts in time** or immediately and take sufficient care to see that there are no mistakes. They will not be easily tempted to commit frauds because they know that the accounts are to be audited at an early date by the experts in the field and they may be caught and punished.
- 4) Auditor is an expert in the science of keeping books of accounts. He is familiar with different laws governing different businesses. **So, he can guide the accounts department in time. Such timely advice is very valuable for the business.** Now a day there are number of laws and new laws are added to them from time to time. A busy businessman even though highly educated can not keep track of such ever changing laws. Businessmen have neither time nor inclination to study and understand these laws. Auditor will come to their rescue.
- 5) Shareholders of joint stock companies are laymen and scattered all over the country and in the case of certain companies even all over the world. **The auditor audits the accounts of the business on behalf of these shareholders** and submits his report to them. From such reports the shareholders come to know how their company is functioning and how their hard earned money is being used. They can also take a decision about retaining or selling their shares in the company.
- 6) **Government and different tax authorities like** Sales Tax officers, Income Tax officers, Service Tax and Excise officers etc. **readily accept the audited accounts** and the matter of assessment of tax becomes simple and less time consuming.
- 7) When there is loss due to theft, fire, floods etc. **claim of loss from the Insurance Company is settled quickly if the accounts are audited.**
- 8) In the case of Partnership Firm, **when any partner retires or dies, his account can be easily and quickly settled.**
- 9) **Banks and other financial institutions sanction loans quickly on the basis of accounts audited** by a duly qualified auditor.

- 10) **Trade unions will demand bonus and rise in salary for a reasonable amount** only because the workers will believe in the accounts kept by the management if they are duly audited. If the accounts are not audited, the trade union leaders feel that the company's accounts do not reveal the real profits made by the company and they are not getting reasonable remuneration and bonus.

Due to all these advantages business organisation like sole traders and partnership firms, where audit of accounts is not legally mandatory, mostly get their accounts audited by a duly qualified Auditor.

### 9.5.2 Limitations of Auditing

- 1) **Non-detection of errors/frauds:** - Even though the accounts are carefully audited by the auditor. Sometimes the auditor fails to detect certain mistakes and frauds. After the entire Auditor is a watchdog and not a blood hound. So, if the accounts are prepared intentionally and thoughtfully with flaws to commit frauds, the auditor may not be able to detect them. Thus, you cannot guarantee that there are absolutely no errors or frauds in the accounts that are audited.
- 2) **Dependence on explanation by others:** - Auditor has to depend on the explanation, clarification and information given by the client or his staff. This information may not be necessarily always correct. Audit report is affected adversely if the explanation and information prove to be false.
- 3) **Dependence on opinions of others :-** Auditor has to rely on the views or opinions given by different experts viz Lawyers, Solicitors, Engineers, Architects etc. he cannot be an expert in all the fields Such opinion given by the experts may not be flawless.
- 4) **Conflict with others:** - Auditor may have differences of opinion with the accountants, management, engineers etc. In such a case personal judgement plays an important role. It differs from person to person.
- 5) **Audit is a post mortem examination. Things have already happened and nothing much can be done now.** Usual reply given by the Government Authorities for different Audit objections is "Noted for future guidance."
- 6) Under the Indian Companies Act, the real owners are the shareholders. They appoint the Auditor in their Annual General Meeting. **This is only in theory or on paper. In practice, he is**

**appointed by the Directors only. So, he may not necessarily act independently.** He may try to avoid displeasing the Directors to continue to get the business.

- 7) **Corrupt practices to influence the auditors:** The management may use corrupt practices to influence the auditors and get a favourable report about the state of affairs of the organisation. Many Auditors are not bold enough to express their frank opinion and displease the clients. So, they may give a clean chit or favourable opinion even though there are errors or frauds. They are not prepared to displease their clients and lose their business.
- 8) **No assurance:** - Auditor cannot give any assurance about future profitability and prospects of the company.
- 9) **Inherent limitations of the financial statements :-** Financial statements do not reflect current values of the assets and liabilities. Many items are based on personal judgement of the owners. Certain non-monetary facts cannot be measured. Audited statements due to these limitations cannot exhibit true position.
- 10) **Detailed checking not possible :-** Auditor cannot check each and every transaction. He may be required to do test checking.

However in spite of the above limitations, there is no alternative to Audit and its advantages outweigh the disadvantages. So, all business units mostly get their accounts Audited by a qualified Auditor.

**Expressing Opinion:**

After completing his Audit work, Auditor finally expresses his Frank opinion on the quality of the accounts maintained. He suggests ways and means to further improve their quality.

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**9.6 DISTINCTION**

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**9.6.1 Accounting v/s Auditing**

Points of difference	Accounting	Auditing
1. Meaning	It is recording of all the day to day transactions in the books of accounts leading to preparation of financial statements.	It is the critical examination of the transactions recorded in the books of accounts.

<b>2. Nature</b>	It is concerned with finalization of accounts.	It is concerned with establishment of reliability of financial statements.
<b>3. Objects</b>	The object is to ascertain the trading results.	The object is to certify the correctness of financial statements.
<b>4. Commencement</b>	Accounting commences when book keeping ends.	Auditing begins when accounting ends.
<b>5. Scope</b>	It involves various financial statements. It involves maintenance of books of accounts. It does not go beyond books of accounts.	It depends upon the agreement of upon the provisions of law. It goes beyond books of accounts.

### 9.6.2 Auditing v/s Investigation

<b>Points of difference</b>	<b>Auditing</b>	<b>Investigation</b>
<b>1. Objects</b>	The object is to find out whether balance sheet and profit and loss account exhibit a true and fair view of business.	It is undertaken to know the essential facts about a matter under inquiry. It is done with some special purpose of view.
<b>2. Period</b>	It usually covers one accounting year.	It may cover more than one accounting year.
<b>3. Conducted</b>	It is conducted for proprietors only.	It is carried out on behalf of any party interested in the matter.
<b>4. Scope</b>	It is restricted to balance sheet and profit and loss account.	It is wider in scope It may be carried out beyond balance sheet.
<b>5. Compulsion</b>	Audit is legally compulsory for companies.	It is voluntary. It requires under certain circumstances
<b>6. Time</b>	It may be conducted at the end of the year.	It may be conducted at any time in case of suspicion about any transaction
<b>7. Report</b>	Form of report is prescribed. It is	Form of report is not prescribed. It is

	presented to the shareholders.	presented to the client.
<b>8. Appointment</b>	Owners appoint the auditors.	Even third party can appoint an investigator.
<b>9. Qualifications</b>	The statutory auditors must possess proper qualifications.	Even an employee preferably a chartered accountant may be appointed as investigator.
<b>10. Rework</b>	Re-audit is not generally undertaken	Re-investigation may be undertaken.

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## 9.7 PRINCIPALS OF AUDIT

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Following are the important concepts of Auditing :

1. Materiality
2. True and Fair
3. Independence
4. Going concern

As per the syllabus students have to study the first two concepts:

### 1. Materiality Concepts:

Material here means important. The auditor should verify every important transaction. Which is important and which is trivial or not important is to be decided by the Auditor. Here his past experience in the Audit field and his discretion will help him. In every business different things have different degree of importance. Auditor should be able to decide which things are important and which are not in a particular business unit which he is auditing. He should devote sufficient time and verify toughly all important transactions. At the same time, he should not unnecessarily waste his time in verifying small and unimportant transactions. An auditor can achieve all objects of audit by properly following this principle.

Information is material if its misstatement or omission will affect the financial or economic decision to be taken by the users of this information i.e. Auditor's report. Materiality depends upon the size and nature of the transaction. Some matters are individually or in the aggregate are relatively more important than others in presenting a true financial position of the concern. Materiality may also be decided by some legal and regulatory requirements.

The concept of materiality is fundamental to the process of accounting. This concept is applicable in planning as well as performing audit. Auditor will insist upon more reliable evidence for

passing material transactions. He will see that such items are properly and distinctly disclosed in the financial statements.

## **2. True and Fair :**

According to Indian Companies Act, the auditor has to report whether the account statements give a true and fair view. Balance sheet should show true financial position and profit and loss account should reveal true profits made or losses incurred.

Companies Act 1913 contained the words true and correct. However, subsequently these words were substituted by True and Fair. Many a times it was found that though the accounts were true and correct, they did not disclose the position of the concern in a fair manner if they were not presented properly.

The phrase True and Fair has not been defined by the companies Act. However, the Auditor is expected to report in these words. So, the auditor should check the full background of each and every transaction. He must not restrict his attention only to the documents produced before him. He must probe deep in to the matter.

### **In order to show a true and fair view the auditor should ensure that:**

1. The final accounts agree with the books of accounts.
2. The provision for depreciation is proper.
3. The closing stock is physically verified and valued properly.
4. Intangible assets like goodwill, patents, preliminary expenses or other deferred revenue expenses are written off properly.
5. Proper provision is made for bad and doubtful debts.
6. Capital expenses is not treated as revenue expenses and vice versa.
7. Capital receipts are not treated as revenue receipts.
8. Effect of changes in rate of foreign exchange on value of assets and liabilities is recorded in the books properly.
9. Contingent liabilities are not treated as actual liabilities and vice versa.
10. Provision is made for all known losses and liabilities
11. A reserve is not shown as a provision and vice versa
12. Cut off transactions are recorded properly, so that all sales invoices are matched with goods delivered and all purchase invoices are matched with goods received.

13. Transactions are recorded on accrual basis, i.e. outstanding expenses, prepaid expenses, income accrued and advance income are recorded properly.
14. Expected or anticipated gains are not credited to the profit and loss account.
15. Effect of events after the balance sheet date on the value of an asset and liability is disclosed in the accounts properly
16. The exceptional or non-recurring transactions are disclosed separately in the accounts.
17. If there is any charge on the assets, that should be disclosed clearly. .
18. In the case of assets, the auditor should see that they are neither over valued nor undervalued.
19. The auditor should ensure that no important asset is omitted.
20. Similarly liabilities should not be under or overstated and no liability should be omitted. Accounting policies should be consistently followed, and all legal requirements should be complied with.

This is one of the fundamental concepts in auditing In short what constituents true and fair view is a matter of an auditor's judgment. However all legal requirements should be strictly complied with.

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## **9.8 SUMMARY**

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This chapter deals with the basic concepts of Audit. The Audit has come from a Latin term Auditor which means to hear. When a fraud was suspected an outside expert was appointed to check the accounts. He used to hear or listen to different concerned parties before fixing the responsibility of the fraud on any one person. Hence the term Auditor which then became audit. In simple terms audit means critical checking of the account books. Audit begins, where accounting ends.

Trial balance, profit and loss account and balance sheet prepared at the end of the year are called financial statements. Besides owners, these annual statements are read by investors. Government taxation authorities, Trade Unions, financial institutions etc. They will readily believe in the accounts if they are audited by a qualified auditor. So, even where auditing is not compulsory, business people go in for auditing.

The term audit has been defined by different people in different words. The auditor has to check the accounts and report

whether they are prepared properly and there are no errors or frauds. He must also report, whether they reflect a true and fair view of the financial position of the concern.

Main object of audit is to check the accounts and the subsidiary objects are detection and prevention of different types of errors and frauds. Window dressing and creation of secret reserve both should be avoided.

There are number of advantages of Audit and it has some inherent limitations also. However, the advantages outweigh the disadvantages.

There is difference between accounting and auditing and auditing and investigation. There is also difference between book – keeping and accounting.

Auditor should have good knowledge of the science of keeping books of accounts and also different laws concerning different types of business. He must be straight forward and honest and think independently. He must be bold enough to frankly express his mind in his report. He must not reveal the business secrets to outsiders or competitors.

He should plan his work in advance and complete the same in time. He must be able to decide what is material or important and what is not. He must concentrate on material matters. He must proceed with an assumption that the business is going to be continued for a considerable future period.

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## **9.9 EXERCISE**

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1. What do you mean by auditing? Discuss its objects.
2. Distinguish between accounting and auditing.
3. Write short notes on :
  - i. Compensating errors
  - ii. Principles of Auditing
  - iii. Window dressing
  - iv. Secret reserves drop
  - v. Going concern concept.
  - vi. Methods of selecting sample items
  - vii. Error of principle.
4. Define and explain the term auditing
5. Distinguish between auditing and investigation
6. What is a fraud? What are the different types of frauds?
7. Explain the concept of True and Fair view.

8. What are the advantages and limitations of auditing?
9. Explain in brief different types of errors.

**10. Objective type questions :**

1. Select the appropriate option and rewrite the following sentences :

- i) The main object of an audit is ----- .
    - a) To ensure that the final accounts are prepared.
    - b) Detection and prevention of frauds and errors.
    - c) Verification of accounts and financial statements.
    - d) To ensure future viability of the concern.
  - ii) The main objective of window – dressing is ----- .
    - a) To reduce tax ability
    - b) To mislead investors
    - c) To understate profits
    - d) To avoid payment of bonus to workers
  - iii) Auditing commences after ----- .
    - a) Investigation is over                      b) Accounting work is over
    - c) The General Meeting is over      d) None of the above
  - iv) ----- is not an error of commission.
    - a) Arithmetical error                      b) Compensating error
    - c) Posting error                              d) None of the above
  - v) Misappropriation of goods is generally done by ----- .
    - a) Auditors                                      b) Employees
    - c) Shareholders                                d) All of the above
  - vi) The responsibility of adopting sound accounting policies and maintaining adequate internal control rests with ----- .
    - a) Chief Accountant
    - b) Company Management
    - c) Company's internal audit department
    - d) Statutory Auditor
  - vii) Audit conclusions and reporting is ----- .
    - a) Advantage of audit
    - b) Technique of audit
    - c) Limitation of audit
    - d) Principle of audit
2. State whether the following statements are True or False.
1. An error of principle will not affect the trial balance.
  2. The term audit has been derived from the Latin term Audire.
  3. The allocation of amount between capital and revenue expenditure is a compensating error.
  4. Audited accounts are free from errors and frauds.



## TYPES OF AUDIT

### Unit Structure :

- 10.0 Objectives
- 10.1 Introduction
- 10.2 Interim Audit
- 10.3 Continuous Audit
- 10.4 Annual Audit / Final Audit
- 10.5 Concurrent Audit
- 10.6 Balance sheet Audit
- 10.7 Statutory Audit
- 10.8 Exercise

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### 10.0 OBJECTIVES

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After studying the unit the students will be able to

- Meaning, Advantages and disadvantages of Balance sheet audit
- Meaning, Advantages and disadvantages of Interim Audit
- Meaning, Advantages and disadvantages of Continuous Audit
- Meaning, Advantages and disadvantages of Annual Audit
- Meaning, Advantages and disadvantages of Statutory Audit

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### 10.1 INTRODUCTION

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In the forms of business organization where the owners are not involved in the management of the organization, they cannot ensure about the performance of the business organization. Being the owners of the organization they can also have interest in the firm's performance. In response to this, the legislator has made a decision that limited firms are obliged to be under constant control of auditors. Auditors are assigned at a firm's general meeting. The role of the auditor is more than to control the firm. Advising on how the firm can advance its decisions and activities is a vital part of the auditor's role. Auditing consists of a review of a firm's annual reports. Auditing commences with a selection of areas to observe and assess. Principally, the area with the greatest risk for errors and inaccuracies should be reviewed most intensively. As each firm is unique, the audit needs to be adapted to be applicable to each

firm's special features. The chosen way to audit a firm should reflect the most cost efficient process of accomplishing the aim of the audit. An **audit** is a systematic and independent examination of books, accounts, statutory records, documents and vouchers of an organization to ascertain how far the financial statements as well as non-financial disclosures present a true and fair view of the concern. Audit is an appraisal activity undertaken by an independent practitioner (e.g. an external auditor) to provide assurance to a principal (e.g. shareholders) over a subject matter (e.g. financial statements) which is the primary responsibility of another person (e.g. directors) against a given criteria or framework (e.g. IFRS and GAAP).

### **Classification of Audit**

Audit may be classified into two categories mainly ; - (a) according to organizational structure of a business; and (b) from practical point of view.

According to Organizational Structure of a Business

#### 1. Statutory Audit

***In case of many undertakings, audit is made compulsory under statute because these undertakings are established by statute. The audit of their accounts is termed as statutory audit. The following are the examples of such an audit:***

By virtue of the organizational pattern, some business institutions appoint auditors who are made responsible to have a constant and regular review of their accounts.

#### **From Practical Point of View :**

All those forms in which audit is often conducted practically by business houses are as follows :-

1. Continuous Audit or Detailed Audit.
2. Periodical audit or Final Audit or complete Audit.
3. Interim Audit.
4. Occasional Audit.
5. Partial Audit.
6. Balance Sheet Audit.
7. Cash Audit.
8. Cost Audit.

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## **10.2 INTERIM AUDIT**

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### **10.2.1 Meaning and Definition**

Interim audit is the audit which is conducted between the two annual audits for the purpose of finding the interim dividend. It may be monthly quarterly or half yearly. For knowing the reliable results during the financial year such type of audit may be applied. In large-scale business concern, the performance may be checked

for a particular part of the year. Depending upon the amount of work the auditor may check the figures of a month or a quarter. It involves a complete examination or a review of the accounts and records of the business upto the date of the interim audit.

#### **DEFINITION OF INTERIM AUDIT**

“An interim audit is one when the auditor completes an audit up to the date of a set of interim accounts, for example quarterly or half-yearly accounts.

#### **G. William**

**R. Howard** defines interim audit, as this is when an audit is conducted to a particular date within the accounting period.

#### **10.2.2 OBJECTIVES OF INTERIM AUDIT**

1. To know profit or loss of interim period.
2. To declare interim dividend.
3. In case of partnership there may be admission or retirement of a partner during the year.
4. To get loan on the basis of interim account.
5. To get information about the financial position of interim period.
6. To take mid-term decisions about prices, investments or profits.

#### **10.2.3 ADVANTAGES OF INTERIM AUDIT**

1. **Suitable For Big Firms:** Interim audit is very suitable for large and dynamic type of business organizations.
2. **Moral check:** There is a moral check on the staff of the client as the accounts are checked after three or six months. An auditor checks the work of every person. It creates moral pressure on the employees to perform accounting jobs effectively.
3. **Detection of frauds and Correction of errors:** It helps to eliminate mistakes and frauds. The time between compiling and checking accounts is very short. Therefore location of fraud is possible, as sufficient time is not given to employees. The interim audit is also helpful for correction of errors.
4. **Helpful for Final Audit:** The interim audit is helpful for the early completion of the final audit.
5. **Interim dividend:** The interim audit is conducted to declare the interim dividend. The management can prepare interim accounts for dividend purpose.
6. **Publication of Interim Figures:** In some cases the publication of interim figures is compulsory. So in such cases interim audit is very useful.

7. **Admission, retirement or death of a partner:** The admission or retirement of a partner during the year is possible due to interim audit. A partner may expire at any time during business life. Due to the interim audit to determine the fair value of assets and liabilities during the year becomes possible. Thus interim audit helps all partners to settle conditions.
8. **Convenient for the management:** Interim audit provides midyear financial information. Therefore it becomes helpful for the management to take the price or profit related decisions.
9. **Encourages Investment :-**Due to interim audit investor rely more on the company performance. He purchases and sells the shares keeping in view the audit report.
10. **Up to date record:** The benefit of the interim audit is that accounting record is kept up to date. The accounting staffs have a duty to complete their work for interim audit. Thus delay in accounts is not possible.
11. **Suggestions Implementation:** The accounting staff can follow auditor's suggestion. In case of interim audit auditor's suggestions can be quickly implemented.

#### 10.2.4 DISADVANTAGES

1. **Additional work:** The interim is not a part of the final audit. Final audit must be conducted after conducting this audit too. So it is an additional workload on audit staff.
2. **Alteration of Figure:** Already audited accounting figure may be changed by a dishonest employee. It may create difficulty in final audit. It will mean that the audit staff will have to prepare notes when they finish the interim audit.
3. **Unsuitable For Small Firms:** Interim audit is not suitable for small business organizations with less financial transaction.
4. **Work Burden:** Audit notes have to be prepared after the completion of interim audit. It increases the burden of work.
5. **Disturbance at Work:** Interim audit disturbs the working environment in the office. Regular office activities may be hampered because of audit work.
6. **Increase Expenses:** Interim audit may prove expensive because it involves addition work on the part of the auditor. Thus it increases the expenses of the business as it is not compulsory by law.

- 7. Not useful for third parties:** The demerit of the interim audit is that it may not provide a guideline to third parties. The interim accounts are not final so the figures may not be reliable for making decisions.

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## 10.3 CONTINUOUS AUDIT

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### 10.3.1 Meaning and Definition

The audit which remains continue throughout the financial year is called continuous audit. In this case an audit staff may carry audit work for the whole year with equal or unequal intervals. He checks each and every transaction. The large-scale companies require constant review of their business matters or there may be a declaration of dividend during the year, it is of great help. In case the volume of the transaction is very large, the management can follow the policy of continuous audit. If the internal control system is not satisfactory then to apply continuous audit will be the best option in order to show a true and fair view of accounting record. This audit is very costly but minimizes the errors. A continuous audit is applicable in the following cases.

#### DEFINITION OF CONTINUOUS AUDIT

**1.R. G. Williams** says that continuous audit is one where the auditor, or his staff is consistently engaged in checking the accounts during the whole period, or where the auditor or his staff, attend at regular or irregular intervals during the period.

**2. Waiter W. Bigg** says that continuous audit is one member of auditors staff is occupied continuously on the accounts the whole year round or where they attend at frequent interval, fixed or otherwise during the current of the financial year.

**3. L. R. Howard** says that continuous audit work is conducted through at the course of the financial year but is not taken to a specific accounts period as in interim audit.

### 10.3.2 ADVANTAGES OF CONTINUOUS AUDIT

- 1. Continues and through checking:** This is the main advantage of the continuous audit. The audit clerks remain busy throughout the year. The work is checked on the spot. Auditor has sufficient time to check the books of accounts thoroughly.
- 2. Quick discovery of errors:** Errors and frauds can be discovered easily and quickly as the auditor checks the accounts at regular intervals and in detail. As an auditor visits the client regularly and the number of transactions will be small and hence, the errors will be detected easily and quickly.

3. **Quick presentation of accounts:** As most of the checking works are already performed during the year, the final audited accounts can be presented to the shareholders soon after the close of the financial year at annual general meeting.
4. **Prompt filing of returns:** The continuous audit is beneficial for the prompt filing of returns as the accounts are prepared as well as audited at the end of the year.
5. **Interim dividend:** Here it is easy to prepare the accounts for six months. Hence Continuous audit is helpful to declare interim dividend.
6. **Moral check on the client's staff:** The continuous audit is useful to develop moral check on employees. As the time between recording and checking the entries is very short, the staff cannot think to plan any fraud. As well the auditor can surprisingly visit to the client's office therefore it will have a considerable moral check on the clerks preparing the accounts.
7. **In time Auditor's advice:** The continuous audit is beneficial to seek auditor's advice. The weakness of business functions can be removed during the year by taking the guidance of the auditor.
8. **Convenient for auditor:** The continuous audit is helpful for the audit staff for distribution of workload. The work is distributed over the whole year. The audit staff can prepare their programme on the basis of time allocated to one business. The auditor gets sufficient time for important and ambiguous matter to draw a conclusion.
9. **Regularity in the staff:** The continuous audit is beneficial for business. The accounting employees become regular. The accounting record is maintained on regular basis for showing it to audit staff.
10. **Upto Date Accounts :-** Accounts of the business are kept upto date by the staff because they know that auditor may visit and check the accounts at any time.

### 10.3.3 DISADVANTAGES

1. **Small business:** Continuous audit is not fit for small-scale business concerns. A small business has a few transactions so there is no need of audit for the whole year. As well the continuous audit is an expensive system of audit.
2. **Alteration of figures:** Figures in the books of account which have already been checked by the auditor at previous visit, may

be altered by a dishonest clerk and the frauds may be committed. Also the changed figures can show different results.

3. **Disturbance in the client's work:** The frequent visits by the auditor may disturb the work of the client. When the audit work starts, the work of accounting staff suffers, as the books are not spare.
4. **Staff intimacy:** The accounting staff and the audit staff work side by side for the whole year. Friendship among the employees and auditors may lead to errors and frauds. The sympathetic view of audit staff may fail to show true and fair view.
5. **Queries may remain outstanding:** The queries raised by the audit staff may not be answered on the same day. The audit clerk may lose the thread of work and the queries may remain outstanding as there might be a long interval between two visits.

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## 10.4 ANNUAL AUDIT / FINAL AUDIT

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### 10.4.1 Meaning and Definition

This is also known as final audit or Periodical audit. This audit is carried out often at the close of the accounting year. The final audit takes place only after the end of the trading period when all the transactions for the whole year are completely recorded and final accounts have been prepared. Therefore there is no clash among the duties of accounting and audit staff. Here the auditor examines the accounts of the whole accounting year in one continuous session. Normally the small concerns audit their accounts under this system. If internal control is effective then the auditor can use the sampling method, otherwise cent percent checking becomes essential. The audit staff can complete the audit work within shortest possible time. There is continuity of work in checking the financial and other relevant records.

The various definitions of Final audit are as below:

#### DEFINITION OF FINAL AUDIT

1. **R. G. Williams** says that final audit is one which is not commenced until after the books have been closed at the end of the financial year, or which is not commenced towards the end of the financial year and carries through to completion after the end of the year.
2. **Walter W. Bigg** says that, a final audit is an audit which is not commenced before the end of financial period, and is then carried on until completed.”

3. **L. R. Howard** says that final audit is carried through to completion in one continuous session. Although it may be commenced before the end of the accounting period, it is completed at least after the end of the financial year.

The basic characteristics of Final or Annual Audit are as below:

1. In case of Annual audit, generally audit work commences after the close of the financial year.
2. Audit work is carried on and completed in a continuous session.
3. Auditor visits the client's office only once in a year and keeps on doing the work until it gets over.
4. It is suitable for small scale concerns.

#### **10.4.2 Merits of Annual audit**

The following are some of the main advantages of Annual audit

##### **1. Economical:**

Periodical audit is economical and suitable particularly small sized business units. In this type of audit the auditor makes test checking and whole work is performed once only. Hence, it is possible for the auditor to check the accounts of various business concerns at a time, and so the fee charged by audit staff is less as compared to continuous audit

##### **2. STAFF DUTIES:**

The audit work is started after the completion of accounting work. There is no clash of duties of accounting and audit staff. The accounting staffs remain busy for one year. But the audit is started after the end of accounting work.

##### **3. PLANNED WORK:**

The work of audit is completed under planning. The audit programme provides the schedule of time for audit work. According to planned work the auditor can control the audit of many business units.

##### **4. Work continuity:**

The flow of audit work goes on without any break from start till its completion. The continuity of work is beneficial for audit staff to clear their questions. The doubts become clear on the same day

##### **5. Convenient for management:**

The benefit of the final audit is that is convenient for management as well as audit staff as the auditor starts and completes an audit in one session and the queries can be cleared on the same day.

**6. Less Chance to Alter Figure:**

As the audit is completed in one continuous session, and once the records are delivered to the auditor they are not accessible by the accounting staff, so there is less chance to alter figure which minimizes the chances of frauds.

**7. No relations:**

The merit of the final audit is that it provides no chance to audit staff to develop friendly relations with accounting staff. The accounting staffs are not in a position to get undue benefit from audit staff.

**10.4.3 Demerits of Annual Audit**

Followings are the disadvantages of periodical audit:

**1. Unsuitable:**

Big organization having large number of transactions it takes more time to complete the audit and hence presentation of accounts to the share holder may be delayed. The share holders are usually very anxious for dividends which cannot be declared until the completion of the audit. So this type is unsuitable for big organization.

**2. Possibility of Leaving Errors**

Detail checking of books of accounts is not possible under this method. So the auditor applies test check. Thus there are chances of leaving errors and frauds.

**3. Difficult to Detect Planned Frauds**

Generally, the frauds are committed in the direction of top level management. So, such frauds are committed in planned way. In this type of audit the auditor uses the sampling method and does not check in detail. So, such planned frauds cannot be detected.

**4. Late correction:**

The demerit of a final audit is that errors are located after the end Of the year. The corrections of errors take time so long errors are not corrected the accounts are incomplete.

**5. Low moral check:**

The drawback of a final audit is that it has less moral pressure on employees of the business concern. The audit staffs come after one year. The employees are free to commit errors and frauds for the whole year.

**6. Thorough checking:**

The drawback of a final audit is that there may not be thorough checking. Audit sampling may be used to complete work.

**7. Delay in the future planning:**

As the audit work is started after the end of accounting year it takes time to check the accounting records. The audit work is completed late. So the budgets and estimates for future may not be prepared in time.

8. In case of Final audit only the declaration of final dividend is possible declared

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## **10.5 CONCURRENT AUDIT**

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**10.5.1 Meaning**

The word **concurrent** itself defines its meaning, concurrent means happening at the time. Concurrent Audit means doing the examination of the financial transactions at the time of happening or parallel with the transaction. The concept of Concurrent Audit has been introduced to reduce the time gap between occurrences of transactions.

**10.5.2 Objectives of Concurrent Audit**

1. Concurrent audit is a Systematic and timely examination of financial transactions on a regular basis to ensure accuracy, authenticity, compliance with procedures and guidelines.
2. The emphasis under concurrent audit is not on test checking but on substantial checking of transactions.
3. The concept of concurrent audit has been introduced to reduce the time gap between occurrences of transaction and the overview or checking of the transactions
4. The concurrent audit serves the purpose of effective control as it is normally conducted by external agencies like chartered accountants firms.
5. It attempts to shorten the interval between a transaction and its examination by an independent person not in its documentation.
6. In concurrent audit, there is an emphasis in favour of substantive checking in key areas rather than test checking.
7. The concurrent audit is essentially a management process integral to the establishment of internal accounting functions and effective controls and setting the tone for a vigilance internal audit to prevent the incidence of serious errors and fraudulent manipulations.

8. The focus of concurrent audit is on adherence to laid down systems, procedures and safeguards, therefore a concurrent auditor may not sit in judgment of the decisions taken by a branch manager or an authorized official.
9. The main objective of concurrent audit is to bring to light any violation of procedure.

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## **10.6 BALANCE SHEET AUDIT**

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### **10.6.1 Meaning**

In this type of audit the audit is commenced from the balance sheet, working back to the books of original entry and relative documents. In this type the work of audit does not start with the verification of primary books, it verifies the items appearing in the balance sheet, so this is basically a partial audit. This type of audit can be successful in those organizations where an effective internal check is in operation. Verification of all items included in the balance sheet combined with the examination of related income and expenses accounts is known as balance sheet audit. Under such an audit, the auditor checks capital, reserves, assets, liabilities, etc., given in the Balance Sheet. In this audit the items of Trading and Profits and Loss Account which have a relation with the Balance Sheet items are also checked. For example, the purchase of goods on credit will increase the liabilities to creditors, increase the stock and will be shown in the Trading Account as an increase in purchases and closing stock. So this item will have to be verified. In short Balance sheet audit means checking the accuracy of information found in a company's balance sheet. Such an audit is popular in U.S.A.

### **10.6.2 Purpose of conducting Balance Sheet Audit**

In large organizations the trading transactions are numerous and mostly they are entirely computerized. In such cases, the routine checking may be completely dispensed with. Where the computerized accounting system is coupled with effective internal control, detailed vouching can also be dispensed with, in such organizations; auditor conducts the balance sheet audit.

The purpose of balance audit is to making sure that:

1. The assets shown in the balance sheet are really owned by the organization.
2. All assets owned by the organization are included in the balance sheet at the correct value.
3. All liabilities are included at the appropriate values.

4. Accepted accounting principles are followed to prepare the balance sheet.
5. All items are appropriately classified as capital items and revenue items and treated accordingly.
6. All the requirements of law are duly complied with. For example, in the case of companies, the issue of share capital is correctly recorded in the books.
7. All the adjustment entries and journal entries relating to the closing of accounts and preparation of balance sheet are examined.

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## 10.7 STATUTORY AUDIT

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### 10.7.1 Meaning

It is a type of **audit** which is mandated by a country's Law. A statutory is also known as financial audit. It is basically an audit of the final statements of a company, i.e. the profit and loss and the balance sheet. The main purpose of this type is to ensure that the books of accounts presented to the regulators and public are true and fair and the balance sheet of the company is showing an accurate picture of the company's current financial position.

**Statutory audit** is mandatory if certain criteria are being met by the business. It is carried out by independent external auditors. In India, the statutory audit is recommended by Companies Act. In this audit the reports are reported to the company shareholders by the auditor. In his reports, the statutory auditor expresses his outlook on the fair values of the company's final accounts. He also confirms the observance of the financial statements according to the provision of the act. The purpose of the statutory audit is to ensure the fairness and credibility of accounting records. The auditor's appointment, his remuneration, duties are assigned by the provisions of the law, as pertinent to the organization.

### 10.7.2 Objectives of Statutory audit

1. Statutory audit is mandatory in case of the company because the share holders are the owners of the company, however, they do not run or manage the day to day affairs of the company. The management of the company is done by the board of Directors. So the shareholders need assurance that the accounts maintained and published by the company are authentic and genuine. The independent auditor has full authority to check the financial records of the company and publish his findings via an auditor's report.

2. Other stakeholders like creditors, employees, potential investors etc also benefit from the statutory audit. They too can base their decisions on these accounts, since they are authentic.
3. An annual report is the most important basis of the decision making process for stakeholders and is therefore expected to be correct and trustworthy. An auditor's task is to ensure that annual reports are executed correctly by applying appropriate regulations and show an accurate picture of a firm's financial situation.

### **10.7.3 Advantages of statutory audits**

A **statutory** audit offers the following benefits:

1. It assures the management that their duties in statutory performed perfectly.
2. Statutory audit improves the reliability of the published financial statement.
3. It provides internal control's efficiency.
4. The statutory audit ensures the management that they have to abide by non-statutory requirement say Corporate Governance requirement.
5. When the internal controls are poor in a company, the statutory auditor will give the suggestion for the company's improvement which will help the company from risk and improves the company's performance.
6. It enhances the trustworthiness of published financial statements.

### **10.7.4 Disadvantages/Limitations of Statutory Audit**

1. The cost associated with an audit can be very high. But if any audit firm is already engaged for looking after the day to day work including accounts preparation etc then it will charge relatively very less amount to conduct the audit as compared with the firm which is not engaged for doing the same.
2. The employees might get disrupted for performing their normal work in order to answer the day to day query of auditor or while providing the auditor any reports or data required to them. This might result in stretching the work of the employees beyond office hours and may sometimes cause distress among the employees.
3. The financial statements include judgemental as well as subjective matter. Judgemental issues may vary with persons. Sometimes personal business is also included.

4. There are inherent limitations of audits like it has to be done in due time, internal control within the organization, limited power of auditor, etc. One has to understand that auditors are watchdogs and not the bloodhounds. Their reporting is based on the sample data and not the total data. Moreover, as frauds are the planned ones so it will be more difficult to find the same.
5. There are many areas in which auditors are left with no other option than to take representation from management. This is a danger if management itself is involved in frauds as in that case they will give the manipulated representation.
6. The auditor does not assess and review the 100 % transactions. Auditor merely expresses his opinion on the financial statements and data provided to him and at no point gives total assurance.
7. An auditor comments upon the going concern of the organization but nowhere assures for its future viability. Stakeholders should not invest their money only seeing that the organization's data are being audited.

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## 10.8 EXERCISE

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Write short notes

1. Interim Audit
2. Continuous Audit
3. Concurrent Audit
4. Annual Audit
5. Statutory Audit



## AUDIT PLANNING AND PROCEDURES AND DOCUMENTATION

### Unit Structure:

- 11.0 Objectives
- 11.1 Introduction
- 11.2 Meaning and Objectives of Audit Planning
- 11.3 Preparation for Audit
- 11.4 Sources of Obtaining Information
- 11.5 Factors to be Considered While Preparing Audit Plan
- 11.6 Audit Programme
- 11.7 Audit working paper
- 11.8 Summary
- 11.9 Questions

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### 11.0 OBJECTIVES

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After studying this chapter the students will be able to:

- Understand the meaning and importance of audit planning and audit programme
- Know the advantages and disadvantages of Audit programme.
- Explain the Meaning and importance of Audit working paper.
- Discuss the factors determining form and contents of audit working paper.
- Explain the Ownership, custody, access of other parties to audit working papers.
- Understand the Auditor's lien on working papers.
- Know the Auditor's lien on client's books.
- Explain the Main functions, importance, features, contents of permanent audit file, temporary audit file.
- Understand the Meaning, structure, contents, General information, current information, Importance of Audit Note book.

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## **11.1 INTRODUCTION**

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In simple terms, planning is thinking before doing. We all think before doing any importance work. We think about the best method of doing that job successfully and in time. Audit of accounts being an important job, the auditor thinks in advance before starting any audit and prepares a detailed programme to be followed to complete the job successfully in time. Institute of Chartered Accounts issued detailed instructions in this regard in 1989. The Auditor should plan his work to enable him to conduct an effective audit in an efficient and timely manner.

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## **11.2 MEANING AND OBJECTIVES OF AUDIT PLANNING**

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### **11.2.1 Meaning**

Audit planning means planning of his work by the auditor. It will help him to conduct the audit in an efficient manner and complete it in time. He has to plan about the area, scope, depth of transactions to be audited, time to be devoted for each job, persons to be deployed for different operations etc.

Audit plan should inter-alia cover the following:

1. Acquiring knowledge of the client's accounting system, policies and internal control procedures.
2. To what extent reliance should be placed on the internal control system.
3. Deciding nature timing and extent of the audit procedure to be performed.
4. Coordinating the work to be performed by different individuals.

The audit plan prepared should not be rigid. As and when necessary it should be altered to suit the changed conditions. Planning should be continuous throughout the engagement. It involves developing an audit programme, showing nature, timing and extent of audit procedures. Changes in surrounding conditions may require revision of the overall plan. However, when there are significant changes, the auditor should state the reasons for the same. He must give reasons in support or justification of the changes made and they should be documented.

### **11.2.2 Objectives of Audit Planning :**

Planning the audit work will immensely help the auditor to complete the work successfully and in time. Objectives or benefits of planning audit can be enumerated as follows:

- 1) If he thinks in advance he can decide which things are important and which are not. Accordingly, he can devote more time and attention to important matters while actually conducting the audit.
- 2) If any problems are likely to crop up, the auditor can find or seek solutions for the same well in time.
- 3) Planning will help him to conduct his work efficiently.
- 4) This will also help him to select a suitable team of assistants and properly distribute the job amongst them. Each member of the team should get that part of the job which he likes and which he can complete in time. Every person has his own likes and dislikes. If a person gets a job of his liking, he will always perform it more efficiently and find pleasure in doing the same. In other words, he gets work satisfaction which is very important. Members of appropriate levels of capabilities and competence can be selected in the team.
- 5) Planned work can be supervised easily. Suitable directions and instructions can be given to the staff in time.
- 6) Co-ordination between the work done by different members of the team can be easily done.
- 7) Audit planning will help the auditor to utilize the services of all assistants fully and properly.

### **11.2.3 Factors to be considered while preparing the audit plan :**

While preparing the audit plan the auditor should consider the following factors:

- 1) Complexity of audit
- 2) Environment in which the business is working at present.
- 3) Personal nature of the client. What is the previous experience?
- 4) Special features of the client's business.

Before actually framing the programme the auditor should personally discuss with the client the proposed programme and consider his suggestions and amendments in this connection. The auditor should discuss with the client the overall plan and the procedure he wishes to follow while conducting the audit. Client's convenience should also be taken into account.

Audit plan cannot be formulated by sitting in isolation. It's a brain-storming exercise. The auditor should use his wisdom, foresight, professional knowledge, previous experience knowledge about the industry and the particular unit etc. in preparing the audit

plan. The plan once prepared, should be altered as and when there are changes in the circumstances and a change is warranted.

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### **11.3 PREPARATION FOR AUDIT**

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Proper execution of any work requires appropriate planning and programme of action. Before commencing any new Audit, Auditor should take the following steps.

- 1) Ascertain the scope of his duties.
- 2) Procure engagement letter.
- 3) Acquire complete knowledge about the business of the unit and the accounting system followed by the concern.
- 4) Obtain a list of responsible officers.
- 5) Knowledge of technical details.
- 6) Inquiry into special circumstances.
- 7) Instructions to the client.

#### **1) Scope of duties :**

To begin with the auditor should ascertain the exact nature and scope of his duties. This question does not arise in case of statutory audit because his duties are enumerated in the concerned law only. E.g. when an auditor is appointed to audit the accounts of a joint stock company, there are provisions in the companies act about his duties rights and liabilities. However if a concern in which audit is not legally mandatory, appoints an auditor, auditor should get clear instructions about the work expected from him by the appointing authority, so that he can plan his work accordingly. Auditor should discuss the scope of his duties with the person who is going to hire his services.

#### **2) Procure engagement letter :**

Before starting his work, the auditor should obtain his appointment letter from the client. Such letter should clearly mention amongst other things, his duties, remuneration, period allowed to complete the job etc. In other words, such letter leads to an audit contract. Such a letter or contract is highly desirable to avoid any misunderstanding with the client in future. Such a letter will also help if the client accuses him of not performing the work promised.

#### **3) Knowledge about business :**

Every type of business has its own special features. So, every business follows an accounting system that suits its needs. There is no one uniform accounting system that can be followed by every business unit. So, the auditor before starting his work of audit

should study the special problems of the business unit and the system of account followed by it. If necessary the auditor should visit the factory and acquaint himself with the production procedure followed by the factory. He must acquire knowledge about the raw material and the machines used in production.

An auditor should understand the broad economic environment in which his client is working. He must also study the different regulatory provisions and taxes payable by the client.

Auditor should obtain a list of all books of accounts and registers etc. maintained by the firm. He must also study the internal control system followed. If the internal control system in the concern is adequate and reliable, he need not check each and every transaction. He may adopt test check system and audit only few selected items in detail.

#### **4) List of Principal officers :**

In an Accounts department there may be different officers in charge of different books of accounts. Auditor should obtain their list so that while going through the audit procedure, if the auditor needs any information or clarification on any specific point, he can directly contact the concerned officer. Auditor should also obtain information about the extent and scope of authority of each one of them.

#### **5) Knowledge of technical details :**

He should also acquire some knowledge about the technical details if any of the business. This will enable him to grasp easily the nature of the transactions while auditing them.

#### **6) Enquiry into special circumstances if any :**

An auditor should also enquire into special circumstances surrounding his appointment. He is required to be careful about the implications of such special circumstances. In case he is appointed in place of another auditor, it is his professional duty to communicate with him.

#### **7) Instructions to the client :**

After making above preparation, he should issue following instructions to his client:

- a. Accounts should be finalized and kept ready for audit.
- b. Necessary schedules be prepared and made available to him.  
E.g. schedules of debtors and creditors, bad and doubtful debts, fixed assets, outstanding and prepaid expenses, outstanding incomes and incomes received in advance, investments, cost of acquisition and market price, stock sheets, statements of deferred revenue expenditure etc.

Then the auditor should ask for final accounts of last 2-3 years with auditor's reports.

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## **11.4 SOURCES OF OBTAINING INFORMATION**

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As we have seen earlier, the auditor should acquire full information about the business of the client before the actual commencement of audit. He has to collect this information from the following sources.

Sources of information can be classified into two parts.

1. Internal sources
2. External sources.

### **1. Internal sources :**

#### **Examples :**

- a. Annual reports sent to the shareholders.
- b. Minutes of Annual General Meetings and those of Directors' Board Meetings and Directors' Committee meetings.
- c. Budget forecasts and projections.
- d. Auditor's last year's working papers.
- e. Policy manuals
- f. Internal Audit reports.

### **2. External sources:**

#### **Examples :**

- a. Trade journals, magazines and news papers.
- b. Text books on different subjects.
- c. Publications of different professional bodies
- d. Industry publications
- e. Websites

### **3. Discussions with the management:**

Next source of information is actual discussion with the management. The auditor should meet the senior management staff and discuss in detail about the special issues relating to the business of the client. He should obtain information on the following points in particular.

- a. Changes in management, organisational structure and activities, if any during the year.
- b. Current Government legislation, rules and regulations regarding the business of the client.
- c. Current business developments affecting client.

- d. Current or expected financial difficulties or accounting problems.
- e. Plant facilities available.
- f. Recent changes if any in technology, types of products or services and production and distribution methods.
- g. Important matters arising from previous years' financial statements, audit reports and management letters.
- h. Changes in accounting policies procedures and internal control made in the year under review if any.

**4. Visit to client's premises for a personal discussion.**

The auditor may personally visit the client's premises and get firsthand information about the plant layout, process of manufacturing and different registers etc. maintained. It is always useful to have a personal discussion with the client about his method of writing accounts and his other accounting policies.

He may ask to balance all the accounts in the ledger and prepare a trial balance as on the closing date of the accounting year. On the basis of the trial balance, the client may prepare Trading and Profit and Loss account and Balance sheet. Auditor may ask his client or his staff to prepare the following statements before he actually starts his work of audit.

- a) Bank Reconciliation statement.
- b) Arrange the vouchers chronologically or serially.
- c) Statement of cash or goods in transit if any.
- d) A statement of cheques returned from banks.
- e) A schedule of Debtors and creditors.

A separate statement may also be prepared of aging debtors i.e. Debtors outstanding for a long time. All debtors may be sent a copy of their account with the client and they may be asked to confirm the correctness of the balance. Replies received from the debtors may be kept systematically.

- f) A statement of Bills Receivable.
- g) A schedule of investments on hand and a statement of investments sold and purchased during the year. A statement of dividend received and receivable.
- h) List of inventories and their location and valuation.
- i) A schedule of fixed assets and details about new assets purchased and sold during the year.
- j) A schedule of prepaid expenses and outstanding expenses. Similarly a schedule of income outstanding and the income received in advance.
- k) A list of long term liabilities etc.

If the client keeps all the above statements prepared in advance, the auditor can complete his work within a short time and submit his report to the client.

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## **11.5 FACTORS TO BE CONSIDERED WHILE PREPARING AUDIT PLAN**

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While preparing the audit plan the auditor takes into account the following factors:

### **1. Terms of appointment :**

If audit of the unit is compulsory, terms and conditions of audit are contained in the concerned Act itself. If audit of a firm is done voluntarily, then the client should give him a letter of appointment stating the terms and conditions of his appointment scope of his work etc. Auditor will take these terms in to account while preparing his audit plan.

### **2. Audit Report :**

Auditor has to prepare his report at the end of his work. The contents of the report will vary according to the terms of his appointment. In some acts is making appointment of the auditor where mandatory, the format of the report is also given and the auditor has to submit his report to the client in that format only. Copies of his report are also to be sent to certain parties as per the provisions of the concerned act. E.g. A copy of the auditor's report of a Joint Stock Company is required to be submitted to the stock Exchanges along with annual returns.

### **3. Legal requirements :**

If there are any special provisions in the concerned law regarding the Audit, Auditor should take them into account while preparing the audit plan.

### **4. Accounting Policies :**

Every concern may adopt certain accounting policies to suit their needs. These policies, once decided are not usually frequently changed. However, when it becomes necessary, the firm may change these policies. The auditor should take in to account these existing policies and changes made in them during the year under consideration. If such changes, affect the final results of the year, the auditor should mention the effects of these changes in his final report.

### **5. Changes in the Accounting standards :**

The Institute of Chartered Accountants has prescribed certain accounting standards. Changes are made and new additional standards are added by the Institute from time to time.

Business people have to keep their books of accounts according to these standards. So, the auditor should take in to account the prevailing accounting standards while preparing his audit plan.

**6. Deciding the possible areas of errors and frauds:**

While conducting the Audit, the auditor should decide, on the basis of his past experience the possible areas where frauds are likely, and the auditor should check these items in greater details. This fact should be taken into account while preparing the audit plan.

**7. Reliance on internal control system :**

Though the accounts are audited at the end of the year, every concern has its own internal check system in at least some areas to prevent errors and frauds. A simple definition of internal check system is to follow a routine wherein the work done by one person is routinely checked by another. E.g. in a departmental store, one man sells the goods on the counter, next man prepares its bill third man packs it and finally the cashier at the counter collects the price. All these 4 people independently maintain a record of goods sold. At the end of the day records thus maintained by different employees are tallied with each other. Thus there are checks and counter checks on sales. Auditor will study the prevalent internal control system and will decide how much to rely on it. Where there is a reliable internal check system, the auditor need not check every item in detail. He can adopt test check system and audit only certain items selected at random. Auditor should devote more time to check these items where frauds are more likely.

Considering the nature and volume of work, the auditor should decide the number of staff members required to complete the work within the time limit. He should select the staff with appropriate skill and efficiency.

**CHECK YOUR PROGRESS:**

- 1. Give the examples of Internal and External sources.
- 2. Enlist the points to be considered while preparing the audit plan.

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## 11.6 AUDIT PROGRAMME

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### 11.6.1 Meaning

The auditor should prepare a written programme containing procedures needed to implement it. It should also contain audit objectives. Detailed instructions should be included so that the assistants can properly implement the programme. If the assistants follow this programme, it will be easy for the boss to control the proper execution of the same.

While preparing such a programme the auditor has to decide to what extent he can rely on the internal control system being used by the business unit. If there is a proper internal control system, auditor need not check each and every item in detail as possibilities of errors and frauds are rare. If he feels that the system is not sufficiently reliable, he must insist on production of appropriate reliable evidence for every transaction entered in the books of accounts. The auditor may also decide the timings for different procedures to be followed. He must also take into account the number of assistants he can spare for this particular assignment.

Usually the auditor has enough freedom to decide the timing. However sometimes he was no such option. E.g. If he has to check the closing stock, he has to do it on the last working day only.

The auditor may have to make changes in the plan if there are significant changes in the circumstances. In other words, the Audit plan should be flexible.

- **Audit Programme :**

To complete his work successfully in time, the auditor should draw up an audit programme for every audit especially in the case of audit of a large concern. Audit programme is a sort of a time table containing the sequence in which the auditor wants to verify the books of accounts of the firm and the time he allots to each operation.

### 11.6.2 Development of an Audit Programme :

While developing an audit programme the auditor should pay special attention to the following points :

#### 1. Internal Control :

Before preparing the audit programme the auditor should study the internal control system prevalent in the organisation and to what extent it is reliable. In the field in which the system is found to be reliable, the Auditor need not verify each and every item in detail. He can pick and choose some items at random and adopt test checking. However in the fields where the control system is not

found to be strictly followed or is not sufficiently reliable the auditor should go and check each and every item in detail and insist on reliable evidence in support of such entries. E.g. If there is proper internal control system on purchases and sales and perpetual inventory system is in vogue, the auditor need not spend more time on verification of closing stock.

## **2. Business of the Client :**

The auditor should study the special features of the client's business and develop a suitable audit programme. E.g. Audit programme for a service industry like a bank will be entirely different from the audit programme of a factory. While auditing a bank, the auditor should pay more attention on the loans given by the bank and their recovery. Whereas in a factory he should pay more attention on purchase of machinery and its proper depreciation, purchase of raw material and its utilization etc.

## **3. Cost benefit :**

Auditor cannot neglect the cost factor. He must take in to account the cost involved in following the procedure and the benefit that accrues. Procedure which costs the least should be naturally selected.

4. The auditor should consider all the possibilities of errors.

5. Different procedures adopted should be suitably co-ordinated.

## **6. Assistants available :**

The auditor should take into account the number of assistants he can make available to complete this assignment.

## **7. Other Auditors :**

If services of internal auditor, Branch Auditor or outside experts are available, the auditor should decide to what extent he can rely on the work done by them.

### **11.6.3 Advantages of an Audit Programme.**

- 1) It will ensure that each and every book of account and the register is verified. There is absolutely no possibility of any book being left out through oversight.
- 2) It facilitates the work of distribution of the job by the chief auditor amongst his subordinates. He can make proper distribution of the work amongst different audit assistants. While dividing the work amongst different persons, the Auditor should take into account each person's past experience, qualifications, efficiency, likes and dislikes, level of understanding and work habits etc.

- 3) Chief auditor can see the day to day progress of the work at a glance.
- 4) As the work is carefully planned in advance and distributed, control over the work of the assistants becomes easy.
- 5) It facilitates timely completion of the work. If on any day any assistant is absent another person can continue the work as he can easily know what work the earlier person has actually completed on the previous day.
- 6) If later on any mistakes are noticed responsibility for the lapse can be easily fixed on the concerned person and suitable action can be taken against him. Remedial action may be taken immediately if necessary.
- 7) This years' programme is very useful while preparing the programme for the next year.
- 8) Audit programme contains instructions to the concerned staff about carrying out their work.
- 9) It makes the job of selection of suitable persons for different jobs easy.
- 10) It facilitates systematic auditing.
- 11) It serves as a guide for audit work in future.
- 12) In future if nay case is filed against the auditor for negligence in duty etc. it an be produced in the court as an evidence to prove the actual work done.
- 13) There is uniformity in the audit work done.
- 14) It enhances the efficiency of audit staff.
- 15) It is very useful to the Auditor, while preparing his final audit report.
- 16) Due to systematic working, the auditor may get more clients.
- 17) Potential problems are promptly identified and services of assistants can be fully and properly utilised.
- 18) Co-ordination of the work done by different persons becomes easy.

#### **11.6.4 Disadvantages of an Audit Programme :**

1. The work may become mechanical. A part of the audit programme may be carried out without understanding the importance of that part in the complete work of audit.
2. Programme may become rigid and inflexible. There are continuous changes in the business world. If Cognisance of these changes are not taken in to account in time, original programme itself may be carried out.

3. A hard and fast programme may kill the initiative of efficient and enterprising assistants.
4. Elaborate programming may not be necessary in the case of the audit of a comparatively smaller concern. Here programming may just amount to unnecessary waste of time and energy.
5. The job may be finished hurriedly to complete it within the time schedule. So, the quality of the work may be affected.
6. A uniform audit programme cannot be used in the audit of every company. A fresh programme unit is to be prepared for each and every audit every year. Thus it becomes a time consuming activity.
7. Assistants may not verify anything more than what is given in the programme.

All these disadvantages may be eliminated by imaginative supervision of the work carried on by the assistants. Assistants should be encouraged to suggest changes in the programme as and when necessary.

Secondly if we take an overall view, the advantages outweigh the disadvantages and programming is absolutely necessary atleast in the case of audit of bigger concerns.

#### **11.6.5 Method of Work:**

In order that an audit may be carried out in a systematic and efficient manner, the following steps should be taken:

- 1) Work may be carried on regularly. Record of time of arrival, and departure of the staff should be maintained with the actual work done by each member of the staff every day. Entries should be made in the audit note book.
- 2) Definite portion of the work should be completed every day.
- 3) Different coloured pencils should be used and different types of ticks should be done for different jobs. These should not be disclosed to the staff of the client.
- 4) Vouchers examined should be immediately cancelled so that the same may not be produced again.
- 5) Staff members should not discuss amongst themselves or with outsiders the details of the client's affairs. They should maintain absolute secrecy about these matters.
- 6) The auditor should collect sufficient evidence to enable him to form an opinion about:
  - a. Truth and fairness of the accounts and that

- b. They are kept regularly following all necessary legal requirements.
- 7) All assets and liabilities should be properly classified and mentioned.
  - 8) Details of mortgaged assets must be clearly stated.
  - 9) Income and expenses should be properly classified and stated.
  - 10) No material omissions should be done.
  - 11) Errors and frauds are avoided.
  - 12) Books of accounts should be properly kept.

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## 11.7 AUDIT WORKING PAPERS

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### 11.7.1 Meaning

Audit working papers constitute the link between the auditor's report and client's records. Documentation is one of the basic principles. SA 230 audit documentation refers to the record of audit procedures performed, evidence obtained and the conclusions reached by the auditor.

- **Information contained in the working papers:**

Audit working papers are also called working papers or simply work papers. They contain a record of the audit work done. Inter alia (amongst other things) they contain information on the following points:

- a) Evidence of audit work performed
- b) Schedules prepared
- c) Additional items in the accounts.
- d) Information in short about the business of the client and its recent history.

- **Working papers include:**

Working papers of audit of different concerns are different. But usually they contain the following:

- 1) Memorandum and Articles of Association in the case of a company audit, partnership deed in the audit of a partnership firm and Trust Deed in the audit of a Trust.
- 2) Extracts from minute books of meetings of managing committee.
- 3) Trial Balance Sheet and profit and loss account.
- 4) Letter of appointment or engagement given to the auditor etc.
- 5) Correspondence done between the auditor and outsiders like banks, Insurance companies, debtors, creditors etc.

- 6) Details regarding valuation of stock.
- 7) Certificate from the management regarding stock and its valuation.
- 8) Bank Reconciliation statement.
- 9) Adjustment entries passed.
- 10) Details of investments.
- 12)Contingent liabilities.
- 13) Audit time budget.
- 14)Certificate from the management regarding accrued liabilities.
- 15)Any other working papers.

**11.7.2 Importance of working papers:**

1. The auditor can understand the sincerity of his assistants.
2. They are useful to the auditor when he finally drafts his report.
3. If there is a change in the Audit staff the new incumbent can easily continue the work i.e. link up his work with the work done by the earlier member of the staff.
4. These papers provide training to the audit staff.
5. Auditor can plan his next years programme on the basis of these papers.
6. Auditor can understand the weaknesses of the internal control system in the organisation.
7. In future, if there is a suit against the auditor accusing him of negligence in his duties, he can easily defend himself in the court of law on the basis of these papers.
8. Exercising control over the audit work is facilitated.
9. If any mistakes are noticed subsequently in the work carried on by the staff the auditor can easily fix responsibility of the same on the concerned staff member and take suitable action against him if found necessary.

In view of their importance, the auditor should keep these papers in a safe custody and retain them for a reasonable period of time.

**11.7.3 Classification of working papers :**

Working papers should be properly organized. All significant matters which require the exercise of judgement by the auditor should be included. The conclusions drawn by the auditor on the basis of these papers should also be recorded. Some schedules he gets prepared by the client's staff and some he prepares himself

with the assistance of his own staff. Clients are mostly permanent. They do not frequently change their auditor because the auditor has secret information about their business. So, the working papers collected are classified into two parts.

- 1) A permanent audit file
- 2) The current file

**1) Permanent File:**

A permanent audit file normally contains papers which can be used every year. The file is updated as and when necessary. It includes the following papers:

**Contents of Permanent Audit file**

- a. Memorandum of association. Articles of association partnership and Trust Deed etc.
- b. Description of the business of the client.
- c. List of books of accounts maintained and names of concerned officers.
- d. Information on accounting policies like method of depreciation, valuation of stock etc.
- e. Copies of continuing contracts
- f. Copies of balance sheets of earlier years etc.

**2) Current file or Audit administrative Papers:**

These papers are concerned only with the current year's audit. All the work done in the course of audit planning, assignment of staff, evaluation of internal control and audit programme are included in this group of papers. Usually this file contains the following papers :

- a. Appointment letter
- b. Discussion with the management and client.
- c. Audit time budget
- d. Internal control systems
- e. Audit programme
- f. Trial balance prepared
- g. Adjustment entries passed
- h. Copies of communications the auditor has with bankers, creditors, debtors etc. and replies received.

As working papers are important and are to be preserved for a longer period, there should be a standard form in which they should be prepared. There should be proper layout and space for margin. They should be complete and there should be clarity and accuracy. A good quality paper should be used for this purpose.

#### 11.7.4 Ownership and custody of working papers :

There is a controversy amongst the different experts about the ownership of these papers. An important and relevant question arises as to who is the owner of these working papers. One set of experts say that their ownership is with the auditor whereas others argue that they belong to the client.

First category of experts argues that they are prepared by the auditor. So he has a right over them. He can use them in future as evidence in the court of law if any case is filed against him for negligence of his duties. He has spent his time and energy on them. So, naturally their ownership should go to him.

People in the second category argue that their ownership should go to the client as these papers contain important and sometimes even secret information about his business. So, to preserve or maintain trade secrets, audit papers should be handed over to the client as soon as the job of auditing his accounts is over. He is the agent of the client and should surrender the papers to him.

Both the arguments have some substance or force in them. However, in an English case in 1938 *Soekoc Kinsky Vs Bright Gram & Co.* it was held that the working papers belonged to the auditor because they were independent contractors and not agents of the client. In a second case *Chantrey Martin & Co Vs Martin* in 1953 it was held that working papers prepared by the Accountant for the sole purpose of producing a balance sheet belonged to the client. The court opined that where the accountant merely acted as agent of the client like in the case of corresponding between the Accountant and Income Tax Authorities, the papers belong to the client and not to the accountant.

On the basis of these judgements, we can conclude that generally an Auditor as an independent professional is entitled to the working papers prepared by him. However, where he corresponds with any third party as an agent of the client, the papers rightfully belong to the principal. But where an auditor has not been paid his fees he can retain such papers. He has a right of particular lien upon the books of accounts and other documents also.

According to the views of the institute of Chartered Accountants, the working papers are property of the auditor. Auditor should however maintain confidentiality of the information in the papers and properly maintain these papers for a reasonable period of time He can give copies of some papers if demanded by the client.

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## 11.8 SUMMARY

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This chapter deals with Audit Planning procedures and documentation. Any important task to be completed successfully needs proper planning. Similarly Audit of a firm needs proper pre planning before it is actually performed. All the information of the clients business is first collected. His accounting system is studied. A list of books of accounts maintained along with the names of the persons responsible to maintain each book is obtained, Accountant of the client is then asked to close the books of accounts and prepare a Trial Balance and Trading and Profit and Loss Account and Balance sheet. Auditor then studies the internal control system prevalent in the organisation and decides to what extent he can rely on the same. If the system is satisfactory, he may adopt test checking. In such cases he need not waste much time on routine checking of each and every item.

Auditor collects information about the client's business from various sources – internal as well as external. He discusses relevant issues with the client. If necessary, he visits the client's premises and his factory. Accounting policies adopted by the client are noted down.

Auditor decides the number of persons to be spared for the particular Audit assignment taking into account the volume of work involved. The task is divided amongst different assistants taking into account their past experience, qualifications, degree of efficiency and likes and dislikes. Time schedule is to be prepared. Dates of commencement and completion are decided. These dates are decided in consultation with the client taking in to account his convenience. Thus an Audit programme is developed.

Audit programme has number of advantages. It ensures that each and every book of account and register is checked. Auditor can see the progress of the work completed every day. Audit Assistants can follow the instructions given in the programme and complete the work in time, work is done systematically. Possible problems are properly dealt with Co-ordination between the work done by different assistants can be easily done.

There are also some disadvantages for Audit Programme. Work becomes rigid inflexible and mechanical. It may kill the initiative of the efficient and enterprising assistants. However by imaginative supervision, the disadvantages may be overcome. There is no alternative to planning and programming specially for the efficient, systematic and timely completion of audit of large concerns.

**Audit Working Papers :**

There are two files of working papers – 1) Permanent file  
2) Current file. Permanent file consists of documents like Memorandum of Association, Articles of Association, Partnership Deed, Trust Deed etc. Current files contains Bank Reconciliation statement prepared, contingent liabilities, Adjustment entries passed etc.

Working papers are very useful to the Auditor while preparing his final report. They can also be used as evidence in the court of Law if subsequently any case is filed against the auditor for negligence in his duties. They are the evidence of the work done by the Auditor and his subordinates. They are carefully prepared and preserved for a reasonable period of time.

There is a controversy amongst the experts about their ownership. However courts have held that they belong to the Auditor and not the client. However, the Auditor should not misuse the secret information contained in them about the business of the client. He may at his discretion give copies of the same to the client.

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**11.9 QUESTIONS**


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1. Explain the importance of Audit Working papers.
2. What are the contents of Working Papers?
3. What are the contents of Audit Programme?
4. Write a short note on :
  - a) Audit Note Book
  - b) Audit Planning
5. Explain current file. Give examples of its contents.
6. Elaborate the factors considered by an auditor while preparing an Audit plan.
7. What do you mean by an Audit Programme? What are its contents?
8. Discuss the importance of Audit Note Book.
9. Explain "Permanent Audit File. Give examples of its contents.
10. Explain Audit Working Papers and Auditor's lien on them.
11. Objective type questions:
  - A. Select most appropriate option and rewrite the following sentences.
    - a) Audit Programme should be –
      - i) Oral
      - ii) Rigid
      - iii) Flexible
      - iv) Oral and Flexible

- b) Working papers are the property of the –
  - i) Client
  - ii) Auditor
  - iii) Client and Auditor
  - iv) Equity Share holder
- c) Audit programme must be prepared –
  - i) Before commencement of an audit.
  - ii) During the conduct of an Audit.
  - iii) After completion of an audit.
  - iv) After submission of an audit report.

**B. Write True or False.**

- a) Audit plan should be primarily based on knowledge of client's business.
- b) Permanent Audit file includes Trust Deed.
- c) Audit working papers constitute the link between the auditor's report and client's records.



## AUDITING TECHNIQUES

### Unit Structure :

- 12.0 Objectives
- 12.1 Introduction
- 12.2 Test Checking
- 12.3 Audit Sampling
- 12.4 Internal Control
- 12.5 Internal Check
- 12.6 Internal check system for business transactions
- 12.7 Distinguish
- 12.8 Internal Audit
- 12.9 Summary
- 12.10 Questions

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### 12.0 OBJECTIVES

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After studying this unit the students will be able to:

- Understand the concept routine checking.
- Know in detail about Test checking
- Learn about audit sampling.
- Know in detail about internal control system and its utility.

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### 12.1 INTRODUCTION

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Routine checking involves checking of such common records and books which is carried on by the auditor as a matter of routine. Routine checking includes checking the casting carry forwards and other calculations in the books of original entry. Posting from these books to relevant accounts are verified. Balancing and carry forward of different ledger accounts are also verified. While doing this routine checking the auditor uses different types of ticks and different coloured pencils so that they may not be copied easily by the staff of the client. Information about these ticks is kept secret e.g. normally we use blue or black colour pen but to keep their separate identify auditors use a green colour pen. The auditor uses special ticks for each class of transaction checked. Like posting, casting, carry forward, bank statement and vouching. As far as possible the same tick should not be used for the same transaction in all the firms to maintain secrecy of these ticks. While

auditing each section, work should be completed up to a certain point otherwise the chances of mistakes increase.

All important balances and totals and note worthy points should be noted down in the Audit Note Book. Vouching work should be done by two audit assistants together. The Auditor should not accept any figures written in pencil because they can be easily changed after auditing. He should insist on writing the figures in ink only.

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## 12.2 TEST CHECKING

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### 12.2.1 Difference between Test Checking and Routine Checking :

Test Checking	Routine Checking
<b>Meaning</b>	
Here only parts of the transactions are checked to form an opinion.	Detailed checking of all transactions at all stages.
<b>Objectives</b>	
To obtain reasonable level of satisfaction about all transactions by verifying only a few representative transactions	To verify arithmetical accuracy, accuracy of posting to ledgers, correctly balance the ledger A/cs
<b>Advantages</b>	
Volume of work is reduced, time is saved	Errors and frauds are easily detected and trial balance can be easily prepared
<b>Disadvantages</b>	
Some errors and frauds may go undetected as all the transactions are not checked. There is doubt and risk in the auditor's opinion.	Highly mechanical process and monotonous activity. If may lead to boredom, compensating errors and errors of principle will not be detected

### 12.2.2 MEANING

The main objective of audit is to formulate an overall opinion on the accounts and financial statements of a unit. This enables the auditor, to finally submit his report to the party concerned. He has to express his opinion on the quality of the accounts maintained and whether they give a true and fair views of the profits earned and valuation of assets and liabilities.

In a large organisation there are thousands or even lakhs of transactions to be verified. It is practically impossible for any auditor

to physically verify each and every transaction. In such concerns if there is an effective internal check and internal control system the auditor can adopt test check system. He need not check each and every entry thoroughly. He can check in depth few items selected at random and if he finds that there are no errors in them, he can pressure that other entries are also correct and proceed further.

Thus **test checking can be defined** as “in depth checking of only few selected items and form an opinion about the quality of the accounts”.

If the items selected are correct, he can presume that other entries are also correct. For the success of test checking system, representative number of entries of each class is selected for checking. Test checking is an accepted substitute of detailed checking. In many cases, hundred percent checking of entries is neither possible nor necessary. It will also involve lot of unnecessary expenditure. Test checking is based on the theory of probability. If the sample is truly representative of the population, the test checking will give reliable results.

### 12.2.3 Features of Test Checking

Test checking consists of selecting and checking a proportion of transactions selected by the Auditor. The salient features of Test Checking are –

1. **Scientific:** It is a mathematical truth that a scientifically selected sample would reveal the features and characteristics of the population. The statistical theory of sampling is based on a scientific law. Hence, it can be relied upon to a greater extent than any arbitrary technique which lacks basis and acceptability.
2. **Estimation Process:** Test Checking and Sampling can never bring complete reliability; it cannot give accurate results. It is a process of estimation. What error is tolerable for a particular matter under examination is a matter of the individual's judgment in that particular
3. **Coverage of material items :** Entries involving large amounts or relating to material accounts are seen exhaustively and other entries are picked up for verification from the remainder according to a certain plan. Sometimes entries are checked for a few specified months exhaustively and the rest go unchecked.
4. **Full Coverage over a time period :** Test Check is normally planned in such a way that the audit programmes for 3 to 5 years cover all types of transactions in case of a medium or large sized Company. Thus, if in one year the months of

January, June and December are checked; April, July and September may be checked in the second year and so on.

5. **Surprise Element** : The staff and management of the Auditee Company should not be able to anticipate the pattern of test checking, otherwise they will predict the areas and periods to be covered in any one year and will be careful regarding the same.
6. **Flexibility** : If test checking becomes routine, predictable and mechanical, it loses its value. Hence, the Auditor should keep changing the methods of test checking at reasonably frequent intervals.
7. **Judgment Based** : The extent of test checking would primarily depend on the Auditor's judgment of a particular situation. This judgment in turn depends on the previous experience of the Auditor, current developments and the efficacy of Internal Control System.

Anyway the auditor has to verify the financial statements with the help of available evidence. He has to pay special attention to:

- 1) The method of presentation,
- 2) Information disclosed
- 3) Arithmetical accuracy,
- 4) Following principles of accounting
- 5) Complying the provisions of the laws applicable to that business.

There should be no errors and frauds in the books of accounts. The auditor should know why errors and frauds occur and how they are committed. It is his prime duty to detect them.

#### **12.2.4 Factors to be considered while adopting Test Checking:**

The numbers of transactions in any large concern are large. There will be number of purchases and sales. Salary may have to be paid to thousands of workers. There may even be overseas transactions. Bank loans, letters of credit, overdrafts, bills discounted etc. may have to be verified. There is the problem of volume and variety. So, selection of the items for test checking should be carefully done.

It should be remembered that by adopting test checking the auditor only reduces his physical labour. However, in no way it reduces his liability. Subsequently if any error or fraud is detected in the accounting entries which were not checked by the auditor due to adoption of test checking, he will still be held personally liable for negligence in his duties. So, he must be doubly careful in selecting the items for test check. They should be fairly representative items and he should be fully satisfied that they are in order. If he comes

across anything fishy, he must give up test checking and check all the entries.

While selecting items for test check auditor should consider the following points:

1. He should classify the transactions under appropriate heads.
2. He should thoroughly study the system in the concern from authorisation, documentation, recording and evidencing the same. The system should be found perfectly O.K.
3. The auditor should carefully study the internal check system followed by the concern. As we have seen earlier, internal check system means a system where the work of one is automatically checked by the other as a matter of routine. Financial data provided by the system should be reliable. If and only if the auditor is fully satisfied by the internal check system, he should adopt test check. Not otherwise.
4. There should be absolutely no bias in selecting items for test check.
5. Test check should not be adopted in the audit of such concerns where there are only few transactions of large amount. E.g. A company may have only 20 export or import transactions and each transaction may be in crores of rupies. In such cases, 100% transactions should be checked.
6. The number of transactions to be selected for test check is decided by the degree of reliance on the internal check system.
7. If the auditor comes across any material errors, they should be properly and thoroughly investigated.

#### **12.2.5 When test check can be used.**

Test check can be used only under the following circumstances :

- a) When the number of transactions to be audited is very large.
- b) The auditor has limited time at his disposal.
- c) There are number of identical transactions.
- d) There is efficient system of internal control.
- e) Audit history of the organisation in the past will also decide the size of the sample. The areas requiring audit depend on the previous history.

#### **12.2.6 Precautions to be taken:**

Test checking means examination of few selected transactions from the beginning to the end through various stages.

The auditor has to take following precautions while adopting this system:

1. For the success of the system of test checking, samples of transactions selected should be fairly representative. It is a mathematical truth that scientifically selected sample would reveal the features and characteristics of the population.
2. There should be some surprise element. Client's staff should not be able to anticipate the pattern of test checking. Otherwise they will predict the areas and periods to be covered for audit and will be careful only about those transactions and neglect the others.
3. There should be flexibility. Auditor should change his method of selecting transactions for test check from year to year. In selecting appropriate transactions for test check, the auditor should use his past experience and discretion current developments and changes made in the internal check system, should also be taken in to account.

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## **12.3 AUDIT SAMPLING**

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### **12.3.1 Meaning:**

"Audit sampling" means the application of audit procedures to less than 100% of the items within an account balance about some characteristic of the items selected in order to form or assist in forming a conclusion concerning the population.

It is important to recognise that certain testing procedures do not come within the definition of sampling. Tests performed on 100% of the items within a population do not involve sampling. Likewise, applying audit procedures to all items within a population which have a particular characteristic (for example, all items over a certain amount) does not qualify as audit sampling with respect to the population examined, nor with regard to the population as a whole, since the items were not selected from the total population on a basis that was expected to be representative. Such items might imply some characteristic of the remaining portion of the population but would not necessarily be the basis for a valid conclusion about the remaining portion of the population.

### **Methods of selecting Sample Size:**

SA 530 deals with Audit sampling. (S.A. standards on auditing issued by the institute of chartered accountants of India). There are two methods of selecting the size of the sample and individual items. They are:

- 1) Judgmental sampling
- 2) Statistical sampling

Whichever method is adopted it should be particularly noted that the sample selected must be representative. It should be closely similar to the whole population. It should be large enough to provide statistically meaningful results. Sample should be selected in such a manner that it is representative of the whole population. Each item in the population should have an equal chance of being included in the sample.

### **1) Judgmental Sampling Method :**

Here size and composition of the sample are decided on the basis of his past experience and knowledge by the auditor. It is decided at his discretion. The method is simple. So it was adopted for several years. Auditor may decide the number of pages or personal accounts in the purchase or sales ledger to be checked. E.g. January, April, July and October months may be selected for verification in one year and February, May, August and November months maybe selected next year. However usually a large number of items at the close of the year are selected for detailed checking.

Some people criticize this method. They say that the method is neither objective nor scientific. Risk of personal bias cannot be completely eliminated. Statistical techniques are not used. Selection of items is entirely left to the discretion of the auditor. But mostly, experienced auditor will succeed in selecting right representative items.

### **2) Statistical Sampling:**

The auditor should select sample items in such a way that the sample can be expected to be representative of the population. This happens only when all the items in the population have an equal opportunity of being selected.

This is a scientific method of selection of samples. Hence definitely better than the earlier discussed judgment sampling method which entirely depends upon the discretion of the auditor. Statistical sampling methods use mathematical laws of probability in determining the sample size in different circumstances. This method is widely used especially where the population consists of large number of similar transactions. It is also used for debtors' confirmation, payroll checking, vouching of invoices and petty cash vouchers. Readymade statistical tables are available. So, the auditor need not have knowledge of statistics and mathematics to use this method.

### **Methods of Selection of sample in Statistical Sampling are:**

- 1) Random Sampling
- 2) Internal sampling or systematic sampling

## 1. Random Sampling :

There are two types of random sampling.

### i. Simple random sampling:

Under simple random system each purchase or sales invoice has an equal chance of being selected. Selection may be done with the help of computers or by picking up numbers randomly from a drum. This method is simple and easy to use. This method can be used where the items are of fairly similar nature. There is no wide difference between two items.

### ii. Stratified sampling:

Under stratified sampling the whole population is divided in to some groups and items are selected from each group. E.g. debtors may be divided in to (a) Above Rs. 1,00,000, (b) Rs. 75,000 to 1,00,000, (c) Rs. 25,000 to 75,000 and (d) Below Rs. 25,000 etc. Then certain percentage of items are selected from each group. The percentage of items selected from each group need not be the same. In the above example e.g. more items may be selected from the 1<sup>st</sup> group and very few items from the last group.

## 2. Interval sampling or systematic sampling :

Here again there are two methods.

- i. **Block sampling:** Block selection means say first 100 items of sales of August, then first 100 sales of December etc. may be selected.
- ii. **Cluster sampling:** means dividing the items in to groups called clusters e.g. 500 to 540. 2015 to 2055 etc. These figures are again selected at random.

### a. Advantages of statistical sampling in auditing :

It has following advantages.

- 1) Sample size will not increase in proportion to the size of the area involved.
- 2) Selection is more objective as there is absolutely no personal element involved.
- 3) The size of the sample is minimum.
- 4) Calculated risk is taken.

However, the system should not be universally applied. Sometimes other methods may be more convenient or useful e.g. when exact accuracy is required or there may be legal compulsions.

### **Factors determining Sample size :**

The following factors determine the size of the sample –

- 1) Sampling Risk
- 2) Tolerable Error
- 3) Expected Error
- 4) Efficiency of internal control

#### **1. Sampling Risk:**

Auditor in auditing only the sample entries and arriving at his final conclusion no doubt takes risk. Because, if subsequently errors or frauds are noticed in those entries which he has not audited, he will still be held responsible. Sampling risk means if he audited 100% entries, he may arrive at a different conclusion than the one he arrived by auditing only sample of transactions.

The auditor is faced with sampling risk in both tests of control and substantive procedure. In test of control it may be risk of under reliance or over reliance. In risk of substantive procedures. There may be risk of incorrect rejection, or incorrect acceptance.

#### **2. Tolerable Error :**

Sample size is affected by the level of sampling risk the Auditor is willing to accept from the results of the sample. If he is prepared to take higher risk, he will select a smaller sample and if he is not and prepared to take much risk, he will select a larger sample. Tolerable error is the maximum errors in the population that the auditor is willing to accept.

#### **3. Expected Error :**

If the auditor expects error in the population, the size of the sample is large and if no errors are expected, the size of the sample will be comparatively small. Auditor should decide expected error taking into account his past experience and changes done in the procedures etc.

#### **4. Efficiency of internal control :**

If the internal control system is found to be satisfactory, the Auditor may select a smaller sample. On the other hand if he finds that it is not effective, he may select a larger sample.

#### **5. Evaluation of Sample Results :**

After selecting the sample items for detailed investigation, the auditor should audit all these sample entries in detail. Then the should analyse the errors in the sample. First the auditor should confirm that it is really an error. For that he should take in to account the objective he has decided while auditing. If expected evidence is not available to audit a particular item, he should look for alternate evidence. The auditor should consider the qualitative

aspect of the error. i.e. nature and course of the error and the possible effect of the error on other phases of the audit. The auditor may come across some common factors like type of the transaction, location, period of time etc. Then the auditor should check all items of his type of transactions and not restrict himself only to the scrutiny of the sample transactions selected. The auditor should project the error results of the sample to the population. He should keep in mind the qualitative aspects of the errors found. If the population is divided in to sub population, the projection of errors is done to each sub – population and the results are combined.

Then the auditor should decide whether the error in the population exceeds the tolerable error limit. If so, he must reassess the sampling risk. If that risk is unacceptable, he should adopt alternative audit procedure.

**Auditor’s Liability in conducting Audit based on Sample**

While auditing the selected sample entries, the auditor should take maximum care in analysing the evidence produced before him in support of the entry. Auditor should select the sample in a scientific manner. He must use statistical rules of sampling. He should exercise his best judgment so that he may not be held responsible subsequently for the opinion he has expressed. As far as possible the auditor should use test check method only after selecting the samples scientifically. He must be extra careful in using test check method because by adopting test check method, he only reduces his physical labour. His liability for errors and frauds extends to the entries in the whole population. He cannot escape from his liability saying that he had not audited that particular transaction.

**CHECK YOUR PROGRESS**

1. Define the following terms:
  - a. Routine Checking
  - b. Test checking
  - c. Judgment Sampling
  - d. Stratified Sampling
  - e. Block sampling
  - f. Cluster sampling
  
2. Enlist the factors determining the Sampling size.

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## 12.4 INTERNAL CONTROL

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### 12.4.1 MEANING AND DEFINITION

Internal control is a broad term with wide coverage. It covers the control of the whole management system. It may be financial as well as non financial. It involves number of checks and controls in order to ensure that the business is carried on efficiently. Only with the help of control, efficient and effective management of business becomes possible. Internal control system helps the business to achieve its goals effectively. Effective internal control system is important from the point of view of the management as well as auditor. It helps the auditor in devising a proper audit procedure for the audit of a particular unit.

### 12.4.2 Definitions of internal control:

**W.W. Bigg defines** it as “internal control is best regarded as indicating the whole system of controls, financial and otherwise, established by the management in the conduct of the business including internal check, internal audit and other form of control.” This definition explains internal control from the auditors point of view.

**According to American Institute of Certified Public Accountants,** “Internal control comprises of the plan of organisation and all the co-ordinate methods and measures adopted within a business to safeguard its assets, check the accuracy and reliability of its accounting data to promote operational efficiency and to encourage adherence to prescribed managerial policies.” In this definition both accounting and administrative control are emphasized.

Internal control includes financial and administrative controls. It is established by the management to run the business smoothly. Internal control system is very important from the point of view of the auditor. It will help him to select the right method of working.

### 12.4.3 Purposes of Internal Control:

Internal control system is beneficial or useful to both the client and the auditor.

#### 1. Usefulness to the client :

- a. Reliable data is provided. On the basis of such data the management takes its day to day decisions e.g. Fixation of selling price, quantity of goods to be produced etc.
- b. Assets and records are safeguarded. If there is no proper system of control, the physical assets may be stolen, misused

or accidentally destroyed. Same is the case of other important documents in the business. Confidential records may be properly maintained. Now a days lot of such documents are fed to the computers. If proper care is not taken magnetic tapes can be destroyed.

- c. Internal control system promotes operational efficiency. Business resources are properly used. Business policies are strictly followed.

## **2. From the Auditor's point of view :**

The business will have competent and trust worthy personnel. This will reduce the chances of errors and frauds and the job of the auditor becomes safe and simple. There is scientific division of duties amongst different members of the staff. Every transaction is authorised by the competent authority. Duties and responsibilities of each member of the staff are clearly stated. The internal audit is part of the whole system of internal control.

### **12.4.4 Inherent limitations of Internal Control:**

Standard auditing practice SA-6 issued by the Institute of Chartered Accountant of India mentions certain inherent limitations of internal control. They are :

- 1) The control system involves expenditure of time and money. If attempts are made by the management to economise in this expenditure, effectiveness of the control system is adversely affected.
- 2) Internal control system lays greater emphasis on routine transactions. So, unusual and irregular transactions are likely to be neglected.
- 3) The possibility of human error cannot be ruled out. This may affect the effectiveness of the control system.
- 4) Persons implementing the system may abuse the authority given to them.
- 5) Whenever there are changes in the circumstances, the system also needs to be changed. If such changes are not done in the systems from time to time, the system may loose its effectiveness.
- 6) Management may manipulate the system.

### **12.4.5 Scope of internal control :**

Internal control is a broad term having wide coverage. It may normally cover the following areas :

- 1) **Financial control:** It includes proper system of accounting and proper supervision.

- 2) **Cash control** : There is proper control over receipts, payments and balance kept in hand missappropriation of cash in any way by anybody is not permitted.
- 3) **Trading transactions** : There will be proper control over purchase as well as sales transactions. Suitable procedures are laid down and handling of goods is effectively controlled and properly accounted for.
- 4) **Employees remuneration** : Pay sheets are properly prepared. A detailed record of work done by each worker is kept and used while preparing pay sheets. Salaries and wages must be paid to the concerned workers regularly in time. There should be no scope for payment to dummy workers.
- 5) **Capital Expenditure** : Capital expenditure involves heavy amount. So, it should be authorised by proper authority and wisely spent. Amount should be used properly.
- 6) **Others** : Control is also in existence on maintaining proper relationship with the staff, inventory in the factory and investment of funds.

#### **12.4.6 Internal Control and Auditor:**

The management of any business unit is duty bound to introduce a good system of internal control. Existence of an efficient system of internal control in the unit is very useful to the auditor. It helps him to reduce his workload to a large extent. So, if he finds any defect in the existing internal control system the auditor can suggest suitable changes in the same as he is an expert in the field. However, it should be remembered that though he may suggest changes, his suggestions are not binding on the client. He can only help and guide the client.

#### **AUDITORS DUTIES**

Following are the duties of an Auditor considering the internal control system:

1. Auditor will carefully study the existing system of internal control and then decide to what extent he can rely on the same. Then he can decide the audit procedure to be adopted for auditing this particular unit.
2. The auditor has to decide to what extent he can adopt test check. The auditor is expected to critically review the existing system before the commencement of his work. Where there is a good internal check system; the work of the auditor, automatically becomes simple. However it should be distinctly remembered that adopting test check will in no way reduce his liability. He should perform all his normal duties as usual. If he

performs his duties carelessly or negligently, he will be held liable subsequently if any errors or frauds are detected.

3. **Necessity for Evaluation:** The Auditor is interested in ascertaining that transactions are executed in accordance with the Management's authorisation, all transactions are recorded properly and assets are adequately safeguarded. Therefore, the examination and evaluation of the Internal Control System is an indispensable part of the overall audit Programme.
4. If the Auditor reviews the Internal Control System of the client, he will be in a position to bring to the Management's notice, the weaknesses in the system and suggest measures for improvement. During the course of his audit, he may also ascertain how far the weaknesses have been removed.

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## 12.5 INTERNAL CHECK

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### 12.5.1 Meaning and Definition

Internal check is an important part of internal control. The whole accounting system is so arranged that the work done by one is invariably checked by another as a matter of routine. No additional expenditure is incurred for this procedure. Different methods of internal check are devised for different types of concerns taking in to account the special needs of each concern.

It can be defined as **“an arrangement of the duties of the members of the staff in such a manner that the work done by one person is automatically and independently checked by the other.”**

Each employee here works independently but it does not involve duplicating the work of other. Frauds, errors or irregularities are thus prevented. Under these circumstances if frauds are to be committed, a collusion among different members of the staff is necessary which is normally not easy.

#### **Definition :**

**Spicer and Peglar** “Internal check is an arrangement of staff duties where by no one person is allowed to carry through and record every aspect of transactions, so that without collusion between two or more persons, fraud is prevented and at the same time, the possibilities of errors are reduced to the minimum.”

**F.R.M. Paula** “Internal check means practically a continuous internal audit carried on by the staff itself, by means of which the

work of each individual is independently checked by other members of the staff.”

**Ronald A Irish** – “Internal check refers to the organisation of office duties in such a way as to prevent or disclose both errors and frauds.”

Many other authors have defined the term in almost similar words but the common idea is that here the system is internally organised in such a way that the work of one employee is automatically checked by the other and the possibility of error or fraud is reduced to the minimum.

### **12.5.2 Features of internal check system:**

- 1) The work is divided amongst different assistants.
- 2) Work is divided amongst different persons, taking in to account the qualifications and ability of each member of the staff.
- 3) Only one person does not perform any task from the beginning to the end.
- 4) The work done by one is independently and automatically checked by the other. E.g. in the case of cash sales the salesman will not receive cash and deliver the goods to the customer. Price of the item is received by the cashier. Gate keeper or goods clerk will deliver the goods and the accountant will make entry in the cash book and so on.

### **12.5.3 Objectives of Internal Check System:**

1. Internal check system is introduced to bring moral pressure on the staff.
2. Reliable and adequate information is made available from the books of accounts.
3. Valuable assets of the business can be saved and frauds and errors are avoided.
4. Available work in the accounts department is suitably distributed amongst the members of the staff.
5. If any error or fraud is subsequently found the responsibility for the same can be easily fixed on the person concerned.
6. Staff becomes more alert and efficient.
7. The firm can get all the advantages of division of labour.

#### 12.5.4 Principles of a Good System of Internal Check :

1. Here the responsibilities of each member of the staff are clearly stated.
2. The available work load is equitably distributed so that no one is over burdened with work and there is no dissatisfaction amongst the staff on this issue.
3. People having custody of assets should not have access to books of accounts.
4. Duties allotted to the staff should be changed from time to time.  
Whenever a different person takes charge of the table, the mistakes if any committed by the earlier occupant of the table are easily detected. If the same man remains at the same table for a long time, this is not possible. Work done by one should be automatically checked by another.
5. The management should not rely too much on any one person. Frauds are normally committed only when there is over reliance in any person in the organisation.
6. Cheque books important files etc. should be maintained safe under lock and key.
7. The management should carryout supervision from time to time to ensure that the rules prescribed for internal check are being followed meticulously by one and all.
8. Deviations from the rules should be permitted only by the top authorities and only when it is absolutely necessary.
9. The system of internal check once introduced should be reviewed from time to time taking into account any changes that have occurred in the business in the interim period.

#### 12.5.5 Advantages of Internal Check System :

The advantages of the system can be enjoyed by the business, auditor and also by the owner of the business. Let us study them one by one.

##### 1. Advantages for the Business :

The business enjoys number of advantages of internal check system. Some of them are :

##### i) Proper division of work :-

Available workload is suitably divided amongst the different members of the staff. Division of work is done taking into account the qualifications, experience, likes and dislikes etc. of each member of the staff.

ii) **Detection of errors and frauds :-**

Errors and frauds are easily detected and taking up of prompt suitable remedial action becomes possible at an early date.

iii) **Increased efficiency of the staff and economy :-**

As each one is given the work he likes and capable of doing, there is increase in the efficiency of the staff and their efficiency will bring down the administrative expenditure.

iv) **Moral Check :-**

There is a moral check on the staff because the work done by every member is routinely and automatically checked by another. Members of the staff will not be easily tempted to commit frauds.

**2. Advantages for the Auditor :**

Internal check system is very useful to the auditor. It reduces his workload to a large extent. Advantages to him can be enumerated as follows :

i) **Quick preparation of final accounts :**

where there is an efficient system of internal check, the books of accounts are regularly written. So, the auditor can readily prepare annual statements like profit and loss account and balance sheet and start his work.

ii) **Convenience :**

Where there is an efficient system of internal check, the Auditor can adopt test check and complete his work within a short time. He need not undertake detailed checking of routine transactions.

**3. Advantages to the Owner :**

- i) The owner can rely on the accuracy of the books of accounts.
- ii) Increase in profits. As there is increase in the efficiency of the staff, there is economy in the cost of administration and this will lead to increase in total profits.

**12.5.6 Disadvantages of Internal Check System :**

Just like there are advantages, there are also some disadvantages of internal check system. They can be enumerated as follows :

**1) Costly :**

Introduction of this system requires a large number of staff. Naturally the cost of administration will increase. So, the system can not be introduced in a smaller business unit.

**2) Quality Sacrificed for promptness :**

Here the quality of work may decline. Members of the staff may devote more time to complete the work in time but may not devote enough time towards the quality of the work.

**3) Carelessness amongst high officials :**

Higher officer may not strictly supervise the staff presuming that the work is being done properly.

**4) Risky for the auditor :**

Relying too much on the system is sometimes likely to be proved risky for the auditor. If there is any laxity in the implementation of the system, errors and frauds can not be ruled out.

In short the system should be carefully and continuously implemented. Auditor should use his tact and judgement while studying the system and relying on it.

**12.5.7 Auditor and Internal Check :**

Scope of the Auditor's work is largely decided by the internal check system prevalent in the organisation. After studying the system the auditor decides to what extent he can adopt test checking. Where there is an efficient system of internal check, the auditor need not check all the transactions in detail. The time thus saved can be utilized for more important matters. However, the auditor should always keep in mind that though his physical labour is saved, his responsibility is not at all reduced. He will be held responsible if any errors or frauds are found subsequently even in those transactions which he has not audited as he has not selected those transactions in the sample selected for test checking. He cannot argue that he did not audit 100% transactions as there was an efficient system of internal check. Thus though a good system of internal check is helpful to the auditor, in no way it relieves him of his contractual responsibilities. So, the auditor should take enough care before deciding the extent to which, he should depend upon the internal check system prevalent in the organisation.

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## **12.6 INTERNAL CHECK SYSTEM FOR BUSINESS TRAFFICS**

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**12.6.1 Internal Check System for Sales and Debtors :**

Sales may be for cash as well as on credit. A businessman has to use both the types of sales to increase his turnover and profit. However, here we are considering only the internal check system for credit sales.

**Example of Internal check System for cash sales of the goods**

The salesman will only complete the transaction of sale by showing the goods to the consumer. He will neither receive cash nor deliver the goods. He prepares 3-4 copies of the invoice and sends the goods to the packing department. Packer packs the goods according to the invoice and forwards them with a copy of the invoice to the cashier. Cashier receives cash from the customer and sends a copy of the invoice to the accounts departments for making entry. He also sends the goods to the delivery department, which again verifies the goods with the copy of the invoice with the customer and then hands them over to him. Thus the work of selling the goods is divided amongst so many members of the staff.

1. **To start with, different forms used in this connection** like invoices; delivery challans etc. should be standardised. They should be serially numbered and kept in the custody of any responsible officer. If any of them are missing, efforts should be made to trace them and causes for their loss should be investigated. If not found even after all efforts, duplicate may be obtained and this fact may be mentioned by the auditor in his final report.
2. **Credit control:** No businessman can insist on cash sales only. To increase his sales and to meet the needs of the customers, he has to sell on credit. However, many a times, the recovery of the amount from the customers becomes difficult. Its an unpleasant task. So to avoid bad debts, though sales should be done on credit basis also, all care should be taken before extending credit to a new customer. Decision regarding grant of credit, extent and period of credit, should be decided by a responsible officer only. Before accepting an order for credit sale, a suitable enquiry should be conducted about the credit worthiness of the customer. Enquiries may be done about his credit worthiness with his other suppliers and also with his bankers. However, this should be done only after obtaining the permission of the prospective customer. It should always be remembered that selling on credit is easy but the job of recovering credit is difficult and unpleasant.
3. **Different functions related with the sales should be allotted to different persons** e.g. preparing invoice, dispatching the goods, recording the sales in the sales book maintaining customers' Ledger Accounts or Debtors Ledger, preparing their list at the end of the year etc.
4. **Delivery challans should be tallied with the orders received.** These challans should be serially numbered and kept in a separate file by a person who should not have any access to the stock.

5. **Customers should be asked to acknowledge** in writing the receipt of the goods. These acknowledgements should also be serially arranged and kept in a separate file.
6. **Along with the goods, invoice for the same should be sent.** Quantity mentioned in the invoice should be the same as the one mentioned in the order of the customer
7. **If there is any transfer of goods from the Head Office to Branch** or from one department to another it should be distinctly recorded.
8. **Invoices should be prepared with proper care.** There should be strict rules regarding the discount to be allowed if any.
9. **When the price of the goods is received from the customer,** an official receipt should be sent to him and entry for the same should be promptly done in the Cash book.
10. **If there are any sales returns,** they should be properly recorded in the books and the causes for the return should be investigated. If the return of the goods is found to be in order, a credit note should be sent to the customer.
11. **Debtors' balances should be tallied** with the balances in the control accounts if a self balancing system is in vogue.
12. **Reminders should be regularly sent to the customers** whose accounts are overdue. All possible efforts should be done to recover the dues as early as possible, without displeasing the customer.

#### **12.6.2 Internal Control System for Purchases and Creditors :**

There are different stages in purchasing and there should be proper control system of control at each stage. Purchases are also of two kinds' viz. cash purchases and credit purchases.

1. **Different departments which need different items for consumption or production send their requisitions** in a prescribed form to the purchase department. This department then prepares purchase order in duplicate and sends the original copy to the supplier. Duplicate copy is retained in the purchase department for future reference. In some concerns the order is prepared in triplicate and one copy is sent to the stores department to keep space ready for the receipt of the goods.
2. **Orders are always sent only to the selected or approved supplier.** Supplier is selected after inviting quotations or tenders. Prices of different suppliers and the quality of the

goods are studied by experts and then 2-3 suppliers whose rates are reasonable and quality is satisfactory are selected as approved suppliers. Orders are sent only to these approved suppliers, 2-3 suppliers are selected instead of only one who is the best amongst the lot, because sometimes if the goods are not available due to any reason like strike etc. services of the alternative suppliers may be utilized to avoid inconvenience.

3. **Verification** – On receipt of the goods, the stores department verifies their quality, quantity and price with the copy of the order sent and the invoice received with the goods, and then send the invoice to the accounts department for making necessary entry in the books of accounts and making payment as per the terms agreed upon. Stores department then stores the goods in the respective shelves or bins. If the goods are not found to be of appropriate quality or as per the order placed, they should be immediately returned along with a debit note.
4. **Copies of the personal accounts of the suppliers should be sent to them** at regular intervals for the confirmation of the balance.
5. **When the invoice is received from the stores department with a satisfactory remark**, the accounts department sends a cheque to the supplier. As referred to above a list of approved suppliers is prepared by every concern. However, if any supplier, fails to supply the goods as per order in time his name should be dropped from the list. In other words, this list is revised from time to time on the basis of the experience.

#### **12.6.3 Internal check system for Salaries and Wages :**

Most common entry in the books of accounts of any concern after purchases and sales is that of payment of wages or salaries. Payment of wages or salaries in a large concern involves number of functions.

1. **A record is kept of Number of days or hours worked** by each employee. There is a punch card system and the card is punched when the employee enters the office or factory and when he leaves.
2. **On the basis of the above, pay sheets are prepared and wages or salaries payable are calculated.** From the gross amount of salary there are different deductions to be made for items like Provident Fund, Employees State Insurance, Income Tax, Profession Tax, deductions for housing or other loans or advances etc. After considering these different deductions net amount payable to the employee is arrived at. However, these

days, the pay sheets are prepared by the computer and directly sent to the bank. The bank will then credit the net amount payable to each employee, to his bank account.

3. When pay-sheets were manually prepared one person used to make calculations. Second person used to prepare pay-sheets taking into account leave taken, hours worked etc. These salary sheets were then test checked by some higher authority. If a particular worker is absent on the date of payment, his packet was kept in the safe custody and handed over to him personally when he returns to work. Actual payments were done by persons different from those who prepared the paysheets.
4. Many a times bogus or ghost workers were shown and their salary was misappropriated. So, the Head of the Department should take proper care to avoid such misuse of funds.

Previously there was a procedure of obtaining signature of each employee on a revenue stamp. But such procedure is no more prevalent as the amount of salary or wages is directly credited to their bank accounts. So no other proof of payment is necessary.

Under the law wages are to be paid before 10<sup>th</sup> of every month. So, care should be taken to see that the whole procedure is completed in time.

Any way it should be remembered that there is no one standard internal check system applicable to all types of units. Each unit has to evolve its own system to suit its own needs.

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## 12.7 DISTINGUISH

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### 12.7.1 Test Check v/s Internal Check

Test Check		Internal Check	
1)	It means checking only selected few items instead of checking all transactions.	1)	It means division of work in such a way that work done by one is automatically checked by another.
2)	It is used by the Auditor	2)	It is instituted by the management
3)	Errors and frauds are detected by checking only few items.	3)	It helps to prevent errors and frauds.
4)	Management has no control over it.	4)	Management has full control over it.

### 12.7.2 Internal Check v/s Internal Control

INTERNAL CHECK	INTERNAL CONTROL
1) Internal check means the arrangement of work different employees in such a manner that work of any person is automatically checked by another person is doing his duty.	1) Internal control is the whole system of controls, financial and otherwise, established by the management in order to carry on the business of the company in an orderly manner, safeguard its assets and secure as far as possible the accuracy and reliability of its records.
2) It on going continuous process	2) Internal control is a wider term which includes internal check, internal audit, etc.
3) It is applicable to both, small & large organizations.	3) Generally it is more applicable to large organizations where there are many departments.
4) Relatively it is cheaper.	4) Relatively setting up of internal control system is costly and time consuming.

#### CHECK YOUR PROGRESS:

1. Enlist the advantages and disadvantages of Internal check system.
2. "Internal control is a broad term having wide coverage", Explain.
3. Define the terms Internal Control and Internal Check.
4. Explain the examples of Internal Check System.

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## 12.8 INTERNAL AUDIT

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### 12.8.1 MEANING AND DEFINITION

The normal concept about audit is checking the books of accounts by an outside expert to detect and prevent errors and frauds. In other words the auditor is an outsider and an independent expert. However, some concerns get their accounts audited by its own staff and then presents the same to the outside expert. This is internal audit. Internal audit is the review of its records by its specially appointed staff.

#### Definition :

**Watter B. Meigs** defines Internal Audit as "Internal Audit consists of continuous critical review of financial and operating

activities by a staff of auditors functioning as full time salaried employees.”

Internal Auditor comments on the effectiveness of the internal check system and suggests improvements in the same if necessary. Assets of the firm should be properly accounted for and adequately safeguarded. Acquisition and disposal of assets should be done only with the permission of the proper authority. Internal Auditor will ensure that the accounting policies laid down by the management are being meticulously followed :

### 12.8.2 Basic Principles of Establishing Internal Audit

The basic principles of establishing internal audit in a business concern are-

1. **Independence:** the internal audit department should have an independent status in the organization. It may be required to report directly to the board of directors.
2. **Objectives:** the objectives of the internal audit function should be made very clear and unambiguous. The objectives should be properly communicated so that internal audit is not viewed as "over-the-shoulder check" by other departments.
3. **Clarity in Scope:** the scope of internal audit department must be specified in a comprehensive manner. The department must at all times, have authority to investigate every phase of organizational activity from the financial angle, under any circumstances.
4. **Definition of Duties:** The internal audit Department's duty is to review operations as part of the internal control system. It should not be involved in performance of executive actions.
5. **Internal Audit Department:** The size and qualification of staff of the internal audit department should be equal with the size of the business. The cost of internal audit department should not exceed the benefits expected to be derived from it.
6. **Reporting:** The Programme of internal audit should be time-bound. There should be provisions for periodic reporting on various operational and other aspects.
7. **Follow Up and Review:** There should be sufficient scope for the follow up actions on the various points raised in internal audit report. Top management should take active part in ensuring compliance with actions points raised in the report.
8. **Relationship with statutory auditor:** The copy of the internal audit report should be made available to the statutory Auditor, who can deal with the same in the manner as he deems fit.

### Objectives or Usefulness of the Internal Audit

1. To verify the accuracy and authenticity of the financial accounting and statistical records presented to the management.
2. To ascertain that the organization is following the standard accounting practices or not.
3. To establish that there is a proper authority for every acquisition, retirement and disposal of assets.
4. To confirm that liabilities have been incurred only for the legitimate activities of the organization.
5. To analyse and improve the system of internal check; in particular to see (a) that it is working;(b) that it is sound; and (c) that it is economical.
6. To facilitate the prevention and detection of frauds.
7. To examine the protection afforded to assets and the uses to which they are put.
8. To make special investigation for management.
9. To provide a channel whereby new ideas can be brought to the attention of management.
10. To review the operation of the overall internal control system and to bring material departures and non-compliances to the notice of the appropriate level of management; the review also generally aims at locating unnecessary and weak controls for making the entire control system effective and economical.

#### 12.8.2 Internal Check Vs Internal Audit :

Both internal check and internal audit are parts of the whole system of internal control. Both are complementary to each other and go together. Still there is lot of difference between the two.

Internal Check		Internal Audit	
1)	It is arrangement of duties in such a way that the work done by one is automatically checked by the other	1)	It is independent appraisal of the records
2)	Object is to prevent errors and frauds	2)	Object is to detect errors and frauds
3)	No additional staff is necessary	3)	Additional staff is to be appointed
4)	It starts before the transaction	4)	It starts after the recording of the transaction

### 12.8.3 Internal Audit V/S External Audit

- 1) The role of internal audit function within an entity is determined by management and its prime objective differs from that of the external auditor who is appointed to report independently on financial information. Nevertheless, some of the means of achieving their respective objectives are often similar and, thus, much of the work of the internal auditor may be useful to the external auditor in determining the nature, timing and extent of his procedures.
- 2) The external auditor should, as part of his audit, evaluate the internal audit function to the extent considers that it will be relevant in determining in nature, timing and extent of his compliance and substantive procedures. Depending upon such evaluate, the external auditor may be adopt less extensive procedure than would otherwise be required.
- 3) By its very nature, the internal audit function cannot be expected to have the some degree of independence as is essential when the external auditor expresses his opinion on the financial information. The report of the external auditor is his sole responsibility, and that responsibility is not by any means reduced because of the reliance he place's on the internal work.

### 12.8.3 Evaluation of Internal Audit by Statutory Auditor :

Both of them apply similar techniques for examining the books of accounts. However Internal Auditor is a representative of the management. He is a regular employee of the concern. He reports to the managements. Statutory auditor in the case of the company is appointed by the share holders and reports to them about the truth and fairness about the account statements. Scope of work and functions of the internal auditor are decided by the management. In the case of statutory auditor they are decided by law.

If an auditor finds that internal audit is adequate and satisfactory or effective, he may apply audit procedure to a limited extent. Thus presence of internal auditor reduces the physical labour of the auditor. However it in no way reduces his responsibility. He cannot say that he did not verify a particular item because it was already verified by the internal auditor. The ultimate responsibility for reporting on financial statements is that of the statutory auditor only. Internal auditor will verify the reliability and integrity of the information. He will confirm that the management's policies are being strictly followed and the accounts are maintained taking in to account the different laws applicable to the business. Resources are used economically and the assets are being properly safeguarded.

Finally it is the past experience and discretion of the outside auditor which decides to what extent he can rely on the work done by the internal auditor. Internal auditor, being a regular employee, cannot act effectively as an independent auditor

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## 12.9 SUMMARY

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Test check means the auditor selects at random some transactions and checks them in detail. If he finds that there is nothing objectionable in these items, he will conclude that other transactions are also recorded properly.

Next technique of auditing dealt with in this chapter is sampling. There are two methods of selecting samples viz judgemental sampling and statistical sampling. In judgemental sampling, the auditor relies more on his past experience and selects items at his discretion.

Size of the sample is decided by taking in to account sampling risk, tolerable error, expected error and the efficiency of the internal control system.

It should always be remembered that by adopting test check of sample item, the auditor only reduces his physical labour. His liability for mistakes in auditing extends to the whole population of the transactions and not only restricted to the items he has actually checked.

The third important technique discussed in this chapter is that of internal control. Internal control means dividing the work amongst different members of the staff in such a way that the work done by one is routinely and automatically checked by the other.

In big concerns in addition to audit of accounts by an independent outside Auditors, they have their own Audit staff. Before presenting the books of accounts to the external auditor, they are audited by the internal auditor. The purpose behind this additional system of audit is to detect and prevent errors and frauds at an early date. Suitable penal action can be taken at an early date against the guilty persons and the concern may be saved from the further such loss in the future.

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## 12.10 QUESTIONS

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1. What is test checking? What are the advantages and disadvantages of test checking?
2. What precautions are to be taken by the auditor while adopting test checking?

3. What do you mean by internal check?
4. How internal check is different from internal audit?
5. What are the duties of an auditor in respect of internal check?
6. What are the principal aims of audit by Test – checking?
7. Write short notes on :
  - a) Internal audit
  - b) Objectives of Internal control
  - c) Test Checking
  - d) Technique of audit
8. What is internal control? How is the auditor concerned about it?
9. Explain the terms Internal control, internal audit and internal check.
10. What is internal control? Suggest internal control system for credit purchases.
11. Explain the terms “Internal control” an “Internal Audit”.
12. What are the various techniques of auditing?
13. Select the appropriate option and rewrite the following statements :
  - i. Internal auditor’s appointment is made by -----
    - a) Institute of internal auditors of India.
    - b) Members at the Annual General meeting.
    - c) The management
    - d) The statutory auditor
  - iii. Internal check is meant for -----.
    - a) Prevention of fraud
    - b) Increase in the profits
    - c) Detection of fraud
    - d) Helping audit in depth
  - iv. ----- deals with audit sampling.
    - a) SA 530
    - b) SA 400
    - c) SA 610
    - d) SA 510



## AUDITING TECHNIQUE VOUCHING

### Unit Structure :

- 13.0 Objectives
- 13.1 Introduction
- 13.2 Meaning and Definition of Vouching
- 13.3 Vouching of Income / Revenue
- 13.4 Audit of Expenditure
- 13.5 Summary
- 13.6 Questions

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### 13.0 OBJECTIVES

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After studying this unit the students will be able to:

- Understand about vouching.
- Vouch different types of receipt of Income and different types of expenditure.

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### 13.1 INTRODUCTION

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The act of examining vouchers is called vouching. In auditing vouching is done to establish the authenticity of the transaction recorded in the books of accounts. It is to find out the documentary evidence for the entry. Vouching plays a very important part in the process of audit. The auditor will verify whether the amount in the voucher is posted to the correct account while examining the voucher. Auditor should pay special attention to the following points:-

- i) The date of the voucher. The date should be relevant to the period of audit.
- ii) Voucher is in the name of the client.
- iii) Voucher is duly authorised.
- iv) The voucher is complete in all respects.

After examining the voucher, the auditor should either cancel it by putting a cross or put a stamp on the same so that the same voucher could not be produced once again.

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## 13.2 MEANING AND DEFINITION OF VOUCHING

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### 13.2.1 Meaning and Definition

Vouching is an inspection by the auditor of the evidences supporting the transaction entered in the books. It is a technique used by the auditor to judge the truth of entries appearing in the books of accounts.

Accounting entries are made in the books of accounts. All such entries must be supported by some document. An accountant is not supposed to make any accounting entry unless he is having a documentary evidence to support. If a proper supporting evidence is not available or such evidence is not fully supporting accounting entries made, Auditor has every reason to doubt about the existence of error, fraud or manipulation of accounts, goods or cash. Every transaction must be invariably supported by a suitable voucher. **Success of an audit depends upon the efficiency with which the devices of vouching have been used.** Without vouching auditing is incomplete.

#### Definition :

**J. R. Batliboi** : "Vouching means testing the truth of items appearing in the books of original entry."

**D. Cksee** : "Vouching is an act of comparing entries in the books of accounts with documentary evidence in support there of."

Thus vouching is a device used to prove that the various transactions for the period are fairly, truly and sincerely reflected in the books. Vouching is checking the accuracy of entries made in the books of accounts with the help of available documentary evidences. No transaction has been omitted and all the transactions have been recorded properly. So, vouching is called as an essence of auditing.

### 13.2.2 Objectives or Importance of Vouching :

#### Objectives of vouching are:

1. To confirm that all the transactions have been recorded and every transaction recorded has supporting documentary evidence.
2. Vouchers produced are legally valid, authentic and are in the name of the client.
3. Proper distinction has been made between capital and revenue items.

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### 13.3 VOUCHING OF INCOME / REVENUE

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Now let us consider vouching procedure of some transactions. Books of accounts mainly contain two types of transactions viz transactions regarding revenue and those of different types of expenses. Let us first consider transactions of revenue or income.

Income of any business unit depends upon the nature of its activities. If it's a trading concern it earns its income by selling goods. If it is a service organisation, it earns its revenue by rendering services.

#### 13.3.1 Revenue from Sales :

A trading concern earns its revenue by selling goods. Sales again are of three types.

- i) Cash Sales
- ii) Credit Sales
- iii) Sale on approval or sale or return

All the three types of sales involve different procedure and hence naturally their vouching will involve adoption of different procedures.

#### 1. Cash Sales :

- a. **To study the internal check system:** The auditor should study the internal check system of the organisation for cash sales. He should find out whether there is any loophole in the same so that cash received from sales could be misappropriated. Then he should see whether there is a system of issuing a cash memo for every cash sale. In some business units, a cash memo is issued not only for cash sales but also for the amount collected from the debtors for previous credit sales. Such practice should be discouraged. Because if such system is in vogue then auditor cannot be sure that all the debts have been collected before the end of the year. Amount received on some of the sales may not be accounted for and misappropriated.
- b. **Cash sales are usually verified with the carbon copies of cash memos.** If the number of sales is very large, it becomes very difficult to check every sale. Here a cash sales summary book is maintained. A total of such a book is than tallied with the cash memos.
- c. **While checking cash sales, the auditor should particularly pay attention to the date on the cash memo** and whether the

amount received is accounted for in the books on the same day. All cash sales are entered on the debit side of cash book.

- d. **Then the auditor should verify whether the price of the goods sold is properly calculated.** If any cash memo is cancelled, the auditor should insist on the production of original of such receipt. It should be kept with the carbon copy. Production of both the copies is essential. Otherwise there is a possibility of showing cancellation of the receipt and misappropriating the sale proceeds.
- e. In some business concerns, there is a system of giving discount on the price. **If so, the auditor should insist that there should be clear rules regarding rate of discount** to be granted to their customers. Auditor should, while vouching duplicate copies of the cash memos given, verify whether discount granted is according to these rules only. If any extra rate of discount is to be granted that should be granted by an official at the highest level only. This is necessary because there is a possibility of showing higher discount and misappropriating the difference.
- f. **Auditor should verify that the date on the cash memo and date of the entry in the cash book is the same.** Otherwise there is a possibility of temporary misappropriation of the cash. That is cash received on sale of goods is used for personal purposes and then later returned to the business and accounted for.
- g. **Auditor should also check the balance of stock in hand and the quantity of goods sold.** Transfer or posting of the entry from the cash book to the ledger should also be checked.
- h. **Sale of fixed assets should not be included in the sale of goods.** If there is any sale of scrap, it should be recorded separately. If the business uses automatic cash register, the daily totals entered in the cash book should be checked with the till rolls.
- i. **There are chances of cash misappropriation of cash sales.** Salesman may sell the goods but may not account for the cash received. To avoid such possibility internal control system in the concern regarding cash sales should be effective. In big stores like Malls the salesman is not allowed to receive cash from the customers. Goods are also not delivered by him to the customer. This is done by some other person. He is only expected to prepare four copies of memo of the goods sold. Of these two copies are handed over to the customer. The salesman will send one copy with the goods to the delivery clerk and retain one copy for his record. In the meantime the

customer will make payment to the cashier. Who stamps the bill as "cash received". The customer can get the goods from the delivery clerk who is always at the exit point by showing the copy of the memo with the stamp cash received. At the end of the day the salesman, cashier and delivery clerk will prepare summaries all of which must tally. The auditor should check these summaries and cash book to detect mistake or fraud if any.

## 2. Goods sent on consignment :

- a. Goods sent on consignment are not actual sales. So, the auditor should verify that their accounting is properly done.
- b. **Proforma invoices are sent for such goods and auditor should verify them** with the duplicate copies of the proforma invoice sent.
- c. Auditor should also see **that the stock with the consignee on the last working day is properly valued** at cost plus proportionate non recurring expenses incurred by the consignor or and consignee on the goods.

## 3. Sales Returns :

- a. Returns are verified **with the copies of the credit notes sent to the customers.**
- b. Sales returns of the first and last month should be particularly verified as they are likely to be bogus.
- c. To inflate or deflate profits, bogus sales may be shown and then shown as returns in these months.
- d. Auditor should also verify whether the returned goods are in good condition.

## 4. Sales on approval or sale on return basis :

- a. Auditor should see that a separate register is maintained for such sales.
- b. Entries in such Register should be checked with the carbon copies of the proforma invoices sent with the goods.
- c. When the customer informs that he has approved the goods, then such goods should be transferred from goods on approval register to regular sales book and further entries are passed.

- d. Goods not approved but returned, should be entered in the goods sent on approval and stock register, Incidental expenses incurred, if any should be properly accounted for.

#### **5. Rental Receipts:**

- a. Rent is received from the tenants and the landlord issues them receipts. The auditor should verify the amount received with the carbon copies or counter foils of the receipts given to the tenant.
- b. Then the auditor should look in to the agreements entered in to with the tenants. This will help him to see whether a correct amount is received from the tenant or not.
- c. On the house property, there are certain charges to be paid like Municipal Taxes, Electricity charges, water charges etc. They may be paid either by the tenant or by the owner on behalf of the tenant. Who has to pay these charges is decided by the mutual agreement between the two. So, the auditor should verify whether such charges are paid by the concerned person as per the agreement
- d. Landlords usually maintain a Rent Register and entries for rent received are subsequently entered in this register. He should look in to the total accommodation available for letting out and whether all of it is let out or not. If any part is shown as vacant, he should obtain a certificate to that effect from a responsible officer of the client.
- e. Auditor should carefully study the rent agreement or lease deed. If the rent is collected through an agent, account submitted by the agent should be verified. In case of heavy arrears of rent auditor should confirm the arrears from tenants with the consent of the client and enquire into the causes for the same.
- f. Many landlords collect rent for some period in advance as a security deposit. So, the auditor should see that proper adjustment is made for rent received in advance, rent deposit and regular rent received and receivable.

#### **6. Interest and Dividends received :**

- a. If the investments are in number of companies, investments register is maintained. In such a case dividend income is first vouched by reference to the counterfoils of dividend warrants and the interests on securities by reference to the tax deduction certificate issued by the bank.
- b. Afterwards the amounts collected are traced into the investment register. The Register is carefully checked to ascertain whether any dividend has remained unrealised. If so, the auditor should enquire in to the reasons for the same.

- c. Profit and loss account should show the gross amount of interest as income. So, when a tax is deducted at source a certificate is received, the tax deducted is debited to Income Tax account and credited to interest account. The auditor should verify that this has been done properly.
- d. The auditor should compare the income of interest and dividend of this year with the one received last year. If there is significant change, he should enquire in to the reasons for the same.
- e. The auditor should obtain a list of the securities and check whether income is received on all of them. He should physically check their existence.
- f. If any securities are pledged with the bank, he should obtain a certificate from the bank about their existence with them.
- g. If there are any fixed deposits with the banks, he should check interest received on them from the bank pass book and also inspect Fixed Deposit Receipts issued by the bank.
- h. These days interest and dividend is directly credited to the investor's bank account through electronic transfer. Then the auditor can check their receipt with the entries in the bank pass book directly.

#### **7. Royalties Received:**

- a. Royalty is paid when ore or oil is extracted from the earth or oil well. Royalty is also paid to the author of the book or singer etc. To check the receipt of Royalty the Auditor should examine the terms and conditions of the agreement between the parties for the payment of Royalty.
- b. He should go through the correspondence with the lessee.
- c. Calculation of the Royalty should be checked and the auditor should see the counter foil or carbon copy of the receipt issued to the lessee on the receipt of the Royalty.
- d. Royalties due but not yet received should have been properly accounted for.
- e. If any income tax is deducted at source (T.D.S.) the auditor should see that certificate of such deduction is duly received from the lessee. Further, he should verify that entries in the Royalty Account and Income Tax Account are correctly done.

#### **8. Recovery of bad debts written off**

- a. Ascertain from the trail balance, the amount under consideration, and it should be taken to Profit and Loss Account.

- b. Check the journey entry passed for the same and its authorization.
- c. If the amount is received from a party under liquidation through his liquidator/ official receiver, check the letter from the person and check the amount which is received along with the year in which the original debt was written off.
- d. Trace the amount in the bank statement.
- e. Check the correspondence with the party and with the official receiver/liquidator.

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## 13.4 AUDIT OF EXPENDITURE

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### 1. Purchases

One of the major items of expenditure in a trading concern is purchase of goods for sale. Purchases can also be of two types namely cash purchases and credit purchases.

- a. **Cash purchases should be verified** with the cash memos or the receipted invoices received from the suppliers.
- b. All **credit purchases of goods are entered in** the purchase book. Along with the goods, the supplier sends invoices containing particulars of the goods like their weight, packing price, discount allowed or freight, Sales tax etc. paid on behalf of the client. These invoices are serially numbered and kept in a separate file. Entries in the purchase book are done on the basis of these invoices. Auditor should see that all the invoices received have been properly entered in the purchase book.
- c. **Secondly he should confirm that all the goods purchased are actually received** by the client. This is necessary because many a times, the invoices are sent by post and the goods are dispatched through a carrier like truck, railway etc.
- d. There may be some time gap between the receipt of the two. Client should pay only for the goods which are actually received by him. So, there should be a suitable internal control over the purchases.
- e. Goods are received by the store and the store keeper will verify that the goods received are as per the order placed and as per the invoice received. He must count, weigh and check the quality of the goods and if found satisfactory, then only the invoice should be forwarded to the accounts department for entry in the books and making of payment subsequently.

- f. Auditor should study the internal check system prevalent in the organisation for purchases and then decide to what extent he should verify the purchases. If test check is to be adopted, how many items are to be selected for verification? Each organisation develops internal control for purchases according to its needs. It will usually depend on the number of purchase and the size of the organisation and the staff employed. If the existing internal control system is not found to be satisfactory, the auditor should, exercise greater care in vouching the purchase transactions. He should suggest suitable changes in the internal check system.
- g. In a large concern, to start with the stores department sends purchase requisitions to the purchase department whenever certain goods are required. These purchase requisitions are to be sanctioned by the Head of the Department. He decides whether to purchase and how much to purchase. Purchase requisition contains details about the goods to be purchased, their quality quantity etc. After a decision to purchase is made, the purchase department invites tenders or quotations from different suppliers. Purchases manager studies these quotations and selects the best supplier and places order with him. Usually there are printed order forms which contain the terms and conditions. Copies of this order are sent to the stores department, accounts department and goods receiving from the supplier. The goods receiving department will verify the goods with the order placed – Quantity, quality packing etc. If everything is found satisfactory a goods received note is prepared and sent along with the goods to the stores department. One copy of this note is sent to purchase department and another to accounts department for payment.
- h. On receiving the bill from the supplier, the accounts department verifies the amount from the purchase order and quantity with the goods received note and then the bill of the supplier is passed for payment.
- i. The bill is first entered in the purchase book and the account of the supplier is credited. When payment is done to the supplier either in cash or through a cheque, entry is made in the cash book and in the supplier's account.
- j. Thus a large number of persons are engaged in the purchase department. So, an effective internal control system alone will prevent frauds in the department. However, the possibility of frauds cannot be completely ruled out. E.g. Payment may be made for fraudulent invoices without delivery of goods. Selected suppliers only may be favoured by orders and Kickbacks or gifts are received from them. So, the auditor should thoroughly study

the internal control system and see that purchases are duly authorised by some responsible officer and a proper procedure of purchase is strictly followed.

- k. The auditor should ensure that payment is done only after the goods are received in proper condition. The invoice received should be in the name of the client only. The date of the invoice is within the period under audit.
- l. Goods purchased should be used by the business and not by the officers of the company.
- m. Each invoice should be ticked or stamped after checking so that the same may not be produced once again.
- n. He should also see that trade discount is allowed at usual rate and as per the terms agreed upon while placing the order.
- o. The auditor should not accept duplicate invoices under the pretext that some invoices are misplaced or lost. Under such circumstances, he must obtain a statement from the supplier.
- p. The auditor should be more careful while vouching the purchases at the end of the year and at the beginning of the year. Because there is a possibility of showing bogus purchases at the end of the year to reduce profits and then to show them as returned at the beginning of the year. Current years purchases may be shown in the next year to increase profits. In both the cases, the accounts will not present true and fair operating results.

## **2. Purchase Returns :**

- a. If the goods are not of the ordered quality or quantity, they may entered in a purchases return book or return outward book and along with the goods a debit note is sent to the supplier. Auditor will see that the client follows a proper procedure for the return of the goods.
- b. Purchase return book entries are verified with the carbon copies of the debit notes sent to the supplier.
- c. As we have seen earlier, in large organisation, Purchase manager inspects the goods received and confirms that they are of the quality ordered. If they are not found to be as per the order, the goods are rejected. Rejection report is prepared and a copy of the same is sent to the accounts department. The suppliers account in the ledger is then debited. No such adjustment is necessary, if the supplier immediately replaces the defective goods by goods of satisfactory quality.

- d. He should see that the client sends a debit note or the supplier sends a credit note and the same is properly accounted for in the books of accounts.
- e. Quantity returned must be tallied with the store keeper's records. For manipulation of the year's profits, bogus purchase returns are shown in the beginning of the year or at the end of the year. Or this year's returns are shown in the next year or last year's returns are shown in this year. So, the auditor should verify returns in the beginning and the end of the year more carefully.

### 3. Salaries and Wages :

- a. Payment of salaries and wages is usually a major item of expenditure in any organisation. So, the auditor should pay a special attention for the verification of this item.
- b. There should be a proper system of internal control on this item. There are possibilities of payment of amount which were not due or excess of the amount due. There should be a strict control on the preparation of paysheets.
- c. Calculations of the salaries or wages due should be done correctly by a responsible officer and then checked and rechecked by 2 or 3 other high level officers.
- d. There are two systems of wage payment. Time rate system and piece rate system. If the time rate system is used, a fixed amount is paid as salary or wages for each month. Here the preparation of wage sheets is comparatively easy. Every month the same amount is paid to an employee unless he is on leave without pay. His pay increases either when he completes his year of service or on a fixed date every year as per the terms of the contract.
- e. If piece rate system is followed, we have to keep a record of not only his attendance but the work he has actually done during the month. Wages are calculated on the basis of the work actually done by him or goods produced by him. Besides salary, a worker may be paid dearness allowance, incentive bonus etc and a total gross salary is arrived at. From this there are deductions for Employee State Insurance Scheme, Professional Tax, Employees' Provident Fund, Income Tax, recovery of home loan vehicle loan fines and penalties etc. and a net amount payable to each employee is calculated. In popular parlance this is called a take home salary.
- f. A copy at the paysheet or wages sheet after the calculations are checked is now a days sent to the banker who directly credits

the net amount to the personal accounts of each employee in the bank.

- g.** As per Payment of Wages Act, employer has to pay dues to the employee every month before 10<sup>th</sup> of next month. Auditor should test check the calculations made in the wages sheets and get himself satisfied that the amount payable is calculated on proper lines.
- h.** Then various deductions made for Provident Fund, Income tax etc. should be credited to the respective accounts and paid to the concerned authorities in time as per provisions of concerned legislation.
- i.** There are possibilities of showing bogus names in the pay sheets and misappropriating the amount drawn in their names. So the auditor should see that such fraud is not committed.
- j.** If wages are paid on Time basis, an accurate record of attendance of the employees should be maintained. These days there are machines to record attendance of the employees, time of arrival and departure etc. Wherever possible, such machines should be used to correctly record their attendance. If piece rate system is in vogue, an accurate record of the work done by each worker should be maintained.
- k.** Wages sheets should be prepared by the staff which is in no way connected with the recording of attendance etc. If any employee is promoted during the month and his salary is increased, the auditor should personally verify the correspondence in this connection and re-fixation of his salary in the higher grade should be checked.
- l.** If there is overtime payment, which is usually drop 1½ or double the normal rate, the auditor should see that it is sanctioned by a competent authority and is justified. Auditor should compare the names in the wages sheets with the worker's register to detect inclusion of dummy workers and the workers who have left the company.
- m.** Auditor should compare the total amount paid as wages in this month with the amount paid as wages last month or any other month. If there is a great difference between the two, the auditor should enquire in to the causes.
- n.** If the client has a system of employing casual workers, the auditor should verify payment of wages to these workers more carefully as possibility of frauds here are more.
- o.** If the client has a Standard Costing system in his factory, the auditor should compare the actual amount paid as wages with the standard wages or budgeted wages calculated earlier and if the difference between the two is more, causes for the difference should be enquired in to.

- p. If the salary sheet contains any payment of wages of a partner, it should be seen whether the amount is within the limit prescribed by the Income Tax Act. Every year business firms send an annual return of salaries and wages paid to the employees to the Income Tax Department.
- q. Auditor should cross check the amount in the wages sheets with the statement sent to the Income Tax department.
- r. Salaries and wages paid can be revenue or capital. Salary paid on installation of plant and machinery or on construction of a building is a capital expenditure whereas wages and salaries aid for the production of goods and administration of office are revenue expenses. Auditor should verify whether this classification of expenses in to revenue and capital is correctly done.

#### **4. Payment of Rent :**

We have studied earlier the vouching of receipt of rent. Almost a similar procedure is to be adopted to vouch payment of rent.

- a. To begin with the auditor should go through the terms and conditions of the rental agreement entered with the land –lord.
- b. He should pay special attention to the period of the lease, rent to be paid, manner of payment, amenities to be provided by the landlord etc.
- c. These days, many landlords insist on payment of rent for a certain period like 3 or 6 months in advance. Some amount is also to be paid as a security deposit. If required Income tax (T.D.S.) and Service Tax is required to be deducted from the rent payable. Auditor should verify that the amount paid is properly accounted for in the books of account.
- d. When we pay rent to the landlord he issues a receipt. Such receipts should be serially numbered and neatly kept in a separate file. Auditor will check payment of rent on the basis of such receipts.
- e. Auditor should verify the correctness of the payment of rent as per the rent agreement. Income tax wherever deducted should be paid in to Government Account in time and a statement or a Return is filed with the Income Tax Authority in the prescribed form.
- f. Rent paid as advance or as a deposit should not be charged to revenue.
- g. If the security deposit with the landlord carries any interest, such interest received should be properly taken to profit and loss account.

- h. Auditor should ensure that suitable adjustment entries have been passed for prepaid and outstanding rent, in the books of accounts.

### 5. Payment of Insurance Premium :

Business is generally concerned with General Insurance i.e. Fire, Marine, Accident Insurance, Fidelity Insurance, keyman Insurance, loss of profit insurance etc. These policies are usually for one year and they are to be renewed every year. Insurance premium depends upon the amount of the policy. Business these days is full of uncertainties and the business management has to decide what risks it wants to insure. As noted above now a days there are innumerable insurance policies covering different types of risks. Manager will consider the different risks it has to face in business like fire, riots etc. and the premium payable for insurance. Studying both the aspects, the management decides to insure certain risks and the amount for which the risk is to be covered.

- a. Premium depends upon the amount of the policy. Auditor should verify the payment of insurance premium with the receipt received from the insurance company.
- b. Auditor should verify that the Insurance premium is paid and the policy is renewed every year in time.
- c. He should also consider whether the amount for which the policy is taken, adequately covers the risk involved in the particular business.
- d. Now a day, there are number of Government and Private Insurance companies and their rate of premium and risks covered are different. So the management should study these different terms contained in the policies and then select the company and the policy most suitable to meet its needs.
- e. Insurance premium paid is for one year. So, at the end of the year, suitable adjustment should be made in the books of accounts for prepaid insurance if any.
- f. Sometimes the staff takes life insurance policies on their own lives or lives of their members of their family drop and pay premium through their employer. Employer deducts the premium from the salary payable to the member of the staff and directly pays the amount to the insurance Company. LIC calls such policies, salary saving scheme policies. This is convenient both to the staff member concerned and also to the Insurance Company. Staff member need not bother to pay the premium every month to the company and the company gets the amount regularly from the employer. Under these circumstances, the auditor should see that the premium amount is correctly

recovered from the member of the staff and paid to the Insurance Company in time. Auditor should scrutinize the ledger and see that the transactions are accounted properly.

- g.** If no claim of loss is made during the year, Insurance Companies give some bonus or discount in the premium paid the next year. e.g. If you take an accident insurance policy for the vehicle and do not have any accident during the year. Insurance Company charges lower premium next year. Auditor should verify whether such bonus or discount has been allowed by the Insurance Company as per its rules or not.

#### **6. Telephone Expenses :**

- a.** To start with the auditor should obtain a list of telephones land line and mobile in the organisation.
- b.** Telephone charges are paid usually after the receipt of the bill from the telephone company. Auditor should verify whether the bill is in the name of the client only.
- c.** Telephone companies may require the customer to keep some amount with the company as security deposit. Auditor should verify the payment of deposit and payment of regular telephone charges are properly accounted for in the books of accounts.
- d.** Deposit with the company will be treated as an asset and shown in the Balance sheet whereas telephone charges paid are revenue expenses and taken to profit and loss account.
- e.** Personal Telephone bills of Directors and other executives should not be charged to the profit and loss account even though they are paid by the business on their behalf.
- f.** In good many companies, utility bills of the staff like telephone, electricity, water tax etc. of the staff are paid by the peons of the company to save the botheration of the members of the staff. However, amount thus paid on behalf of the members of the staff is subsequently recovered from their salary. Auditor should see that such recovery has been done. Auditor should also see that at the end of the year adjustment entries are passed for outstanding telephone and other expenses.
- g.** Auditor should study the internal control system specially over the use of I.S.D. calls. Profit and Loss account should contain the telephone expenses of the full year. If the telephone bill is paid through the bank, auditor should verify the same in the bank statement. If any new instrument of telephone is purchased, the bill for the same should be preferably capitalized.

**7. Petty Cash Expenses**

- a. Identify the persons who handle Petty Cash.
- b. Verify the ceiling limit of disbursement through Petty Cash.
- c. Note the limit of Imp rest System.
- d. See whether petty cash payments are regularly checked by a responsible official.
- e. Examine Reconciliation Statements prepared regularly for Petty Cash, based on vouchers.
- f. Verify the Cashbook for the transfer of Cash under Imp rest system to Petty Cash.
- g. Scrutinise the Petty Cash Vouchers along with Invoices, Bills, Receipts signed by the recipients.
- h. Trace the postage expenses along with entries in Mail Outward Register. Compare with previous periods and obtain satisfactory explanations for abnormal movements.
- i. Check the castings of columns, totals and main totals.
- j. Trace the postings from the Petty Cash Book into the Nominal Ledger Head of Account.
- k. Verify the petty cash physically available on a certain date, by way of surprise check.
- l. Examine the Suspense Vouchers I IOU's and ensure that they are reversed within a reasonable time.
- m. Conduct a Surprise Check of Petty Cash balance and compare the same with the Petty Cash Book.

**8. Advertisement Expenses**

- a. These days, business houses spend crores of rupees on advertisement. It's a necessary business expenditure and the auditor should see that the amount is properly spent. Expenditure on advertisement should be sanctioned by the competent authority of the organisation.
- b. Today there are innumerable types of advertisement and there are number of companies providing advertisement facility. A proper type of advertisement should be selected and a competent agency should be asked to conduct the advertisement campaign for the company. If the advertisement is done on right lines it will immensely benefit the business unit. If not, advertisement is a waste.

- c. Auditor should verify the amount spent with the receipt received from the advertising agency.
- d. He should see that the date of the receipt falls within the period of audit. It should be in the name of the client. Amount should be spent on the advertisement of the client's products only. First the advertising agency sends its bill for services and on receipt of the same, agencies account should be credited. Bill received should be kept securely in a file. When the amount is actually paid to the agency, its account should be debited and cash or bank account should be credited. If the firm has advertised its products in a New Paper, a cutting of the same should be obtained as a proof of the publication of the advertisement.
- e. If the Advertisement. is done through signboards the business unit has to pay rent for the place of display of the board. Auditor should see that payment of rent is properly accounted for.
- f. Usually commission is paid to the Advertising agencies at an agreed rate. Auditor should vouch payment of such commission. If there is a regular contract with the agency, auditor should go through the agreement and note down the terms and conditions agreed in the same.
- g. If any advance is paid, it should be suitably adjusted when the final bill is paid. If the payment is done through a bank, auditor should verify the same with the bank statement.
- h. If a large amount is spent on advertisement on a new product introduced in the market, some part of it may be treated as deferred revenue expenditure as the advertisement is likely to benefit the business for 2-3 years to come. In such cases, the auditor should verify whether the classification or division of expenditure in to capital and revenue is done on some sound principles.
- i. Advertisements are usually issued through advertising agencies. These agencies not only arrange for the publication of the advertisement as per your instructions but also prepare the draft of the advertisement in an attractive language in a minimum number of words. They have number of experts in this field on their staff. They also prepare advertising films, arrange for booking advertisement time on radio or television etc. After the publication of the advertisement they prepare and send their bill. The auditor should verify the payment of this bill and the receipt received from the agency.

### 9. Travelling

Demanded for all items of expenses incurred, except those which are capable of independent verification. As regards traveling expenses claimed by directors:

- a. The auditor should satisfy himself that these were incurred by them in the interest of the business and that the directors were entitled to receive the amount from the business.
- b. The voucher for travelling expenses should normally contain the under mentioned information: Name and designation of the person claiming the amount, Particulars of the journey, Amount of railway or air fare, Amount of boarding or lodging expenses or daily allowance along with the dates and times of arrival and departure from each station, Other expenses claimed, e.g., porter age, tips, conveyance, etc.
- c. If the journey was undertaken by air, the counterfoil of the air ticket should be attached to the voucher; this should be inspected.
- d. For travel by rail or road, the amount of the fare claimed should be checked from some independent source.
- e. Particulars of boarding and lodging expenses and in the case of halting allowance the rates thereof should be verified. The evidence in regard to sundry expenses claimed is generally not attached to T.A. bills. So long as the amount appears to be reasonable it is usually not questioned.
- f. All vouchers for travelling expenses should be authorised by some responsible official.
- g. In the case of foreign travel or any extraordinary travel, the expenses, before being paid, should be sanctioned by the Board.
- h. Unless the articles specifically provide or their payment has been authorised by a resolution of shareholders, directors are not entitled to charge travelling expenses for attending Board Meetings.

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## 13.5 SUMMARY

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This chapter deals with an important function or technique vouching of audit viz. Vouching of five items of revenue and five items of expenditure are discussed in greater details as illustrations.

Vouching is an act of examining vouchers. It is done to establish the authenticity of the transaction recorded in the books of accounts. It is to trace documentary evidence. Voucher is a

supporting document. Success of audit largely depends upon the efficiency with which the vouching function is carried out. It is the testing of the truth of the item in the books of accounts. Entries in the books are compared with the details in the voucher produced. Vouching confirms that all the transactions have been recorded and every transaction recorded has a supporting documentary evidence. Proper distinction has been made between capital and revenue items.

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### 13.6 QUESTIONS

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- 1) State the purpose of vouching.
- 2) How will you investigate misappropriation of cash sales?
- 3) How would you vouch cash purchases?
- 4) What do you understand by the term vouching?
- 5) "Vouching is the essence of Audit". Explain.
- 6) How would you vouch purchase ledger and sales ledger or credit purchases and credit sales?
- 7) What do you mean by vouching? How would you vouch cash sales?
- 8) How would you vouch the following?
  - a) Interest received on investments.
  - b) Cash purchases of stationary
  - c) Cash Sales
  - d) Advertisement expenses
- 9) Select the appropriate option and rewrite the sentence.
  - a) Which of the following document is not relevant for vouching of sales?
    - i) Daily cash sales summary
    - ii) Credit memos
    - iii) Delivery Challans
    - iv) Sales department attendance record.
  - b) ----- document is not relevant for vouching cash purchases.
    - i) Purchase invoice
    - ii) Goods inward register
    - iii) Attendance record of cashier
    - iv) Purchase order
  - c) Telephone charges should be examined on the basis of -----
    - i) Cash memo
    - ii) Agreement with telephone department
    - iii) Telephone bill
    - iv) All of the above
- 10) State whether the following statement is true or False.  
While checking dividend received the auditor should check dividend warrant.



## AUDITING TECHNIQUE VERIFICATION

### Unit Structure :

- 14.0 Objective
- 14.1 Introduction
- 14.2 Verification
- 14.3 Auditors general duties
- 14.4 Audit of Assets
- 14.5 Audit of Liabilities
- 14.6 Summary
- 14.7 Questions

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### 14.0 OBJECTIVE

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After studying the unit the students will be able to:

- Understand another technique of auditing viz. verification
- Explain the Difference between vouching and verification
- Explain how to verify assets viz. Plant and Machinery, Account receivables, investments and inventory and
- Know how to verify liabilities like outstanding expenses, Accounts payable, secured loans and unsecured loans.

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### 14.1 INTRODUCTION

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Verification is the technique used for auditing the assets and liabilities. Verification means the procedure normally carried out at the year end to confirm the ownership, valuation and existence of items at the balance sheet date. It also involves confirming that presentation in the financial statements is in accordance with laws governing the particular unit. Just examinations of the books of accounts with a view to ascertain their arithmetical accuracy is not enough. The auditor must verify that the various items appearing in the balance sheet are actually in the possession of the concern. In short, verification means proving the truth or confirmation.

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## 14.2 VERIFICATION

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### 14.2.1 Meaning and Definition

Verification is a broader term and includes valuation of the assets and liabilities. The auditor has to report that the Balance – sheet exhibits a true and fair view of the state of affairs. So, he has to ascertain the correctness of value of assets and liabilities in the Balance sheet. Such examination is called verification of assets and liabilities.

#### **Spicer and Pegler ,**

“The verification of assets implies an enquiry in to the value ownership and title, existence and possession and the presence of any charge on the assets!

#### **J.R. Batlibei,**

“the auditor must satisfy himself that assets really existed at the date of the Balance sheet and were free from any charge and they have been properly valued. In verifying the liability, he has to see that all liabilities have been inserted at their proper figures and that no liability has been omitted.”

**Institute of Chartered Accountants** opines that verification of assets should establish their:

- a) Existence
- b) Ownership
- c) Possession
- d) Freedom from encumbrances
- e) Proper recording and
- f) Proper valuation

### 14.2.2 Verification V/S Vouching:

Vouching and verification appear to be similar or same but they are not. Vouching proves the accuracy of the books of accounts but the worth of the assets and liabilities is confirmed by verification. Thus there is a clear line of demarcation between the two. Vouching is to examine the correctness of the transaction in the books and verification confirms correctness of their valuation as shown in the balance sheet. Thus the auditor has not only to see that a particular asset has been actually acquired but to see that it physically exists and is owned by the client. It is to be shown in the balance sheet at a right price.

Difference between the two will be more clear if we look at an example Building. If the auditor only vouches the purchase of a building he may not know whether the building is mortgaged for any loan or not. Vouching will not prove the existence of an asset. Values of assets and liabilities shown in the Balance – sheet may

not be the same on the date of the balance sheet. So, to verify the existence and proper valuation, verification is necessary.

Thus, we can conclude that vouching and verification are different but equally important for proper audit.

#### **14.2.3 Technique of verification:**

##### **1. Inspection:**

The auditor may visit the premises of the client and physically verify the existence of the assets, second method is observation. E.g. closing stock or cash in hand on the last working day is counted by the staff of the client. The auditor may be present there at that time and observe that they are doing their job on proper lines. In the case of assets like shares and securities, mortgaged with the Bank for a loan, he may ask the concerned Bank manager to issue a certificate about their existence in his possession.

##### **2. Observation :**

The auditor may observe or witness the inspection of assets done by others.

##### **3. Confirmation :**

It means obtaining written evidence from outside parties regarding existence of assets.

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### **14.3 AUDITORS GENERAL DUTIES**

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#### **14.3.1 Auditors General Duties**

Here the position of the Auditor is a little different because he is not supposed to be an expert in this field. He has no technical knowledge. He has to depend upon the valuation made by the Directors, expert valuers, surveyors etc. to a large extent. In this concern auditor's general duty is as below:

1. He has to see that the assets are valued by valuer on reasonable ground. Auditor cannot guarantee the correctness of the valuation. But he must get himself satisfied that valuation done is fairly satisfactory.
2. Auditor should see that the valuation is done according to certain accepted principles of accountancy.
3. Auditor should carefully inspect the available documents to arrive at the correct value of assets. If there is any room for suspicion, the auditor should probe deep in to the matter.
4. The auditor is required to report about the valuation of the assets on the date of the balance sheet. However, if before the completion of audit any major event has happened regarding

these assets, the auditor should take cognizance of such an event and take note of the same in his report.

5. Many a times a foot note is added to the financial statements. Suppose the balance sheet shows the existence of a building of Rs. 10 lakhs but after the date of the balance sheet there is a fire in the premises and the same is completely destroyed. This fact should be shown as a foot note in the financial statement and included in the auditor's report.
6. Whatever is the policy of the management regarding valuation of different assets, there should be consistency in the same. This policy should not be changed from year to year. Policy should be changed only when it is absolutely necessary and when such change is made, it should be either mentioned in the financial statements or included in the auditor's report. Auditor should mention the effect of such policy change on the profits of the concern. Auditor is expected to test check the calculation of valuation of assets.

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## 14.4 AUDIT OF ASSETS

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### 1. Plant and Machinery:

Business units which use number of machines in their business usually maintain a Plant Register. To begin with the auditor should ask any responsible officer of the business unit to supply him a list of plant and machinery used in the business. This list should be complete in all respects.

#### **Auditor's duty**

- a) The auditor should verify the asset by comparing the schedule with the details in the plant register. The machinery purchased during the year should be vouched by reference to the invoices and other relevant vouchers. If any machinery is sold during the year, auditor should verify that the sale has been properly accounted for in the books of accounts. Profit or loss on sale of the Machinery should be duly recorded.
- b) If any plant is located or installed in a foreign country, the auditor should require that the engineer concerned should furnish a certificate reporting whether the plant is working efficiently or not. Such report should be compared with the details in the Plant Register or schedule of plant.
- c) At the end of the year a statement is prepared from the Plant Register showing opening balance, sale and addition there to during the year in respect of various items of machinery and plant. Its total is then reconciled with the balance in the General Ledger.

- d) If any new machinery is purchased it is as usual vouched with the invoice and receipt of money issued by the supplier. However, if any part of the Machinery is manufactured in the factory of the client, the auditor should verify whether correct amount spent on material, Labour etc. is allocated to the machinery account. In addition the auditor may ask any senior engineer of the client to certify the correctness of the value of the machinery. If any machinery or part of it is sold, scrapped or destroyed, the auditor should ascertain the correctness of profit or loss arising therefrom.
- e) Though it is the duty of the management to ensure that the fixed assets are in existence, the auditor should periodically physically examine the different machines in the premises. Such verification may be done every three years or five years depending upon the size of the organisation.
- f) Plant and machinery is a fixed asset and is valued in the Balance Sheet at cost less depreciation. There are different methods of depreciation in use and a business concern can choose any method that is found suitable to it. However Income Tax department adopts written down value method only for calculating taxable income. So using the same method will be more convenient as adjustment in the books of accounts are not necessary. Any method adopted, should be consistently used because the amount of depreciation under different methods is different and profit will also be different. If the method of depreciation is changed in any year, this fact should be clearly mentioned on the financial statements and the report of the Auditor. If any year the plant and Machinery is revalued the depreciation should be calculated on the revised value and not on the historical value.
- g) Large concerns maintain a special Plant Register which contains full information about each machinery like its cost date of purchase, amount spent on repairs, name and address of the supplier etc. Thus the Register contains full history of each plant. As and when any plant is to be replaced, this information helps the management to select the supplier for the new machine.
- h) Under Indian Companies Act it is mandatory for the limited companies to maintain a Register of Fixed Assets.
- i) Auditor should get himself satisfied that adequate amount of depreciation is provided on plant and machinery. He may take here the help of a technical expert to estimate the number of years for which the machinery is likely to work satisfactorily.
- j) Sale and acquisition of plant and machinery should be done only by a duly authorised person. Auditor should verify from the available documents that the plant and machinery is owned by

the client and is not mortgaged with any financial institution for a loan. If it is found to be mortgaged, auditor should verify the relevant documents and see that the fact of this charge created is clearly disclosed in the financial statements. Present market value of the machine should not be taken in to account.

- k) **Machinery under Hire Purchase Scheme** :If the client has acquired plant and machinery on Hire Purchase Scheme the auditor should inspect the Hire Purchase Agreement and terms of payment. He should further confirm that the instalments are being paid regularly as per the agreement. Usually the title of the machinery is passed on to the purchaser only after the last instalments is paid. However, it depends upon the agreement between the concerned parties. So the auditor should look particularly for this clause in the agreement. Hire purchase instalments paid include interest. Auditor should see that only part of the cash value of the machine paid is capitalised. Interest paid is taken to profit and loss account. However, depreciation should be calculated on the entire cost price of the asset and not merely o the part of the cash price paid. If any machinery is taken on hire it should no be shown in the balance sheet.
- l) **Imported Machinery:** If the machinery is imported, the auditor should see the agreement with the foreign supplier. He should also see whether the client has received import licence and permission of the Reserve Bank for the remittance of the price of the machine.

## 2. Fixtures and Fittings :

Fixture is an asset fixed to land or building and forms part of the machine. Fittings are fitted on the wall like electric fittings. Cost of fixtures and fittings are added to the cost of the machine.

## 3. Investments :

Investments may be in Share certificate, Government Bond certificate, Government Loan certificate, Debenture Certificate, Mutual Fund Certificate or statement etc. Extra or idle funds with the concern may be invested in shares, bonds, debentures etc.

### • Auditors Duty

- a. If a large amount is found invested in different types of securities, the auditor may ask any responsible officer of the client to provide him an exhaustive list of such investments. Just like a Plant Register many concern maintain an Investment Register giving full details of each title like its face value, purchase price, rate of interest date on which interest is due, date of their maturity name and address of the company, the date on which the interest is actually received and so on.

- b.** The auditor should physically inspect the investment certificate as per this register. These days usually the investments are not maintained in physical form because all transactions on the stock exchange are done usually through Demat accounts. If the investments are in demat form, the auditor should ask the depository participant (popularly known as D.P.) to supply a copy of the demat account of the client with him and verify the existence of the investment.
- c.** If the investments are in a physical form, the auditor should complete their verification at one stretch so that the same certificates may not be produced twice.
- d.** If the number of such certificate is very large, it may not be possible to complete verification in one sitting. In such a case, the auditor should keep the verified certificates separately under his control or custody.
- e.** Sometimes such certificates are with the trustees. Then the auditor should inspect the trust deed and see whether such an action is permitted by the trust deed. Securities may also be kept with the bankers for safe custody. Then the auditor should get a list of investments with them from the trustees or bankers.
- f.** Client may have taken a loan from the bank on the security of such certificates. In that case also the certificates are with the bankers. So, the auditor should enquire whether the certificates are deposited with the bankers for safe custody or as a security against any loan. If any loan is taken, the auditor should further enquire whether the loan is taken for the purpose of the business and properly accounted for in the books of account. Here there is a possibility that top executives of the client, might have used the certificates to obtain a loan for their personal purpose. When any loan is taken against the security of investments, this fact should be clearly disclosed in the financial statements.
- g.** If the investments are of non-trading investments or investments of a permanent nature, they are to be shown in the Balance Sheet as fixed assets and valued at their historical cost. However, here also their market price on the date of the balance sheet is shown in the inner column in a bracket for the information of those who read these financial statements.
- h.** The auditor should also ask the client to supply a list of securities bought and sold during the year under audit. Decision about the purchase or sale of investments should only be taken by top authorities. Auditor should verify whether their consent has been duly obtained. Acquisition and disposal of shares and other securities are done through the brokers on the stock exchange. The auditor should verify these transactions with the contract note, bill of cost etc sent by the brokers. Investments

can be purchased or sold cum interest / dividend or ex-interest / dividend. Auditor should verify that such transactions are properly accounted for in the books of account. If the amount of purchases and sales is substantial, the auditor should check the price paid and received with the stock exchange quotations of those respective days. Expenditure incurred on account of transfer fees stamp duty etc. are included in the cost of the investments.

- i. Dividend declared during the year under audit or before completion of the audit but for the period covered by the audit is treated as the income of the same year though not actually received.
- j. Auditor should be satisfied that there is a valid evidence of their ownership and custody of the investments and they should be properly classified in the Balance Sheet as current and long term investments.
- k. If there is any right issue, auditor should verify whether the client has subscribed for them fully or sold the right.
- l. If the client holds any partly paid shares, the auditor should see that the uncalled amount on these shares is shown in the balance sheet as a contingent liability. If any investments are held in the name of persons other than the client, the auditor should confirm their ownership.

#### **4. Patent and Trademarks:**

- a. The ownership of patent rights is verified by inspection of certificate issued for grant of patent, by the prescribed authority.
- b. If it has been purchased, the agreement surrendering it in favour of the client should be examined.
- c. If there are a number of patents held by the client, obtain a schedule giving the full details thereof or verify with reference to the register maintained by the client.
- d. It must be verified that patent rights are alive and legally enforceable and renewal fees have been paid on due dates and charged to Revenue Account. The last renewal receipt should be examined to ascertain that the patent has not lapsed.
- e. See that the patents are properly registered in the name of the client only.
- f. See that the cost of patent is being written off over its useful period of life.
- g. In case the patent is acquired, cost paid for the same and all relevant expenses are to be capitalized.

- h. If the patent is created by the client by the research experiments and laboratory work, only the actual expenses incurred for it in the process are to be capitalised.

## 5. Copyrights

- a. The auditor has to examine the written agreement of assignment along with the royalty paid to the authors etc., for such copyrights.
- b. He has to see that such assignments are properly registered.
- c. If the client is the owner of many copyrights, the auditor should ask the client to prepare a schedule of copyrights and get the detailed information to confirm that the same is shown in the Balance Sheet.
- d. Regarding the value of copyrights, it should be remembered that this asset has no value in the long run. Hence, value is determined on revaluation basis and period of copyrights.
- e. If any copyright does not command the sale of any books, then the same should be written off in such year. The auditor has to verify the same in detail.

## 6. Know how

- a. Know how is recorded in the books only if it has been paid for. If it is developed in house, it cannot be capitalised. The auditor should keep his in mind while verifying know-how.
- b. Know-how can be of two types:
  - i) Relating to manufacturing process - The auditor should ensure that the expenditure is written off in the year of payment itself.
  - ii) Relating to design plans of plants, building etc. - The auditor should ensure that the expenditure is capitalized and depreciation is charged on the capitalized figure. In case lumpsum payment is made for both types of know-how, both the types should be segregated on a reasonable basis.
- c. Under the Income-Tax Act, cost of Know-how can be deducted subject to the rules laid down.
- d. The auditor should keep this fact in mind while computing the tax liability for the year under audit.

## 7. Free hold Property (Land & Buildings):

- a. The auditor has to examine the title deeds of the property owned by the client and confirm that the same is freehold.

- b. If the property has been purchased during the year, the auditor has to examine the correspondence with the broker, or solicitor in details.
- c. When a building has been constructed on the freehold property, the same is to be verified from builder's bill or architect's certificate.
- d. Where the title deeds are deposited with the mortgagee on a mortgage, then a certificate from him to that effect is to be obtained for verification.
- e. If the title deeds are deposited with the bankers or solicitors for safe custody, the auditor should get a certificate from them to confirm the fact.
- f. If required, the auditor should ask the solicitor of the client to confirm the validity of the title deeds relating to the property.
- g. The auditor has to see that the conveyance of the property is in the name of the client and the same is properly registered.
- h. The auditor has to ensure that the property is properly insured.
- i. The auditor should see that separate account for land and building is maintained. Because on land, usually no depreciation is provided.
- j. In case there is appreciation of land and buildings value by revaluation, the auditor has to see the basis of revaluation and confirm that the same is properly disclosed in the Balance Sheet, to comply with the generally accepted accountancy principles and also the provision of Companies Act, 1956.

#### **8. Loose Tools, Patterns, Dies, etc.**

- a. Since the duration of the usefulness of such assets is very low, there is no need of maintaining separate accounts for each of them. The auditor in this case should see whether proper supervision has been exercised over these assets, as there is every possibility of pilferage of such small assets.
- b. The auditor should collect a list of small tools, dies, moulds, rigs, etc. from a responsible officer and examine the same very carefully. He should also see that such a list has been certified by a responsible officer.
- c. As regards the valuation of small tools, the auditor should see that in the case of the concern which manufactured its own tools, the tools are not to be valued in excess of the cost.
- d. Generally, these types of assets appear to be either lost or consumed very rapidly. So the conventional method of depreciation should not be applied in their cases. The suggestion as given by Montgomery in this connection may be

stated. "Charging the cost of replacement of such items to maintenance in lieu of depreciating them is usually a satisfactory alternative". The auditor should see whether the above mentioned suggestion has been accepted or not.

- e. The auditor should also see whether such an asset has been properly shown in the Balance Sheet.

### **9. Stores and Spare Parts**

Auditor's duties with regard to the verification and valuation of such assets may be stated as follows:

- a. The asset known as stores and spare parts consists of materials which are means for consumption in the business and not for resale. Lubricants, dyes, fuel, etc., are examples of stores, while spare parts of machinery are preserved to maintain it in proper order.
- b. The asset as such should be clearly shown in the Balance Sheet.
- c. The auditor should obtain an inventory of stores and spare parts duly certified by a responsible officer. He should count the stock himself and thus verify the existence by personal inspection, if possible.
- d. It is to be remembered that the stores consumed are debited to the Manufacturing Account and spare parts used are debited to the Machinery Account.
- e. The asset is to be shown at cost price in the Balance Sheet It is not a depreciable asset by use and provision for depreciation is not necessary.
- f. However, the loss on account of breakage or waste on being worn out should be duly written off.
- g. The asset should be revalued annually.

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## **14.5 AUDIT OF LIABILITIES**

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Liabilities are the financial obligations of an enterprise. Like loans, trade creditors, installments payable under Hire purchase agreements etc. An important feature of the liabilities is that they are represented by documentary evidence. Liabilities originate from third parties which deal with the client.

Verification of liabilities is as important as the verification of assets. If any liability is omitted or under or over stated, the balance sheet would not show a true and fair view of the state of affairs of the concern. E.g. If liability for payment of any expenditure is omitted, the profit and loss account will not show the correct profit

earned by the concern. Moreover as the outstanding expense is not shown in the balance sheet and it will not show the correct financial position of the concern. On the other hand if any fictitious liability is included, profits shown will be lower and the financial position revealed by the Balance sheet will be found to be misleading. So, the Auditor should carefully verify that the liabilities stated in the Balance sheet on the last working day are in fact payable and all liabilities payable have been accounted for. The auditor may ask any responsible officer to certify that all liabilities have been included in the books of account and all contingent liabilities are also shown as a foot note in the Balance Sheet.

- **Audit of some liabilities by the Auditor.**

- 1. Outstanding Expenses and Auditor's Duty**

- a. To begin with the auditor should ask the Chief Accountant or any other responsible officer dealing with the accounts of the client to supply him a list of outstanding expenses classified by nature of expenses.
- b. Further, he should be asked to certify that all the outstanding expenses have been included in the current year's accounts.
- c. The amount paid on various accounts should be verified from the entries in the cash book. All unpaid expenses on the date of the Balance sheet should be included in such a list.
- d. Auditor should compare this year's outstanding expenses with those of the last year. If there is a major difference between the two, he should enquire into the reasons for the same.
- e. He should examine the documentary evidence supporting the outstanding expenses. Usual outstanding expenses are last month's salary and wages, rent, legal expenses, audit fees etc.

- 2. Secured Loans and Unsecured Loans :**

Loans and borrowings form an important part in any business. No businessman carries on his business using only his own funds. Even in the Tata group of companies, Tata family hardly owns 5% of the capital. Thus almost all business units have to take loans for running their business. Loans are of two types – secured loans and unsecured loans. Both the types of loans have many things in common. So, let us consider them together.

- a. To start with, the auditor should examine the partnership deed or Memorandum of Association to find out the powers of the client to borrow money.
- b. There are no restrictions on the sole proprietor regarding the amount to be borrowed. He can borrow as much as he needs.

However, as his assets and repaying capacity is limited, he cannot borrow on a very large scale. His capacity to repay, puts a limit on the amount he can borrow.

- c. Amount borrowed should be within the permissible limit. The auditor should examine the loan agreement and note down the terms on which the money is borrowed, like rate of interest to be paid, security to be offered, period of the loan, method of repayment etc.
- d. He should verify the cash received from the entry in the cash book and a duplicate of receipt passed on to the lender.
- e. In case of bank overdraft, he should scrutinize the agreement with the bank.
- f. If any security is offered against the loan, he should enquire into the details of the security given. This fact should be clearly disclosed in the balance sheet.
- g. The auditor should find out whether there was a real need for such loan and the terms of the loan are reasonable and not against the interest of the client.
- h. He should also see that the loan taken is used for the very purpose for which it was taken. If any property is mortgaged, the mortgage deed should be registered with the Government Authorities.
- i. Interest and installments paid on the loan should be verified with the receipt issued by the lender. Such payment should be according to the time schedule agreed in the agreement. If such installments are not paid in time as agreed to, it will affect the goodwill and credit worthiness of the client in the market.
- j. With the permission of his client, he should confirm the balance of the unpaid loans directly from the lenders.
- k. In the case of a bank overdraft, a certificate of balance may be obtained from the bank. If any interest is outstanding on the date of the balance sheet, the auditor should see that the same is shown in the Balance Sheet. The rate of interest agreed to be paid on the loan should be reasonable taking in to account the prevailing market rate.
- l. Loans in business are for large amounts. So they are normally secured. If any loans are unsecured, there will be no charge on any assets of the concern.

### **3. Contingent Liabilities**

Contingent liabilities are those liabilities which may or may not arise in the future for payment. The auditor's duty is to see that all known and unknown liabilities have been brought into the accounts at the date of the Balance Sheet and have been shown in the Balance Sheet separately as such.

- a. **Liabilities on Bills Receivable discounted and not matured :**  
If the bills receivable are discounted with a bank and the money so received from it is made use of, the entire money will be refunded to the bank if the acceptor does not make payment on the date of its maturity. This is why such a contingent liability is distinctly shown in the Balance Sheet by way of a footnote.
- b. **Liabilities for calls on partly paid shares:** The amount called on shares held and paid should be verified from the cash book and the liability for the amount uncalled should be ascertained.
- c. **Liability under a guarantee:** The auditor should ascertain the liability for a guarantee given by the client for a loan or overdraft to his friend or partner. In case of nonpayment of such a loan, the possible liability should be ascertained.
- d. **Liability for cases against the company not acknowledged as debts:** It is a liability in a disputed case where damages may have to be paid. A contingent liability should be ascertained and a note should be made at the foot of the Balance Sheet.
- e. **Liability in respect of arrears of Dividend on Cumulative preference Shares:** The auditor should examine the Articles of Association which should lay down rules in this regard and due provision should be made for such a liability.

**Auditor's duty:** The auditor should very carefully check the various contingent liabilities named above. There may be some such liabilities for which no provision has been made in the books but merely a note has been made at the foot of the Balance Sheet, e.g. Bills Receivables which have been discounted and which have not matured at the date of the Balance Sheet, arrears of fixed cumulative dividends, etc. For liabilities in respect of which provision has to be made in the Balance Sheet, viz a suit, etc., the auditor should examine such cases and ascertain the amount to be specifically reserved for the purpose. The auditor should examine the Director's Minute Book, correspondence made with the legal advisers and the information obtained from the officials of the business. He has to ensure that proper provision has been made for all such liabilities and if he is not satisfied, he should mention the fact in his report. It is to be remembered that the requirements of the Companies Act regarding the contingent liability should be complied with in the Balance Sheet on the liabilities side.

#### 4. Bills Payable:

The auditor should verify the Bills Payable in the following ways:

- a. The Bills Payable Book should be checked with the Bills Payable Account.

- b. The Bills Payable already paid should be checked from the Cash Book and the returned Bills Payables should be examined.
- c. To verify the Bills Payables which have not yet matured at the year end, the auditor should examine the Bills Payable book and should check the Cash Book of the succeeding years to see whether any payment has been made in respect of such bills. In case of any doubt, the auditor may ask the drawers for the confirmation of the bill.
- d. The auditor should see if any charge has been created on the assets of the concern by accepting the bill and he should see that the facts are disclosed in the Balance Sheet.

We have discussed above verification of some assets and liabilities as illustrations. All other assets and liabilities are also to be verified almost on the same lines.

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## **14.6 SUMMARY**

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The procedure of verification is carried on at the end of the year. The purpose of verification is to verify ownership, valuation and existence of different assets and liabilities, at the end of the year. Merely checking the entries in the books of accounts is not enough. The auditor should confirm that these assets and liabilities do really exist on the date of the balance sheet.

Verification is an enquiry in to the valuation, ownership, title and existence and possession of assets and liabilities. It also checks whether there is any charge on the assets.

As per the instructions of the institute of Chartered Accountants CARO (Company Auditor's Report Order) it is the duty of the management to verify the existence of fixed assets from time to time. Auditor has to state in his report whether the management has done this or not.

There is a lot of difference between vouching and verification. In vouching entries in the books are checked. This process can be carried out throughout the year. Documentary evidences are verified. Verification examines assets and liabilities shown in the balance sheet at the end of the year. It includes valuation. However, vouching and verification are equally important for audit.

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**14.7 QUESTIONS**

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1. Write a short note on objectives of verification.
2. "Vouching and verification appear to be similar or same but they are not." Explain.
3. State the importance of verification and valuation of stock from the point of view of an auditor.
4. What are the steps to be taken by the auditor in verification of stock?
5. How would you audit the following:
  - i) Plant and Machinery
  - ii) Patterns, Dies and Loose Tools
  - iii) Investments
  - iv) Contingent Liabilities
  - v) Outstanding expenses
  - vi) Secured loans
  - vii) Unsecured loans
6. Select most appropriate option and rewrite the following sentences.
  - i) Debtors are valued at
    - a. Book value
    - b. Decided by the customer
    - c. Realisable value
    - d. As per articles of Association
  - ii) Stock of goods on consignment should be valued at -----
    - a. Invoice price
    - b. Cost plus proportionate expenses
    - c. Cost or realisable value whichever is less
    - d. None of the above
  - iii) ----- asset which is not subject to physical verification.
    - a. Cash
    - b. Debtors
    - c. Stock
    - d. Furniture
2. True or false
  - i) Verification protects against misuse of assets.
  - ii) Mortgage means a charge on the immovable property to secure a debt.
  - iii) A method of valuation of assets should not be consistent.

## 3. Filling in the blanks;

- i) As long as the business is in existence, the assets are valued under the-----.
- ii) When the business is closed and winding up process starts, the assets are valued under the-----.
- iii) Intangible Assets like goodwill, patent rights, know – how etc. are valued on cost basis.
- iv) Floating assets like stock in trade. Bills receivable, sundry debtors etc. are shown at -----value.
- v) Investments are of two types ----- investments and -----investments.
- vi) Current investments are valued as ----- assets and long term investments are valued like ----- assets.
- vii) The price at which the asset is being transacted in the market means -----.

