

UNIT - 1

INTRODUCTION TO FINANCIAL ACCOUNTING

Introduction to Accounting: Accounting is understood as the Language of Business. However, a business may have a lot of aspects which may not be of financial nature. As such, a better way to understand accounting could be to call it The Language of Financial Decisions. Luca Paciolo, Mathematician Published a book De computicet scriptures in 1494 at venice in Italy.

Meaning of Accounting:

Thus, book-keeping is an art of recording the business transactions in the books of original entry and the ledges. Accountancy begins where Book-keeping ends. Accountancy means the compilation of accounts in such a way that one is in a position to know the state of affairs of the business. The work of an accountant is to analyze, interpret and review the accounts and draw conclusion with a view to guide the management in chalking out the future policy of the business.

Definition of Accounting:

American Institute of Certified Public Accountants (AICPA): “The art of recording, classifying and summarizing in a significant manner and in terms of money transactions and Management events, which are in part at least, of a financial character and interpreting the results thereof.”

Smith and Ashburne: “Accounting is a means of measuring and reporting the results of economic activity

R.N. Anthony: “Accounting system is a means of collecting summarizing, analyzing and reporting in monetary terms, the information about the business activities.”

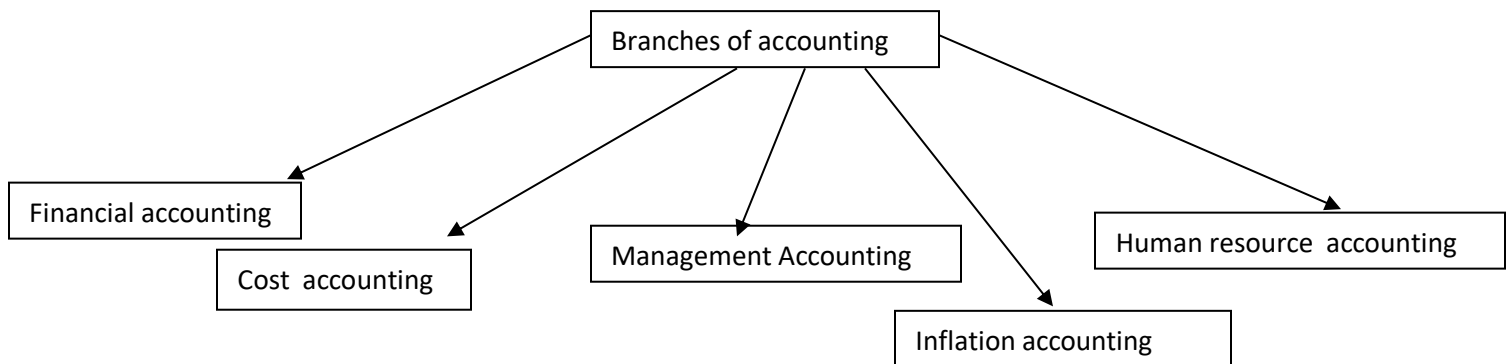
Thus, accounting is an art of identifying, recording, summarizing and interpreting business transactions of financial nature. Hence accounting is the **Language of Business**.

Objectives Of Accounting:

- 1. To maintain records of Business:** one of the important objectives of accounting is the systematic maintenance of all monetary aspects of business transactions. This is known as book-keeping
- 2. To calculate Profit or loss:** The profit earned or the loss suffered during a specific period (generally a year) can be calculated easily from the accounting books
- 3. To ascertaining Financial Position:** by preparing the financial statements (trading and Profit &loss account and Balance sheet) the financial position of the company can be found out. From these statement it is possible to know the resource (assets) owned by the firm. These statements also provide information about obligation (liabilities) of business. Thus accounting aims at depicting the true and fair financial position of a concern.
- 4. To communication financial information:** Accounting is called language of business. It aims at communicating financial information to various interested parties (viz, managers, investors, government etc)

Branches of Accounting:

The important branches of accounting are:



- 1. Financial Accounting:** The purpose of Accounting is to ascertain the financial results i.e. profit or loss in the operations during a specific period. It is also aimed at knowing the financial position, i.e. assets,

liabilities and equity position at the end of the period. It also provides other relevant information to the management as a basic for decision-making for planning and controlling the operations of the business.

2. **Cost Accounting:** The purpose of this branch of accounting is to ascertain the cost of a product / operation / project and the costs incurred for carrying out various activities. Cost Accounting is analyse the expenditure so as to ascertain the cost of various Products Manufactured by the firm and fix Prices. It also helps to controlling the costs and Providing necessary costing information to Management for decision Making.
3. **Management Accounting:** The purpose of Management Accounting is to assist the Management in taking rational Policy decision, Pricing Decision, Make or Buy decisions, Capital Expenditure decision etc. This branch of Accounting is Primarily concerned with Providing the necessary accounting information about finds, costs, Profits etc, to the Management data required for this purpose are drawn accounting and cost-accounting.
4. **Inflation Accounting:**It is concerned with the adjustment in the values of assets and of profit in light of changes in the price level. In a way it is concerned with the overcoming of limitations that arise in financial statements on account of the cost assumption (i.e. recording of the assets at their historical or original cost) and the assumption of stable monetary unit.
5. **Human Resource Accounting:** Human Resource Accounting means accounting of people as organisation resource. It means the measurement of the cost and value of people in organisation. It is a branch of accounting which seeks to report and emphasize the importance of human resources in a company's earning process and total assets. It is concerned with the process of identifying and measuring data about human resources and communicating this information to interested parties. In simple words, it is accounting for people as organizational resources.
6. **Social Responsibility Accounting:** Responsibility Accounting represents a method of apprising the Performance of various Divisions of Organisation. It is system of accounting that recognises various responsibility centres and reflects the plans and actions of each of these centres by assising Particular revenues and cost to those Plans.

ADVANTAGES OF ACCOUNTING

The role of accounting has changed from that of a mere record keeping during the 1st decade of 20th century of the present stage, which it is accepted as information system and decision making activity. The following are the advantages of accounting.

- 1. Provides for systematic records:** Since all the financial transactions are recorded in the books, one need not rely on memory. Any information required is readily available from these records.
- 2. Facilitates the preparation of financial statements:** Profit and loss account and balance sheet can be easily prepared with the help of the information in the records. This enables the trader to know the net result of business operations (i.e. profit / loss) during the accounting period and the financial position of the business at the end of the accounting period.
- 3. Provides control over assets:** Book-keeping provides information regarding cash in hand, cash at bank, stock of goods, accounts receivables from various parties and the amounts invested in various other assets. As the trader knows the values of the assets he will have control over them.
- 4. Provides the required information:** Interested parties such as owners, lenders, creditors etc., get necessary information at frequent intervals.
- 5. Comparative study:** One can compare the present performance of the organization with that of its past. This enables the managers to draw useful conclusion and make proper decisions.
- 6. Less Scope for fraud or theft:** It is difficult to conceal fraud or theft etc., because of the balancing of the books of accounts periodically. As the work is divided among many persons, there will be check and counter check.
- 7. Tax matters:** Properly maintained book-keeping records will help in the settlement of all tax matters with the tax authorities.
- 8. Ascertaining Value of Business:** The accounting records will help in ascertaining the correct value of the business. This helps in the event of sale or purchase of a business.
- 9. Documentary evidence:** Accounting records can also be used as an evidence in the court to substantiate the claim of the business. These records are based on documentary proof. Every entry is supported by authentic vouchers. As such, Courts accept these records as evidence.

10. Helpful to management: Accounting is useful to the management in various ways. It enables the management to assess the achievement of its performance. The weakness of the business can be identified and corrective measures can be applied to remove them with the helps accounting.

LIMITATIONS OF ACCOUNTING

The following are the limitations of accounting.

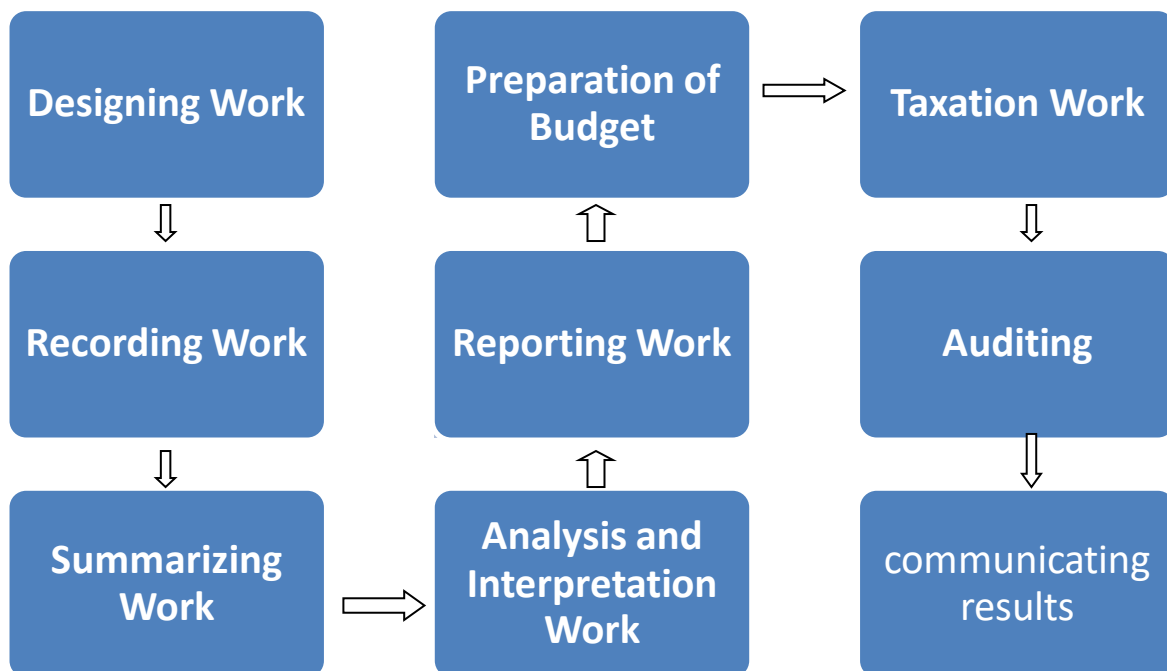
- 1. Does not record all events:** Only the transactions of a financial character will be recorded under book-keeping. So it does not reveal a complete picture about the quality of human resources, location advantage, business contacts etc.
 - 2. Does not reflect current values:** The data available under book-keeping is historical in nature. So they do not reflect current values. For instance, we record the value of stock at cost price or market price, whichever is less. In case of, building, machinery etc., we adopt historical cost as the basis. In fact, the current values of buildings, plant and machinery may be much more than what is recorded in the balance sheet.
 - 3. Estimates based on Personal Judgment:** The estimate used for determining the values of various items may not be correct. For example, debtor is estimated in terms of collectability, inventories are based on marketability, and fixed assets are based on useful working life. These estimates are based on personal judgment and hence sometimes may not be correct.
 - 4. Inadequate information on costs and Profits:** Book-keeping only provides information about the overall profitability of the business. No information is given about the cost and profitability of different activities of products or divisions.
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FUNCTIONS OF AN ACCOUNTANT

The job of an accountant involves the following types of accounting works

Process of accounting

- 1. Designing Work:** It includes the designing of the accounting system, basis for identification and classification of financial transactions and events, forms, methods, procedures, etc.
- 2. Recording Work:** The financial transactions are identified, classified and recorded in appropriate books of accounts according to principles. This is “Book Keeping”. The recording of transactions tends to be mechanical and repetitive.



- 3. Summarizing Work:** The recorded transactions are summarized into significant form according to generally accepted accounting principles. The work includes the preparation of profit and loss account, balance sheet. This phase is called ‘preparation of final accounts’
- 4. Analysis and Interpretation Work:** The financial statements are analyzed by using ratio analysis, break-even analysis, funds flow and cash flow analysis.

- 5. Reporting Work:** The summarized statements along with analysis and interpretation are communicated to the interested parties or whoever has the right to receive them. For Ex. Share holders. In addition, the accounting departments have to prepare and send regular reports so as to assist the management in decision making. This is 'Reporting'.
- 6. Preparation of Budget:** The management must be able to reasonably estimate the future requirements and opportunities. As an aid to this process, the accountant has to prepare budgets, like cash budget, capital budget, purchase budget, sales budget etc. this is 'Budgeting'.
- 7. Taxation Work:** The accountant has to prepare various statements and returns pertaining to income-tax, sales-tax, excise or customs duties etc., and file the returns with the authorities concerned.
- 8. Auditing:** It involves a critical review and verification of the books of accounts statements and reports with a view to verifying their accuracy. This is 'Auditing'

This is what the accountant or the accounting department does. A person may be placed in any part of Accounting Department or MIS (Management Information System) Department or in small organization, the same person may have to attend to all this work.

. **Explain about concepts and conventions in accounting?**

Explain about GAAP principles in accounting?

Ans) Accounting has been evolved over a period of several centuries. During this period, certain rules and conventions have been adopted. They serve as guidelines in identifying the events and transactions to be accounted for measuring, recording, summarizing and reporting them to the interested parties. These rules and conventions are termed as **Generally Accepted Accounting Principles**. These principles are also referred as standards, assumptions, concepts, conventions doctrines, etc. Thus, the accounting concepts are the fundamental ideas or basic assumptions underlying the theory and practice of financial accounting. They are the broad working rules for all accounting activities developed and accepted by the accounting profession.

Basic accounting concepts may be classified into two broad categories.

1. Concept to be observed at the time of recording transactions.(Recording Stage).
2. Concept to be observed at the time of preparing the financial accounts (Reporting Stage)

BASIC ACCOUNTING CONCEPTS

Accounting is a system evolved to achieve a set of objectives. In order to achieve the goals, we need a set of rules or guidelines. These guidelines are termed here as “BASIC ACCOUNTING CONCEPTS”. The term concept means an idea or thought. Basic accounting concepts are the fundamental ideas or basic assumptions underlying the theory and profit of FINANCIAL ACCOUNTING. These concepts help in bringing about uniformity in the practice of accounting. In accountancy following concepts are quite popular. In simple remember of word MCMC BRAD PG.

Accounting Concepts	Accounting Conventions
1. Money Measurement concept	.full Disclosure
2. Cost Concept	consistency
3. Matching Concept	Materiality
4. Consistency or Evidence concept	Conservatism
5. Business entity Concept	
6. Realisation	
7. Accrual Concept	
8. Dual Aspect concept	
9. Periodical Concept	
10. Going concern concept.	

1. **Money Measurement Concept:** While recording the business transactions we don’t record them in terms of Kilograms , metres , quintals , litres etc. We record them in a common Denominations so as see that they become homogeneous and Meaning. In other words In this concept “Only those transactions are recorded in accounting which can be expressed in terms of money, those transactions which can not be expressed in terms of money are not recorded in t he books of accounting”.
2. **Cost Concept:** Usually all the transactions will be recorded at cost in the books, at the end of every year the accountant shows that reduced value of the asset , after providing for depreciation .
 1. This approach is preferred because it is difficult and time consuming to ascertain the Market value
3. **Matching concept:** According to this concept “The expenses incurred during an accounting period should matched with the revenues recognised in that period. For example if revenue is recognised on all goods sold during period, cost of these goods sold should also be charged to that period.

4. **Consistency:** it is concept as well as convention. The methods or principle followed in the preparation of various accounts should be followed in the tear to come.
5. **Business Entity Concept:** The concept implies that the business is distinct from the persons who own it. If the owner takes any goods or cash from the business the drawing accounting is debited and cash or goods or purchase is credited. Personal information should not recorded in business transactions. This concept also helps to develop the theory of $\text{Assets} = \text{liabilities} + \text{capital}$.
6. **Realisation Concept or Historical concept:** The Accountants shows only those transactions which have actually taken Place and not those which may take place in the books
 - All the transactions in accounting are to be recorded in the books in chronological order. This means the preparation of a historical record for all transactions. . Hence, this concept is called Historical record concept.
7. **Accrual concept:** The accrual system is a method where by revenue and expenses are identified with specific period of time like a month, half year or a year, It is called Objective evidence concept.
8. **Dual Aspect Concept :** This concept through light on the point that each transactions has two fold affect the receiving of the benefit and giving benefit. The receiving aspect is termed as debit, where as the giving aspect as credit.
9. **Periodical or Accounting Period concept:** Accounting period is the period followed by a business concern for maintaining accounts to know profit or loss . usually one year will be the accounting period starting from 1st April and ending 31st March (financial year) or 1st January to December 31st (calendar year).the profit or loss for such period is ascertained while measuring the profit, income or expenses of that period only are to be considered
10. **Going concern concept :** it is assumed that the business that the business will continue for a long time with this assumptions fixed assets are recorded in the books at their original cost.

ACCOUNTING CONVENTIONS

Accounting is based on some customs or usages. Naturally accountants here to adopt that usage or custom.

They are termed as convert conventions in accounting. The following are some of the important accounting conventions.

1. **full disclosure:** according to this convention accounting reports should disclose fully and fairly the information. They purport to represent. They should be prepared honestly and sufficiently disclose information which is if material interest to proprietors, present and potential creditors and investors. The companies ACT, 1956 makes it compulsory to provide all the information in the prescribed form.
2. **Materiality:** Under this convention the trader records important factor about the commercial activities. In the form of financial statements if any unimportant information is to be given for the sake of clarity it will be given as footnotes.
3. **Consistency:** It means that accounting method adopted should not be changed from year to year. It means that there should be consistent in the methods or principles followed. Or else the results of a year Cannot be conveniently compared with that of another.

4. **Conservatism**: This convention warns the trader not to take unrealized income in to account. That is why the practice of valuing stock at cost or market price, which ever is lower is in vague. This is the policy of “playing safe”; it takes in to consideration all prospective losses but leaves all prospective profits

Explain about users of accounts

INTRODUCTION:

The main object of any Business is to make profit. Every trader generally starts business for the purpose of earning profit. While establishing Business, he brings his own capital, borrows money from relatives, friends, outsiders or financial institutions, then purchases machinery, plant, furniture, raw materials and other assets. He starts buying and selling of goods, paying for salaries, rent and other expenses, depositing and withdrawing cash from Bank. Like this he undertakes innumerable transactions in Business.

The number of Business transactions in an organization depends up on the size of the organization. In small organizations the transactions generally will be in thousands and in big organizations they may be in lacks. As such it is humanly impossible to remember all these transactions. Further it may not be possible to find out the final result of the Business with out recording and analyzing these transactions.

Accounting came in practice as an aid to human memory by maintaining a systematic record of Business transactions

USERS OF ACCOUNTING INFORMATION :

Different categories of users need different kinds of information for making decisions. The users of accounting can be divided in two board groups

(1). Internal users and

(2). External users.

1 Internal Users:

Managers: These are the persons who manage the business, i.e. management at he top, middle and lower levels. Their requirements of information are different because they make different types of decisions.

Accounting reports are important to managers for evaluating the results of their decisions. In addition to external financial statements, managers need detailed internal reports either branch division or department or product-wise. Accounting reports for managers are prepared much more frequently than external reports.

Accounting information also helps the managers in appraising the performance of subordinates. As such Accounting is termed as “the eyes and ears of management.”

2 External Users:

1. Investors: Those who are interested in buying the shares of company are naturally interested in the financial statements to know how safe the investment already made is and how safe the proposed investments will be.

2. Creditors: Lenders are interested to know whether their loan, principal and interest, will be paid when due. Suppliers and other creditors are also interested to know the ability of the firm to pay their dues in time.

3. Workers: In our country, workers are entitled to payment of bonus which depends on the size of profit earned. Hence, they would like to be satisfied that the bonus being paid to them is correct. This knowledge also helps them in conducting negotiations for wage.

4. Customers: They are also concerned with the stability and profitability of the enterprise. They may be interested in knowing the financial strength of the company to rent it for further decisions relating to purchase of goods.

5. Government: Governments all over the world are using financial statements for compiling statistics concerning business which, in turn, helps in compiling national accounts. The financial statements are useful for tax authorities for calculating taxes.

6. Public : The public at large interested in the functioning of the enterprises because it may make a substantial contribution to the local economy in many ways including the number of people employed and their patronage to local suppliers.

7. Researchers: The financial statements, being a mirror of business conditions, are of great interest to scholars undertaking research in accounting theory as well as business affairs and practices.

Difference between book-keeping and accounting

According to G.A. Lee the accounting system has two stages.

1. The making of routine records in the prescribed form and according to set rules of all events which affect the financial state of the organization; and
2. The summarization from time to time of the information contained in the records, its presentation in a significant form to interested parties and its interpretation as an aid to decision making by these parties.

First stage is called Book-Keeping and the second one is Accounting.

Book – Keeping: Book – Keeping involves the chronological recording of financial transactions in a set of books in a systematic manner.

Accounting: Accounting is concerned with the maintenance of accounts giving stress to the design of the system of records, the preparation of reports based on the recorded data and the interpretation of the reports.

Distinction between Book – Keeping and Accountancy

Thus, the terms, book-keeping and accounting are very closely related, though there is a subtle difference as mentioned below.

Different Point	Book-Keeping	Accounting
1. Scope	It is concerned with recording and classifying the business transactions	It is concerned with recording , classifying, analysing and interpreting financial data
2. Stage	Book-keeping is primary stage in accounting. It is the base for accounting	Apart from the primary stage it includes and interpretation
3. Nature of Job	It is routine and clerical in nature	It is analytical nature
4. Knowledge required	It is requires basic knowledge of principles of journalising and posting	It requires through knowledge of accounting principles, procedure and practices
5. Skill required	Analytical skill is not required for book-keeping	It requires analytical skill
6. users	Only the internal users use book-keeping	On the hand , Accounting has both internal and external users
7. final results	In Bok-keeping it is not possible to know the final results of business every year	Accounting gives the net results of the business every year

Accounting standards

ACCOUNTING STANDARDS ISSUED BY ASB

AS-1 Disclosure of Accounting policies

AS-2 Valuation of Inventories

AS-3 Changes in Financial Position or Cash flow statement

AS-4 Contingencies and Events Occurring after the Balance Sheet Date

AS-5 Prior period and Extraordinary Items and changes in Accounting policies

AS-6 Depreciation Accounting

AS-7 Accounting for Construction Contracts

AS-8 Accounting for Research and Development

AS-9 Revenue Recognition

AS-10 Accounting for Fixed Assets

AS-11 Accounting for Changes in Foreign Exchange Rate

AS-12 Accounting for Government Grants

AS-13 Accounting for Investments

AS-14 Accounting for Amalgamations

AS-15 Accounting for Retirement Benefits in the Financial Statements of Employers/Employees

AS-16 Borrowing costs

AS-17-Segment Reporting

AS-18 Related party disclosures

AS-19 Leases

AS-20- Earnings per share

AS-21 Consolidated Financial statements

AS-22 Accounting for taxation on income

AS-23 Accounting for investments in associates

AS-24 Discontinuing Operations

AS-25 Interim financial Reporting

AS -26 Intangible Assets

AS-27 Financial Reporting of interim in joint ventures

AS-28- Impairment of Assets

AS-29 Provisions, contingent liabilities and contingent Assets

AS-30 Financial Instruments- Recognition and measurement

AS-31 Financial instrument-presentation

AS-32 Financial instrument – Disclosure

UNIT-2

Explain the types of accounts and state the rules for debit and credit?

CLASSIFICATION OF BUSINESS TRANSACTIONS

All business transactions are classified into two categories: personal and impersonal.

1. Those relating to persons(personal)
2. Those relating to property (impersonal)
3. Those relating to income &expenses(impersonal)

Thus, three classes of accounts are maintained for recording all business transactions. They are:

1. Personal accounts: A Natural personal account b.Artificial personal 3..representative.
2. Real accounts
3. Nominal account.

1. Personal Accounts: Accounts which are transactions with persons are called “Personal Accounts”

A separate account is kept on the name of each person for recording the benefits received from, or given to the person in the course of dealings with him.

E.g.: Krishna’s A/C, Gopal’s A/C, , ObulReddy& Sons A/C, Raju A/C , Rani A/C

Artificial Personal Account- HMT Ltd. A/C, SBI A/C, Nagarjuna Finance Ltd.A/C etc.

Representative Personal Account- Outstanding expenses

2. Real Accounts: The accounts relating to properties or assets are known as “Real Accounts” .Every business needs assets such as machinery, furniture etc, for running its activities .A separate account is maintained for each asset owned by the business.

E.g.: cash A/C, furniture A/C, building A/C, machinery A/C etc.

3.NominalAccounts:Accounts relating to expenses, losses, incomes and gains are known as “Nominal Accounts”. A separate account is maintained for each item of expenses, losses, income or gain.

E.g.: Salaries A/C, stationery A/C, wages A/C, postage A/C, commission A/C, interest A/C, purchases A/C, rent A/C, discount A/C, commission received A/C, interest received A/C, rent received A/C, discount received A/C.

Before recording a transaction, it is necessary to find out which of the accounts is to be debited and which is to be credited. The following three different rules have been laid down for the three classes of accounts....

1. Personal Accounts: The account of the person receiving benefit (receiver) is to be debited and the account of the person giving the benefit (given) is to be credited.

Rule: “Debit----The Receiver
Credit---The Giver”

2. Real Accounts: When an asset is coming into the business, account of that asset is to be debited .When an asset is going out of the business, the account of that asset is to be credited.

Rule: “Debit----What comes in?
Credit---What goes out?”

3. Nominal Accounts: When an expense is incurred or loss encountered, the account representing the expense or loss is to be debited. When any income is earned or gain made, the account representing the income of gain is to be credited.

Rule: “Debit----All expenses and losses
Credit---All incomes and gains”

What is journalizing? Explain about journal?

The first step in accounting therefore is the record of all the transactions in the books of original entry viz., Journal and then posting into ledges.

JOURNAL: The word Journal is derived from the Latin word ‘journ’ which means a day. Therefore, journal means a ‘day Book’ in day-to-day business transactions are recorded in chronological order.

Journalising:

Journal is treated as the book of original entry or first entry or prime entry. All the business transactions are recorded in this book before they are posted in the ledges. The journal is a complete and chronological (in order of dates) record of business transactions. It is recorded in a systematic manner. The process of recording a transaction in the journal is called “JOURNALISING”. The entries made in the book are called “Journal Entries”.

The Performa of Journal is given below.

Date	Particulars	L.F. no	Debit RS.	Credit RS.
Year Month ,date	Debited account Dr Credited account (Narration)		xxxx	xxxx

Date: this column represent date of the particular transaction.

Particulars: it represent particulars of the transaction. In each transaction there must be two accounts one is debit account and other is credited account. Debited account must be entered from the near to date column and put Dr in ending of that line .Credited account is enter by giving some space to the date column.

Narration: It will give brief information about a transaction.

L.F.NO: it means a ledger folio number ,it will give information about the particular account is entered on which page on the ledger.

Explain about ledger? What are the rules that we follow while preparing the ledgers?

LEDGER:

All the transactions in a journal are recorded in a chronological order. After a certain period, if we want to know whether a partiular account is showing a debit or credit balance it becomes very difficult. So, the ledger is designed to accommodate the various accounts maintained the trader. It contains the final or permanent record of all the transactions in duly classified form. “A ledger is a book which contains various accounts.” The process of transferring entries from journal to ledger is called “POSTING”.

Posting is the process of entering in the ledger the entries given in the journal. Posting into ledger is done periodically, may be weekly or fortnightly as per the convenience of the business. The following are the guidelines for posting transactions in the ledger.

1. After the completion of Journal entries only posting is to be made in the ledger.
2. For each item in the Journal a separate account is to be opened. Further, for each new item a new account is to be opened.
3. Depending upon the number of transactions space for each account is to be determined in the ledger.
4. For each account there must be a name. This should be written in the top of the table. At the end of the name, the word "Account" is to be added.
5. The debit side of the Journal entry is to be posted on the debit side of the account, by starting with "TO".
6. The credit side of the Journal entry is to be posted on the debit side of the account, by starting with "BY".

Performa for ledger: **LEDGER BOOK**

accountname

Date	Particulars	Lfno	Amount	Date	Particulars	Lfno	amount

examples:

Sales account

Date	Particulars	Lfno	Amount	Date	Particulars	Lfno	amount

Cash account

Date	Particulars	Lfno	Amount	Date	Particulars	Lfno	amount

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Finally, a ledger may be defined as a summary statement of all the transactions relating to a person, asset, expense or income which have taken place during a given period of time. The up-to-date state of any account can be easily known by referring to the ledger.

Difference between Journal and Ledger

Difference Point	Journal	Ledger
1. Entry	Journal is the book of first or original entry	The ledger is the book of secondary entry
2. Nature of work	Transactions in the journal will be recorded immediately	Depending upon his convenience the trader records the transactions in the ledger
3. Maintained	Journal will be maintained on chronological order I.e recording of transactions on the date basis	Posting the journal entries only main aim here
4. Individual or institutional	The transactions relating to all individual or institutional may appear in different pages of journal	All transactions relating to a specific account will be posted on the same page or pages
5. Reveals	Journal may not reveal whether one customer is a debtor or creditor	Ledger will reveal whether one person is a debtor or creditor to business
6. importance	When once the transactions are posted into ledger, the journal loses its importance	It will never lose its importance as it is the main book of accounting which relied upon permanently
7. preparation of final Accounts	In the preparation of final account is not useful	In the preparation of final accounts ledger is a must
8 Tax authority	The tax authorities generally may not depend on journal	In the finalisation of income tax to be paid, the tax authorities depend on ledger

Types of Subsidiary Books

Subsidiary books are divided into eight types . they are given below

1. **Purchase Book:** This Book records all credit purchases only. Purchase of goods for cash and purchase of assets for cash credit will not be recorded in this book
2. **Sales Book:** This book is used to record credit sales only. Goods sold for cash and sale of assets for cash will not be recorded in this book.
3. **Purchase Returns Book:** this book is used to record the particulars of goods returned to supplier
4. **Sale returns Book:** This book records the particulars of goods returned by the customer
5. **Bills Receivable Book:** This book is used to record all the bills and promissory notes received
6. **Bills payable Book:** This is used record all the bill or promissory notes accepted
7. **Cash Book:** All cash transactions, receipts and payments are recorded in this book. Cash includes cheques, money orders etc. do not record credit purchases and sales in the book. Cash book prepare single column cash book, two column cash book with discount , three column cah book with discount, bank column. Petty cash book.
8. **Journal Proper:** This is used to record all the transactions that cannot be recorded in any of the above 7 b mentioned subsidiary books. Here record bad debts, depreciation and all provisions

Advantages of Subsidiary Books

- 1. Division of work:** As there are a number of subsidiary books, the work of recording business transactions may given to a number of employees without any duplication of the same work
- 2. Increase in efficiency of staff:** Due to division of labour each employee will specialise in the work allotted to him. Naturally, he will become efficient in that part of the accounting work.
- 3. Time saving:** As the recording is done simultaneously in a number of books the work will be completed quickly and independently.
- 4. Ledger postings are made easier :** Posting from the subsidiary books are made at convenient intervals depending upon the nature of the business
- 5. Readymade information:** Since a number of books are used from recording different types of transactions the information's relating to any class of transactions is available without any searching or delay.
- 6. Minimisation of frauds:** Checking the transactions for mistakes and errors can be done easily. Checking help in tracing the errors and thus minimises the frauds.
- 7. Saving in stationery cost:** The use of subsidiary books results in economical and limited use of stationery materials
- 8. Helps in decision making:** Since the transactions of a similar nature are recorded at one place, the management can have the benefit of the using them in planning and decision making

TRIAL BALANCE

TRAIL BALANCE

The first step in the preparation of final accounts is the preparation of trail balance. In the double entry system of book keeping, there will be credit for every debit and there will not be any debit without credit. When this principle is followed in writing journal entries, the total amount of all debits is equal to the total amount all credits.

A trail balance is a statement of debit and credit balances. It is prepared on a particular date with the object of checking the accuracy of the books of accounts. It indicates that all the transactions for a particular period have been duly entered in the book, properly posted and balanced. The trail balance doesn't include stock in hand at the end of the period. All adjustments required to be done at the end of the period including closing stock are generally given under the trail balance.

DEFINITIONS: SPICER AND POGLAR :A trail balance is a list of all the balances standing on the ledger accounts and cash book of a concern at any given date.

J.R.BATLIBOI:

A trail balance is a statement of debit and credit balances extracted from the ledger with a view to test the arithmetical accuracy of the books.

Thus a trail balance is a list of balances of the ledger accounts' and cash book of a business concern at any given date.

PROFORMA FOR TRAIL BALANCE:

Trail balance for MR..... as on

NO	NAME OF ACCOUNT (PARTICULARS)	DEBIT AMOUNT (RS.)	CREDIT AMOUNT (RS.)

Specimen of trial balance

1	Capital	Credit	Loan
2	Opening stock	Debit	Asset
3	Purchases	Debit	Expense
4	Sales	Credit	Gain
5	Returns inwards	Debit	Loss

6	Returns outwards	Debit	Gain
7	Wages	Debit	Expense
8	Freight	Debit	Expense
9	Transport expenses	Debit	Expense
10	Royalties on production	Debit	Expense
11	Gas, fuel	Debit	Expense
12	Discount received	Credit	Revenue
13	Discount allowed	Debit	Loss
14	Bas debts	Debit	Loss
15	Bad debts reserve	Credit	Gain
16	Commission received	Credit	Revenue
17	Repairs	Debit	Expense
18	Rent	Debit	Expense
19	Salaries	Debit	Expense
20	Loan Taken	Credit	Loan
21	Interest received	Credit	Revenue
22	Interest paid	Debit	Expense
23	Insurance	Debit	Expense
24	Carriage outwards	Debit	Expense
25	Advertisements	Debit	Expense
26	Petty expenses	Debit	Expense
27	Trade expenses	Debit	Expense
28	Petty receipts	Credit	Revenue
29	Income tax	Debit	Drawings
30	Office expenses	Debit	Expense
31	Customs duty	Debit	Expense
32	Sales tax	Debit	Expense
33	Provision for discount on debtors	Credit	Liability
34	Provision for discount on creditors	Debit	Asset
35	Debtors	Debit	Asset
36	Creditors	Credit	Liability
37	Goodwill	Debit	Asset
38	Plant, machinery	Debit	Asset
39	Land, buildings	Debit	Asset
40	Furniture, fittings	Debit	Asset
41	Investments	Debit	Asset
42	Cash in hand	Debit	Asset

43	Cash at bank	Debit	Asset
44	Reserve fund	Credit	Liability
45	Loan advances	Debit	Asset
46	Horse, carts	Debit	Asset
47	Excise duty	Debit	Expense
48	General reserve	Credit	Liability
49	Provision for depreciation	Credit	Liability
50	Bills receivable	Debit	Asset
51	Bills payable	Credit	Liability
52	Depreciation	Debit	Loss
53	Bank overdraft	Credit	Liability
54	Outstanding salaries	Credit	Liability
55	Prepaid insurance	Debit	Asset
56	Bad debt reserve	Credit	Revenue
57	Patents & Trademarks	Debit	Asset
58	Motor vehicle	Debit	Asset
59	Outstanding rent	Credit	Revenue

FINAL ACCOUNTS

In every business, the business man is interested in knowing whether the business has resulted in profit or loss and what the financial position of the business is at a given time. In brief, he wants to know (i)The profitability of the business and (ii) The soundness of the business.

The trader can ascertain this by preparing the final accounts. The final accounts are prepared from the trial balance. Hence the trial balance is said to be the link between the ledger accounts and the final accounts. The final accounts of a firm can be divided into two stages. The first stage is preparing the trading and profit and loss account and the second stage is preparing the balance sheet.

TRADING ACCOUNT

The first step in the preparation of final account is the preparation of trading account. The main purpose of preparing the trading account is to ascertain gross profit or gross loss as a result of buying and selling the goods.

Trading account of MR..... for the year ended

Particulars	Amount	Particulars	Amount
To opening stock	Xxxx	By sales xxxx	
To purchases xxxx		Less: returns xxx	Xxxx
Less: returns xx	Xxxx	By closing stock	Xxxx
 To carriage inwards	Xxxx		
To wages	Xxxx		
To freight	Xxxx		
To customs duty, octroi	Xxxx		
 To gas, fuel, coal, Water	Xxxx		
 To factory expenses	Xxxx		
To other man. Expenses	Xxxx		
To productive expenses	Xxxx		
To gross profit c/d	Xxxx		
			Xxxx
	Xxxx		

PROFIT AND LOSS ACCOUNT

The business man is always interested in knowing his net income or net profit. Net profit represents the excess of gross profit plus the other revenue incomes over administrative, sales, Financial and other expenses. The debit side of profit and loss account shows the expenses and the credit side the incomes. If the total of the credit side is more, it will be the net profit. And if the debit side is more, it will be net loss

PROFIT AND LOSS A/C OF MR.....FOR THE YEAR ENDED.....

PARTICULARS	AMOUNT	PARTICULARS	AMOUNT
TO office salaries	Xxxxxx	By gross profit b/d	Xxxxx
TO rent,rates,taxes	Xxxxx	Interest received	Xxxxx
TO Printing and stationery	Xxxxx	Discount received	Xxxx
TO Legal charges		Commission received	Xxxxx
Audit fee	Xxxx	Income from	
TO Insurance	Xxxx	investments	
TO General expenses	Xxxx	Dividend on shares	Xxxx
TO Advertisements	Xxxxx	Miscellaneous	Xxxx
TO Bad debts	Xxxx	investments	
TO Carriage outwards	Xxxx	Rent received	xxxx
TO Repairs	Xxxx		
TO Depreciation	Xxxxx		
TO interest paid	Xxxxx		
TO Interest on capital	Xxxxx		
TO Interest on loans	Xxxx		
TO Discount allowed	Xxxxx		
TO Commission	Xxxxx		
TO Net profit-----→	Xxxxx		
(transferred to capital a/c)			
	xxxxxx		Xxxxxx

BALANCE SHEET

The second point of final accounts is the preparation of balance sheet. It is prepared often in the trading and profit, loss accounts have been compiled and closed. A balance sheet may be considered as a statement of the financial position of the concern at a given date.

DEFINITION: A balance sheet is an item wise list of assets, liabilities and proprietorship of a business at a certain state.

J.R.botliboi: A balance sheet is a statement with a view to measure exact financial position of a business at a particular date.

Thus, Balance sheet is defined as a statement which sets out the assets and liabilities of a business firm and which serves to ascertain the financial position of the same on any particular date. On the left-hand side of this statement, the liabilities and the capital are shown. On the right-hand side all the assets are shown. Therefore, the two sides of the balance sheet should be equal. Otherwise, there is an error somewhere

BALANC SHEET OFAS ON

Liabilities and capital	Amount	Assets	Amount
Creditors	Xxxx	Cash in hand	Xxxx
Bills payable	Xxxx	Cash at bank	Xxxx
Bank overdraft	Xxxx	Bills receivable	Xxxx
Loans	Xxxx	Debtors	Xxxx
Mortgage	Xxxx	Closing stock	Xxxx
Reserve fund	Xxxx	Investments	Xxxx
Capital xxxxxx		Furniture and fittings	Xxxx
<u>Add:</u>		Plats&machinery	
Net Profit xxxx		Land & buildings	Xxxx
-----		Patents, tm ,copyrights	Xxxx
xxxxxxx		Goodwill	Xxxx
		Prepaid expenses	
<u>Less:</u>		Outstanding incomes	Xxxx
Drawings xxxx	Xxxx		Xxxx
-----	XXXX		XXXX

Advantages: The following are the advantages of final balance .

1. It helps in checking the arithmetical accuracy of books of accounts.
2. It helps in the preparation of financial statements.
3. It helps in detecting errors.
4. It serves as an instrument for carrying out the job of rectification of entries.
5. It is possible to find out the balances of various accounts at one place.

Explain How The adjustments affect the accounts?

FINAL ACCOUNTS -- ADJUSTMENTS

We know that business is a going concern. It has to be carried on indefinitely. At the end of every accounting year. The trader prepares the trading and profit and loss account and balance sheet. While preparing these financial statements, sometimes the trader may come across certain problems .The expenses of the current year may be still payable or the expenses of the next year have been prepaid during the current year. In the same way, the income of the current year still receivable and the income of the next year have been received during the current year. Without these adjustments, the profit figures arrived at or the financial position of the concern may not be correct. As such these adjustments are to be made while preparing the final accounts.

The adjustments to be made to final accounts will be given under the Trial Balance. While making the adjustment in the final accounts, the student should remember that “every adjustment is to be made in the final accounts twice i.e. once in trading, profit and loss account and later in balance sheet generally”. The following are some of the important adjustments to be made at the time of preparing of final accounts:-

1. CLOSING STOCK:-

(i)If closing stock is given in Trail Balance: It should be shown only in the balance sheet “Assets Side”.

(ii)If closing stock is given as adjustment:

1. First, it should be posted at the credit side of “Trading Account”.
2. Next, shown at the asset side of the “Balance Sheet”.

2. OUTSTANDING EXPENSES :-

(i)If outstanding expenses given in Trail Balance: It should be only on the liability side of Balance Sheet.

(ii)If outstanding expenses given as adjustment :

1. First, it should be added to the concerned expense at the debit side of profit and loss account or Trading Account.
2. Next, it should be added at the liabilities side of the Balance Sheet.

3. PREAPID EXPENSES :-

(i)If prepaid expenses given in Trial Balance: It should be shown only in assets side of the Balance Sheet.

(ii)If prepaid expense given as adjustment :

1. First, it should be deducted from the concerned expenses at the debit side of profit and loss account or Trading Account.
2. Next, it should be shown at the assets side of the Balance Sheet.

4. INCOME EARNED BUT NOT RECEIVED [OR] OUTSTANDING INCOME [OR] ACCURED INCOME :-

(i)If incomes given in Trial Balance: It should be shown only on the assets side of the Balance Sheet.

(ii)If incomes outstanding given as adjustment:

1. First, it should be added to the concerned income at the credit side of profit and loss account.
2. Next, it should be shown at the assets side of the Balance sheet.

5. **INCOME RECEIVED IN ADVANCE: UNEARNED INCOME:-**

(i)If unearned incomes given in Trail Balance : It should be shown only on the liabilities side of the Balance Sheet.

(ii)If unearned income given as adjustment :

1. First, it should be deducted from the concerned income in the credit side of the profit and loss account.
2. Secondly, it should be shown in the liabilities side of the Balance Sheet.

6. **DEPRECIATION:-**

(i)If Depreciation given in Trail Balance: It should be shown only on the debit side of the profit and loss account.

(ii)If Depreciation given as adjustment

1. First, it should be shown on the debit side of the profit and loss account.
2. Secondly, it should be deducted from the concerned asset in the Balance sheet assets side.

7. **INTEREST ON LOAN [OR] CAPITAL:-**

(i)If interest on loan (or) capital given in Trail balance:It should be shown only on debit side of the profit and loss account.

(ii)If interest on loan (or)capital given as adjustment :

1. First, it should be shown on debit side of the profit and loss account.
2. Secondly, it should added to the loan or capital on the liabilities side of the Balance Sheet.

8. **BAD DEBTS:-**

(i)If bad debts given in Trail balance :It should be shown on the debit side of the profit and loss account.

(ii)If bad debts given as adjustment:

1. First, it should be shown on the debit side of the profit and loss account.
2. Secondly, it should be deducted from debtors in the assets side of the Balance Sheet.

9. **INTEREST ON DRAWINGS :-**

(i)If interest on drawings given in Trail balance: It should be shown on the credit side of the profit and loss account.

(ii)If interest on drawings given as adjustments :

1. First, it should be shown on the credit side of the profit and loss account.
2. Secondly, it should be deducted from capital on liabilities side of the Balance Sheet.

10. INTEREST ON INVESTMENTS :-

(i) If interest on the investments given in Trail balance : It should be shown on the credit side of the profit and loss account.

(ii) If interest on investments given as adjustments :

1. First, it should be shown on the credit side of the profit and loss account.
 2. Secondly, it should be added to the investments on assets side of the Balance Sheet.
-
-
-

RATIO ANALYSIS PROBLEMS AND SOLUTIONS

1. You are required to calculate the following:

a) Working capital turnover, b) Fixed assets turnover, c) Capital turnover.

The information available is as under:

Capital employed Rs.4,00,000

Current assets Rs.2,00,000; Current liabilities Rs.40,000

Net fixed assets Rs.2,50,000; Sales Rs.5,00,000

Solution:

1. Working capital turnover ratio:

Sales / Working capital

Sales: 500000 and Working capital = Current assets – Current liabilities
= 200000-40000 = 160000

W.C Turnover ratio = 500000/160000 = **3.125 Times**

2. Fixed assets turnover ratio:

F.A Turnover ratio = Sales / Fixed Assets

Sales 500000 and Net F.A 250000

= 500000/250000 = **2 times**

3.) Capital turnover ratio

Sales / Capital Employed

Sales = 500000; and capital employed 400000

C.T Ratio = 500000/400000 = **1.25 times**

Problem - 1

The following Trading and Profit and Loss Account of Fantasy Ltd. for the year 31-3-2000 is given below:

Particular	Rs.	Particular	Rs.
To Opening Stock	76,250	By Sales	5,00,000
“ Purchases	3,15,250	“ Closing stock	98,500
“ Carriage and Freight	2,000		
“ Wages	5,000		
“ Gross Profit b/d	<u>2,00,000</u>		
	<u>5,98,500</u>		<u>5,98,500</u>
To Administration expenses	1,01,000	By Gross Profit b/d	2,00,000
“ Selling and Dist. expenses	12,000	“ Non-operating incomes:	
“ Non-operating expenses	2,000	“ Interest on Securities	1,500
“ Financial Expenses	7,000	“ Dividend on shares	3,750
Net Profit c/d	<u>84,000</u>	“ Profit on sale of shares	<u>750</u>
	<u>2,06,000</u>		<u>2,06,000</u>

Calculate:

1. Gross Profit Ratio 2. Expenses Ratio 3. Operating Ratio
1. Net Profit Ratio 5. Operating (Net) Profit Ratio 6. Stock Turnover Ratio.

Solution – 1 (Problem related to Revenue Ratio)

$$\begin{aligned}
 1. \quad \text{Gross Profit Margin} &= \frac{\text{Gross profit}}{\text{Sales}} \times 100 \\
 &= \frac{2,00,000}{5,00,000} \times 100 \\
 &= 40\%
 \end{aligned}$$

$$\begin{aligned}
 2. \quad \text{Expenses Ratio} &= \frac{\text{Op. Expenses}}{\text{Net Sales}} \times 100 \\
 &= \frac{1,13,000}{5,00,000} \times 100 \\
 &= 22.60\%
 \end{aligned}$$

$$\begin{aligned}
 3. \quad \text{Operating Ratio} &= \frac{\text{Cost of goods sold} + \text{Op. Expenses}}{\text{Net Sales}} \times 100 \\
 &= \frac{3,00,000 + 1,13,000}{5,00,000} \times 100 \\
 &= 82.60\%
 \end{aligned}$$

Cost of Goods sold = Op. stock + purchases + carriage and Freight + wages – Closing Stock

$$= 76250 + 315250 + 2000 + 5000 - 98500$$

$$= \text{Rs.}3,00,000$$

$$\begin{aligned}
 4. \quad \text{Net Profit Ratio} &= \frac{\text{Net Profit}}{\text{Net Sales}} \times 100 \\
 &= \frac{84,000}{5,00,000} \times 100 \\
 &= 16.8\%
 \end{aligned}$$

$$\begin{aligned}
 5. \quad \text{Operating Profit Ratio} &= \frac{\text{Op. Profit}}{\text{Net Sales}} \times 100 \\
 \text{Operating Profit} &= \text{Sales} - (\text{Op. Exp.} + \text{Admin Exp.}) \\
 &= \frac{87,000}{5,00,000} \times 100 \\
 &= 17.40\%
 \end{aligned}$$

$$\begin{aligned}
 6. \quad \text{Stock Turnover Ratio} &= \frac{\text{Cost of goods sold}}{\text{Avg. Stock}} \\
 &= \frac{3,00,000}{87,375} \\
 &= 3.43 \text{ times}
 \end{aligned}$$

Problem - 2

The Balance Sheet of Punjab Auto Limited as on 31-12-2002 was as follows:

Particular	Rs.	Particular	Rs.
Equity Share Capital	40,000	Plant and Machinery	24,000
Capital Reserve	8,000	Land and Buildings	40,000
8% Loan on Mortgage	32,000	Furniture & Fixtures	16,000
Creditors	16,000	Stock	12,000
Bank overdraft	4,000	Debtors	12,000
Taxation:		Investments (Short-term)	4,000
Current	4,000	Cash in hand	12,000
Future	4,000		
Profit and Loss A/c	12,000		
	<u>1,20,000</u>		<u>1,20,000</u>

From the above, compute (a) the Current Ratio, (b) Quick Ratio, (c) Debt-Equity Ratio, and (d) Proprietary Ratio.

Solution – 2 (Problem related to Balance Sheet Ratio)

1. Current Ratio =	<u>Current Assets</u> Current liabilities	
	Current Assets = Stock + debtors + Investments (short term) + Cash In hand	
	Current Liabilities = Creditors + bank overdraft + Provision for Taxation (current & Future)	
	CA = 12000 + 12000 + 4000 + 12000	
	= 40,000	
	CL = 16000 + 4000 + 4000 + 4000	
	= 28,000	
	= <u>40,000</u> 28,000	
	= 1.43 : 1	

2. Quick Ratio =	<u>Quick Assets</u> Quick Liabilities	
	Quick Assets = Current Assets - Stock	

Quick Liabilities = Current Liabilities – (BOD + PFT future)	
QA = 40,000 – 12,000	
= 28,000	
QL = 28,000 – (4,000 + 4,000)	
= 20,000	
= <u>28,000</u>	
20,000	
= 1.40 : 1	

3. Debt – Equity Ratio =	<u>Long Term Debt (Liabilities)</u> Shareholders Fund	
	LTL = Debentures + long term loans	
	SHF = Eq. Sh. Cap. + Reserves & Surplus + Preference Sh. Cap. – Fictitious Assets	
	LTL = 32,000	
	SHF = 40,000 + 8,000 + 12,000	
	= 60,000	
	= <u>32,000</u>	
	60,000	
	= 0.53 : 1	

4. Proprietary Ratio =	<u>Shareholders' Funds</u> Total Assets	
	SHF = Eq. Sh. Cap. + Reserves & Surplus + Preference Sh. Cap. – Fictitious Assets	
	Total Assets = Total Assets – Fictitious Assets	
	SHF = 40,000 + 8,000 + 12,000	
	= 60,000	

TA = 1,20,000	
= <u>60,000</u> 1,20,000	
= 0.5 : 1	

Problem - 3 [Sau. Uni. T. Y., April, 2000]

The details of Shreenath Company are as under:

Sales (40% cash sales)	15,00,000
Less: Cost of sales	<u>7,50,000</u>
Gross Profit:	7,50,000
Less: Office Exp. (including int. on debentures)	1,25,000
Selling Exp.	<u>1,25,000</u>
Profit before Taxes:	5,00,000
Less: Taxes	<u>2,50,000</u>
Net Profit:	2,50,000

Balance Sheet

Particular	Rs.	Particular	Rs.
Equity share capital	20,00,000	Fixed Assets	55,00,000
10% Preference share capital	20,00,000	Stock	1,75,000
Reserves	11,00,000	Debtors	3,50,000
10% Debentures	10,00,000	Bills receivable	50,000
Creditors Bank-	1,00,000	Cash	2,25,000
overdraft Bills	1,50,000	Fictitious Assets	1,00,000
payable	45,000		
Outstanding expenses	<u>5,000</u>		
	64,00,000		64,00,000

Beside the details mentioned above, the opening stock was of Rs. 3,25,000. Taking 360 days of the year, calculate the following ratios; also discuss the position of the company:

(1) Gross profit ratio. (2) Stock turnover ratio. (3) Operating ratio. (4) Current ratio. (5) Liquid ratio. (6) Debtors ratio. (7) Creditors ratio. (8) Proprietary ratio. (9) Rate of return on net capital employed. (10) Rate of return on equity shares.

Solution – 3 (Problem related to Composite Ratio)

1. Gross Profit Margin =	<u>Gross profit</u> Sales	X 100
	<u>7,50,000</u> 15,00,000	X 100
	= 50%	

2. Stock Turnover Ratio =	<u>Cost of goods sold</u>	
	Avg. Stock	
	Avg. stock = <u>Opening Stock + Closing Stock</u>	
	2	
	COGS = Sales – GP	
	<u>3,25,000 + 1,75,000</u>	
	2	
	AS = 2,50,000	
	COGS = 15,00,000 – 7,50,000	
	7,50,000	
	= <u>7,50,000</u>	
	2,50,000	
	= 3 times	

3. Operating Profit Ratio =	<u>Op. Profit</u>	X 100
	Net Sales	
	Operating Profit = Sales – (Op. Exp. + COGS.)	
	OP = 15,00,000 – (7,50,000 + 1,25,000 + 25,000)	
	= 6,00,000	
	(excluding Interest on Debentures)	
	= <u>6,00,000</u>	X 100
	15,00,000	
	= 40%	

4. Current Ratio =	<u>Current Assets</u>	
	Current liabilities	
	Current Assets = Stock + debtors + Bills receivable + Cash	
	Current Liabilities = Creditors + bank overdraft + Bills payable + Outstanding expenses	

CA = 1,75,000 + 3,50,000 + 50,000 + 2,25,000	
= 8,00,000	
CL = 1,00,000 + 1,50,000 + 45,000 + 5,000	
= 3,00,000	
= <u>8,00,000</u>	
3,00,000	
= 2.67 : 1	

5. Quick Ratio / Liquid Ratio	=	<u>Liquid Assets</u> Liquid Liabilities	
		(Liquid) Quick Assets = Current Assets - Stock	
		(Liquid) Quick Liabilities = Current Liabilities – BOD	
		QA = 8,00,000 – 1,75,000	
		= 6,25,000	
		QL = 3,00,000 – 1,50,000	
		= 1,50,000	
		= <u>6,25,000</u>	
		1,50,000	
		= 4.17 : 1	

6. Debtors Ratio	=	<u>Debtors + Bills receivable</u> Credit sales	X 365 / 360 days
		= <u>3,50,000 + 50,000</u>	X 360 days
		9,00,000	
		(60% of 15,00,000)	
		= 0.444	X 360 days
		= 160 days	
7. Creditors Ratio	=	<u>Creditors + Bills payable</u> Credit Purchase	X 365 / 360 days

	$= \frac{1,00,000 + 45,000}{7,50,000}$	X 360 days
	Notes: If credit purchase could not find out at that point Cost of Goods sold consider Credit purchase	
	$= 0.193$	X 360 days
	= 69 days	

8. Proprietary Ratio =	$\frac{\text{Shareholders' Funds}}{\text{Total Assets}}$	
	SHF = Eq. Sh. Cap. + Reserves & Surplus + Preference Sh. Cap. – Fictitious Assets	
	Total Assets = Total Assets – Fictitious Assets	
	$\text{SHF} = 20,00,000 + 20,00,000 + 11,00,000 - 1,00,000$ $= 50,00,000$	
	$\text{TA} = 64,00,000 - 1,00,000$ $= 63,00,000$	
	$= \frac{50,00,000}{63,00,000}$	
	= 0.79 : 1	

Notes:

Rate of Return on Capital Employed		Rate of Return on Shareholders Fund		Rate of return on Equity Shareholders Fund	
$= \frac{\text{EBIT}}{\text{Capital employed}}$	X 100	$= \frac{\text{PAT}}{\text{SHF}}$	X 100	$= \frac{\text{PAT} - \text{Pref. Div.}}{\text{ESHF}}$	X 100

CE = Eq Sh. Cap. + Pref. Sh. Cap. + Reserves & Surplus + Debenture + Long Term Loan – Fictitious Assets	SHF = Eq. Sh. Cap. + Pref. Sh.Cap. + Reserves & Surplus –Fictitious Assets	ESHF = Eq. Sh. Cap. +Reserves & Surplus –Fictitious Assets
--	---	---

Sales	15,00,000
Less: Cost of goods sold	7,50,000
Gross profit	7,50,000
Less: Operating expenses (including Depreciation)	1,50,000
Earnings before Interest & Tax (EBIT)	6,00,000
Less: Interest Cost	1,00,000
Earnings before Tax (EBT)	5,00,000
Less: Tax liability	2,50,000
Earnings after Tax (EAT/ PAT)	2,50,000
Less: Preference share dividend	2,00,000
Distributional Profit	50,000

9.		10.		11.	
Rate of Return on Capital Employed		Rate of Return on Share holders Fund		Rate of return on Equity Shareholders Fund	
= $\frac{\text{EBIT}}{\text{Capital employed}}$	X 100	= $\frac{\text{PAT}}{\text{SHF}}$	X 100	= $\frac{\text{PAT} - \text{Pref. Div.}}{\text{ESHF}}$	X 100
CE = Eq Sh. Cap. + Pref. Sh. Cap. + Reserves & Surplus + Debenture + Long Term Loan – Fictitious Assets		SHF = Eq. Sh. Cap. + Pref. Sh. Cap. + Reserves & Surplus – Fictitious Assets		ESHF = Eq. Sh. Cap. + Reserves & Surplus – Fictitious Assets	
CE = 20,00,000 + 20,00,000 + 11,00,000 + 10,00,000 – 1,00,000		SHF = 20,00,000 + 20,00,000 + 11,00,000 – 1,00,000		ESHF = 20,00,000 + 11,00,000 – 1,00,000	
= 60,00,000		= 50,00,000		= 30,00,000	
= $\frac{6,00,000}{60,00,000}$	X 100	= $\frac{2,50,000}{50,00,000}$	X 100	= $\frac{50,000}{30,00,000}$	X 100
= 10%		= 5%		= 1.67 %	

Problem = 4

From the following particulars extracted from the books of Ashok & Co. Ltd., compute the following ratios and comment:

(a) Current ratio, (b) Acid Test Ratio, (c) Stock-Turnover Ratio, (d) Debtors Turnover Ratio, (e) Creditors' Turnover Ratio, and Average Debt Collection period.

	1-1-2002	31-12-2002
	Rs.	Rs.
Bills Receivable	30,000	60,000
Bills Payable	60,000	30,000
Sundry Debtors	1,20,000	1,50,000
Sundry Creditors	75,000	1,05,000
Stock-in-trade	96,000	1,44,000

Additional information:

- (a) On 31-12-2002, there were assets: Building Rs. 2,00,000, Cash Rs. 1,20,000 and Cash at Bank Rs. 96,000.
 (b) Cash purchases Rs. 1,38,000 and Purchases Returns were Rs. 18,000.
 (c) Cash sales Rs. 1,50,000 and Sales returns were Rs. 6,000.
 Rate of gross profit 25% on sales and actual gross profit was Rs. 1,50,000.

Solution – 4 (Problem related to find out missing item)

Notes: In this problem available information is not enough to solve ratios asked so that need to prepare Trading Account to identify values which are not given in the question.

Trading Account

Particular	Amount Rs.	Particular	Amount Rs.
To Opening Stock	96,000	By Sales: Cash: 1,50,000	
To Purchase: Cash: 1,38,000		Credit : <u>4,56,000</u>	
Credit: <u>3,78,000</u>		6,06,000	
5,16,000		Less: S/R <u>6,000</u>	6,00,000
Less: P/R <u>18,000</u>	4,98,000	By Closing Stock	1,44,000
To Gross Profit	1,50,000		
	7,44,000		7,44,000

1. Gross Profit Margin =	$\frac{\text{Gross profit}}{\text{Sales}}$	X 100
	25% = $\frac{1,50,000}{\text{Sales}}$	X 100

Sales = $\frac{1,50,000}{25}$	X 100
Sales = 6,00,000	

2. Current Ratio	=	$\frac{\text{Current Assets}}{\text{Current liabilities}}$	
		Current Assets = Stock + debtors + Bills receivable + Cash + Bank Balance	
		Current Liabilities = Creditors + Bills payable	
		CA = 1,44,000 + 1,50,000 + 60,000 + 1,20,000 + 96,000 = 5,70,000	
		CL = 1,05,000 + 30,000 = 1,35,000	
		= $\frac{5,70,000}{1,35,000}$	
		= 4.22 : 1	

3. Acid Test Ratio	=	$\frac{\text{Cash \& Cash Equivalent Assets}}{\text{Liquid Liabilities}}$	
		Cash & Cash equivalent Assets = Cash + Bank + Short term Investments	
		(Liquid) Quick Liabilities = Current Liabilities – BOD	
		= 1,20,000 + 96,000 = 2,16,000	
		QL = 1,05,000 + 30,000 = 1,35,000	
		= $\frac{2,16,000}{1,35,000}$	
		= 1.6 : 1	

4. Stock Turnover Ratio	=	$\frac{\text{Cost of goods sold}}{\text{Avg. Stock}}$
		Avg. stock = $\frac{\text{Opening Stock} + \text{Closing Stock}}{2}$

COGS = Sales – GP
$\frac{96,000 + 1,44,000}{2}$
AS = 1,20,000
COGS = 6,00,000 – 1,50,000
4,50,000
= <u>4,50,000</u>
1,20,000
= 3.75 times

5. Debtors Ratio (Avg. debt collection period)	=	$\frac{\text{Debtors + Bills receivable}}{\text{Credit sales}}$	X 365 / 360 days
		$= \frac{1,50,000 + 60,000}{4,56,000}$	X 365 days
		= 0.461	X 365 days
		= 168 days	

6. Creditors Ratio	=	$\frac{\text{Creditors + Bills payable}}{\text{Credit Purchase}}$	X 365 / 360 days
		$= \frac{1,05,000 + 30,000}{3,78,000}$	X 365 days
		= 0.357	X 365 days
		= 130 days	

Problem - 5

Following is the summarised Balance Sheet of Mona Ltd. as on 31-3-04.

Particular	Rs.	Particular	Rs.
Equity Shares of Rs. 10 each 10%	10,00,000	Fixed Assets	20,00,000
Pref. Sh. of Rs.100 each Reserves	4,00,000	Investments	2,00,000
and Surplus	7,00,000	Closing Stock	2,00,000
15% Debentures	5,00,000	Sundry Debtors	4,60,000
Sundry Creditors	2,40,000	Bills Receivable	60,000
Bank Overdraft	1,60,000	Cash at Bank	60,000
		Preliminary Expenses	20,000
	30,00,000		30,00,000

Summarised Profit and Loss Account is as under for the year ending on 31-3-'04:

Sales (25% Cash sales)	Rs. 80,00,000
Less: Cost of goods sold	<u>56,00,000</u>
Gross Profit	<u>24,00,000</u>
Net profit (Before interest and tax 50%)	9,00,000
Calculate the following ratios:	
(1) Rate on Return on Capital Employed (2) Proprietary Ratio (3) Debt-Equity (4) Capital gearing Ratio (5) Debtors Ratio (365 days of the year.) (6) Rate of Return on Shareholders' Funds (7) Rate of Return on Equity shareholders fund	

Solution - 5

Statement of Profitability

Sales	80,00,000
Less: Cost of goods sold	56,00,000
Gross profit	24,00,000
Less: Operating expenses (including Depreciation)	15,00,000
Earnings before Interest & Tax (EBIT)	9,00,000
Less: Interest Cost	75,000
Earnings before Tax (EBT)	8,25,000
Less: Tax liability (50%)	4,12,500
Earnings after Tax (EAT/ PAT)	4,12,500
Less: Preference share dividend	40,000
Distributional Profit	3,72,500

1.		6.		7.	
Rate of Return on Capital Employed		Rate of Return on Shareholders Fund		Rate of return on Equity Shareholders Fund	
= $\frac{\text{EBIT}}{\text{Capital employed}}$	X 100	= $\frac{\text{PAT}}{\text{SHF}}$	X 100	= $\frac{\text{PAT} - \text{Pref. Div.}}{\text{ESHF}}$	X 100
CE = Eq Sh. Cap. + Pref. Sh. Cap. + Reserves & Surplus + Debenture + Long Term Loan – Fictitious Assets		SHF = Eq. Sh. Cap. + Pref. Sh. Cap. + Reserves & Surplus – Fictitious Assets		ESHF = Eq. Sh. Cap. + Reserves & Surplus – Fictitious Assets	
CE = 10,00,000 + 4,00,000 + 7,00,000 + 5,00,000 – 20,000 = 25,80,000		SHF = 10,00,000 + 4,00,000 + 7,00,000 – 20,000 = 20,80,000		ESHF = 10,00,000 + 7,00,000 – 20,000 = 16,80,000	
= $\frac{9,00,000}{25,80,000}$	X 100	= $\frac{4,12,500}{20,80,000}$	X 100	= $\frac{3,72,500}{16,80,000}$	X 100

= 34.88%	= 19.83%	= 22.17 %
-----------------	-----------------	------------------

2. Proprietary Ratio =	<u>Shareholders' Funds</u> Total Assets	
	SHF = Eq. Sh. Cap. + Reserves & Surplus + Preference Sh. Cap. – Fictitious Assets	
	Total Assets = Total Assets – Fictitious Assets	
	SHF = 10,00,000 + 7,00,000 + 4,00,000 - 20,000 = 20,80,000	
	TA = 30,00,000 – 20,000 = 29,80,000	
	= <u>20,80,000</u> 29,80,000	
	= 0.70 : 1	

3. Debt – Equity Ratio =	<u>Long Term Debt (Liabilities)</u> Shareholders Fund	
	LTL = Debentures + long term loans	
	SHF = Eq. Sh. Cap. + Reserves & Surplus + Preference Sh. Cap. – Fictitious Assets	
	LTL = 5,00,000	
	SHF = 10,00,000 + 7,00,000 + 4,00,000 - 20,000 = 20,80,000	
	= <u>5,00,000</u> 20,80,000	
	= 0.24 : 1	

4. Capital Gearing Ratio =	<u>Fixed Interest or Dividend Securities</u> Equity Shareholders Fund	
	FIS = Debentures + Preference share capital	
	ESHF = Eq. Sh. Cap. + Reserves & Surplus – Fictitious Assets	
	LTL = 9,00,000	

ESHF = 10,00,000 + 7,00,000 - 20,000	
= 16,80,000	
= $\frac{9,00,000}{16,80,000}$	
= 0.54 : 1	

5. Debtors Ratio	=	<u>Debtors + Bills receivable</u>	X 365 / 360 days
(Avg. debt collection period)		Credit sales	
		= $\frac{4,60,000 + 60,000}{60,00,000}$	X 365 days
		= 0.461	X 365 days
		= 31.63 days	
		= 32 days (Aprox.)	

Problem - 6

Two years' Balance sheets of Jamuna Company Ltd. are as follows:[S. U. T.Y.-April, 1999]

Liabilities	31-3-03	31-3-04	Assets	31-3-03	31-3-04
Equity share capital	1,00,000	1,50,000	Land and Buildings	1,00,000	90,000
10%Pref. Sh. capital	50,000	50,000	Machinery	90,000	90,000
General Reserve Profit & Loss A/c 12%	30,000	30,000	Debtors	53,000	30,000
Debentures Creditors	20,000	-----	Bills Receivable	20,000	12,000
Bills payable	1,00,000	50,000	Stock	75,000	90,000
Bank overdraft	30,000	35,000	Bank Balance	15,000	35,000
O/s. Expenses	10,000	25,000	Cash Balance	2,000	13,000
	5,000	20,000	Profit & Loss A/c	----	10,000
		10,000			
	3,55,000	3,70,000		3,55,000	3,70,000

Additional Information:

	2002-'03	2003-04
	Rs.	Rs.
(1) Sales	3,65,000	2,19,000
(2) Cost of Goods sold	2,19,000	1,46,000
(3) Net profit (Before Pref. Dividend)	35,000	47,500
(4) Stock on 1-4-'02	71,000	---

Calculate following ratios and give your opinion about company position in 2003-'04 in comparison with 2002-'03. Whether it is positive or negative?

- (1) Current ratio (2) Liquid ratio (3) Debtors ratio (Take 365 days for calculations) (4) Gross profit ratio (5) Stock Turnover ratio (6) Rate of return on equity share-holders' funds.

Solution - 6 (problem related to comparative analysis between two years)

1. Current Ratio	=	<u>Current Assets</u>	
		Current liabilities	
		Current Assets = Stock + debtors + Bills receivable + Cash + Bank Balance	
		Current Liabilities = Creditors + Bills payable	
		2002-03:	
		= $\frac{53,000 + 20,000 + 75,000 + 15,000 + 2,000}{30,000 + 10,000 + 10,000 + 5,000}$	
		= $\frac{1,65,000}{55,000}$	
		= 3 : 1	
		2003-04:	
		= $\frac{30,000 + 12,000 + 90,000 + 35,000 + 13,000}{35,000 + 25,000 + 20,000 + 10,000}$	
2. Liquid Ratio	=	<u>Liquid Assets</u>	
		Liquid liabilities	
		(Liquid) Quick Assets = Current Assets - Stock	
		(Liquid) Quick Liabilities = Current Liabilities – BOD	
		2002-03:	
		= $\frac{1,65,000 - 75,000}{55,000 - 10,000}$	
		= $\frac{90,000}{45,000}$	
		= 2 : 1	
		2003-04:	
		= $\frac{1,80,000 - 90,000}{90,000 - 20,000}$	
		= $\frac{90,000}{70,000}$	
		= 1.29 : 1	

3. Debtors Ratio = (Avg. debt collection period)	$\frac{\text{Debtors + Bills receivable}}{\text{Credit sales}}$	X 365 / 360 days
	2002-03: $= \frac{53,000 + 20,000}{3,65,000}$	X 365 days
	$= \frac{73,000}{3,65,000}$	X 365 days
	$= 73 \text{ days}$	
	2003-04: $= \frac{30,000 + 12,000}{2,19,000}$	X 365 days
	$= \frac{42,000}{2,19,000}$	X 365 days
	$= 70 \text{ days}$	
4. Gross Profit Margin =	$\frac{\text{Gross profit}}{\text{Sales}}$	X 100
	GP = Sales - COGS 2002-03: $365000 - 219000$ $= 1,46,000$ 2003-04: $219000 - 146000$ $= 73,000$	
	2002-03: $= \frac{1,46,000}{3,65,000}$	X 100
	$= 40\%$	
	2003-04: $= \frac{73,000}{2,19,000}$	X 100
	$= 33.33\%$	
5. Stock Turnover Ratio =	$\frac{\text{Cost of goods sold}}{\text{Avg. Stock}}$	
	Avg. stock = $\frac{\text{Opening Stock} + \text{Closing Stock}}{2}$	

2002-03:	$\frac{71000 + 75000}{2}$ $= 73,000$
2003-04:	$\frac{75000 + 90000}{2}$ $= 82,500$
2002-03:	$= \frac{2,19,000}{73,000}$ $= 3 \text{ times}$
2003-04:	$= \frac{1,46,000}{82,500}$ $= 1.77 \text{ times}$

7. Rate of return on Equity Shareholders Fund:		
2002-03	$= \frac{\text{PAT} - \text{Pref. Div.}}{\text{ESHF}}$	X 100
ESHF = Eq. Sh. Cap. + Reserves & Surplus – Fictitious Assets		
ESHF = 1,00,000 + 30,000 + 20,000		
= 1,50,000		
$= \frac{35,000 - 5,000}{1,50,000}$	X 100	
= 20 %		
2003-04:		
ESHF: 1,50,000 + 30,000 - 10,000		
= 1,70,000		
$= \frac{47,500 - 5,000}{1,70,000}$	X 100	
= 25%		

Problem - 7

The Balance Sheet as on 2002 and 2003 are as under:

Liabilities	2002	2003	Assets	2002	2003
Equity share capital	1,00,000	1,25,000	Land and Buildings	50,000	75,000
General Reserve Profit &	12,500	15,000	Plant Machinery	57,500	55,000
Loss A/c Creditors	10,000	7,500	Stock	10,000	12,500
Bills payable	5,000	6,250	Debtors	7,500	10,000
O/s. Expenses	3,750	7,500	Cash & Bank	5,000	7,500
Provident Fund	1,250	3,750	Bills Receivable	2,500	5,000
	7,500	5,000	Preliminary Exp.	7,500	5,000
	1,40,000	1,70,000		1,40,000	1,70,000

Profit & Loss A/c.

Particulars	2002	2003	Particulars	2002	2003
To Op. Stock	5,000	10,000	By Sales	62,500	1,12,500
To Purchase	37,500	47,500	By Closing Stock	10,000	12,500
To Office Exp.	7,500	10,000	By Profit on Sale of		
To Selling exp.	5,000	12,500	Furniture	2,500	----
To Fin. Exp.	2,500	15,000			
To Net Profit	17,500	30,000			
	75,000	1,25,000		75,000	1,25,000

Find out (1) Current Ratio (2) Stock Turnover Ratio (3) Gross Profit Ratio (4) Liquid Ratio (5) Debtor Ratio (working days 300) (6) Return on Equity Capital employed (7) Ownership Ratio.

Solution - 7

1. Current Ratio	=	$\frac{\text{Current Assets}}{\text{Current liabilities}}$	
		Current Assets = Stock + debtors + Bills receivable + Cash & Bank Balance	
		Current Liabilities = Creditors + Bills payable + O/s Exp. + PF	
		2002:	
		$= \frac{10,000 + 7,500 + 5,000 + 2,500}{5,000 + 3,750 + 1,250 + 7,500}$	
		$= \frac{25,000}{17,500}$	
		$= 1.43 : 1$	
		2003-04:	
		$= \frac{12,500 + 10,000 + 7,500 + 5,000}{6,250 + 7,500 + 3,750 + 5,000}$	
		$= \frac{35,000}{22,500}$	
		$= 1.56 : 1$	

2. Stock Turnover Ratio =	$\frac{\text{Cost of goods sold}}{\text{Avg. Stock}}$
	$\text{Avg. stock} = \frac{\text{Opening Stock} + \text{Closing Stock}}{2}$
	2002-03: $\frac{5000 + 10000}{2} = 7,500$ 2003-04: $\frac{10000 + 12500}{2} = 11,250$
	Gross Profit = Sales + Closing Stock - (Opening Stock + Purchase) COGS = Sales - GP
	2002: = 62,500 + 10,000 - (5,000 + 37,500) = 30,000 COGS = 62,500 - 30,000 = 32,500
	2003: = 1,12,500 + 12,500 - (10,000 + 47,500) = 67,500 COGS = 1,12,500 - 67,500 = 45,000
	2002-03: $= \frac{32,500}{7,500}$
	= 4.33 times
	2003-04: $= \frac{45,000}{11,250}$
	= 4 times
3. Gross Profit Margin =	$\frac{\text{Gross profit}}{\text{Sales}} \times 100$
	GP = Sales - COGS 2002-03: 2002: = 62,500 + 10,000 - (5,000 + 37,500) = 30,000 2003-04: = 1,12,500 + 12,500 - (10,000 + 47,500)

= 67,500	
2002-03:	
= $\frac{30,000}{62,500}$	X 100
= 48%	
2003-04:	
= $\frac{67,500}{1,12,500}$	X 100
= 60%	

4. Liquid Ratio	=	$\frac{\text{Liquid Assets}}{\text{Liquid liabilities}}$	
		(Liquid) Quick Assets = Current Assets - Stock	
		(Liquid) Quick Liabilities = Current Liabilities – BOD	
		2002-03:	
		= $\frac{25,000 - 10,000}{17,500}$	
		= $\frac{15,000}{17,500}$	
		= 0.86 :1	
		2003-04:	
		= $\frac{35,000 - 12,500}{22,500}$	
		= $\frac{22,500}{22,500}$	
		= 1 : 1	

5. Debtors Ratio	=	$\frac{\text{Debtors + Bills receivable}}{\text{Credit sales}}$	X 300 days
(Avg. debt collection period)			
		2002-03:	
		= $\frac{7,500 + 2,500}{62,500}$	X 300 days
		= $\frac{10,000}{62,500}$	X 300 days
		= 48 days	

2003-04: = $\frac{10,000 + 5,000}{1,12,500}$	X 300 days
= $\frac{15,000}{1,12,500}$	X 300 days
= 40 days	

6. Rate of return on Equity Shareholders Fund:		
	2002 = $\frac{\text{PAT} - \text{Pref. Div.}}{\text{ESHF}}$	X 100
	ESHF = Eq. Sh. Cap. + Reserves & Surplus – Fictitious Assets	
	ESHF = 1,00,000 + 12,500 + 10,000 - 7,500 = 1,15,000	
	= $\frac{17,500}{1,15,000}$	X 100
	= 15.22 %	
	2003:	
	ESHF: 1,25,000 + 15,000 + 7,500 - 5,000 = 1,42,500	
	= $\frac{30,000}{1,42,500}$	X 100
	= 21.05%	

7.	Ownership Ratio =	<u>Shareholders' Funds</u> Total Assets	
		SHF = Eq. Sh. Cap. + Reserves & Surplus – Fictitious Assets	
		Total Assets = Total Assets – Fictitious Assets	
	2002 =	SHF = 1,00,000 + 12,500 + 10,000 - 7,500 = 1,15,000	
		TA = 1,40,000 - 7,500 = 1,32,500	
		= $\frac{1,15,000}{1,32,500}$	
		= 0.87 : 1 OR = 87%	

2003 = SHF = 1,25,000 + 15,000 + 7,500 - 5,000 = 1,42,500	
TA = 1,70,000 - 5,000 1,65,000	
= <u>1,42,500</u> 1,65,000	
= 0.86 : 1 OR = 86%	

Problem - 8

Following are incomplete Trading & Profit and Loss A/c. and Balance Sheet.

Trading A/c.

Particular	Rs.	Particular	Rs.
To Op. stock	3,50,000	By Sales	(?)
To Purchase	(?)	By Closing Stock	(?)
To Purchase Return	87,000		
To Gross Profit	7,18,421		
	14,96,710		14,96,710

Profit & Loss A/c.

Particular	Rs.	Particular	Rs.
To Office Exp.	3,70,000	By Gross Profit	7,18,421
To Int. on Deb.	30,000	By Commission	(?)
To Tax. Provision	18,421		
To Net Profit	3,50,000		
	(?)		(?)

Balance Sheet

Particular	Rs.	Particular	Rs.
Paid Up Capital	5,00,000	Plant & machinery	7,00,000
General Reserve	(?)	Stock	(?)
P & L a/c.	(?)	Debtors	(?)
10% Debenture	(?)	Bank	62,500
Current Liabilities	6,00,000	Other Fixed Assets	(?)
	(?)		(?)

Find out missing items with the help of other details are as under:

1. Current Ratio was 2:1.
2. Closing Stock is 25% of Sales.
3. Proposed Dividend was 40% of paid up capital.
4. Gross profit Ratio was 60%.
5. Amount transfer to General Reserve is same as proposed Dividend.
6. Balance of P & L Account is calculated 10% of proposed dividend.
7. Commission income is 1/7 of Net profit.
8. Balance of General reserve is twice the current year transfer amount.

Solution - 8

Trading A/c.

Particular	Rs.	Particular	Rs.
To Op. stock	3,50,000	By Sales (?)	11,97,368
To Purchase (?)	3,41,289	By Closing Stock (?)	2,99,342
To Purchase Return	87,000		
To Gross Profit	7,18,421		
	14,96,710		14,96,710

Profit & Loss A/c.

Particular	Rs.	Particular	Rs.
To Office Exp.	3,70,000	By Gross Profit	7,18,421
To Int. on Deb.	30,000	By Commission (?)	50,000
To Tax. Provision	18,421		
To Net Profit	3,50,000		
	7,68,421		7,68,421

Balance Sheet

LIABILITIES	AMOUNT	ASSETS	AMOUNT
Paid Up Capital	5,00,000	Plant & machinery	7,00,000
General Reserve (?)	6,00,000	Stock (?)	2,99,342
P & L a/c. (?)	20,000	Debtors (?)	8,38,158
10% Debenture (?)	3,00,000	Bank (?)	62,500
Current Liabilities	6,00,000	Other Fixed Assets	1,20,000
	20,20,000		20,20,000

1. Gross Profit Margin =	$\frac{\text{Gross profit}}{\text{Sales}} \times 100$	
	$60 = \frac{7,18,421}{\text{Sales}} \times 100$	
	$\text{Sales} = \frac{7,18,421}{60} \times 100$	
	Sales = 11,97,368	

2. Closing Stock =	Sales x 25%
	11,97,368 x 25%
	CS = 2,99,342

3. Proposed Dividend =	Paid up Capital x 40%
	= 5,00,000 x 40%
	PD = 2,00,000

4. General Reserve =	GR find out as per Proposed Dividend
	Proposed Dividend is 2,00,000
	So that Proposed Dividend = General Reserve
	GR = 2,00,000

5. Commission =	It is 1/7 part of Net Profit
	Commission = 3,50,000 x 1/7
	Commission = 50,000

6. Profit & Loss Account =	It is 10% of Proposed Dividend
	P & L A/c. = 2,00,000 x 10%
	P & L A/c. = 20,000

7. Debenture =	Rate of Interest is 10%
	Interest amount is Rs. 30,000
	So that, Debenture value is = 30,000 x 10/100
	= 3,00,000

8. Current Ratio =	<u>Current Assets</u> Current liabilities	
	2 = <u>Stock + debtors + Bank Balance</u> Current Liability	
	2 = <u>2,99,342 + debtors + 62,500</u>	
	6,00,000	
	12,00,000 = Debtors + 3,61,842	
	Debtors = 12,00,000 - 3,61,842	
	Debtors = 8,38,158	

8. Current Ratio	=	$\frac{\text{Current Assets}}{\text{Current liabilities}}$	
		$2 = \frac{\text{Stock + debtors + Bank Balance}}{\text{Current Liability}}$	
		$2 = \frac{2,99,342 + \text{debtors} + 62,500}{6,00,000}$	
		$12,00,000 = \text{Debtors} + 3,61,842$	
		$\text{Debtors} = 12,00,000 - 3,61,842$	
		Debtors = 8,38,158	
8. Balance of General Reserve	=	It is twice of current year provision for General Reserve	
		Current year provision is Rs. 2,00,000	
		So that, Balance of G. R. = 2,00,000 x 2	
		Balance of GR = 4,00,000	
		Now, General Reserve = 4,00,000 + 2,00,000	
		GR = 6,00,000	

Problem -9

From the following information, prepare the Balance Sheet of ABB Ltd. Showing the details of working:

Paid up capital	Rs. 50,000
Plant and Machinery	Rs. 1,25,000
Total Sales (p.a.)	Rs. 5,00,000
Gross Profit	25%
Annual Credit Sales	80% of net sales
Current Ratio	2
Inventory Turnover	4
Fixed Assets Turnover	2
Sales Returns	20% of sales
Average collection period	73 days
Bank Credit to trade credit	2
Cash to Inventory	1 : 15
Total debt to current Liabilities	3

Solution - 9

1. Net Sales	=	Total Sales - Sales Return
		= 5,00,000 - 1,00,000
		= Rs. 4,00,000
2. Credit Sales	=	80% of Net Sales
		= 4,00,000 x 80%
		= Rs. 3,20,000
3. Gross Profit	=	25% of Net sales

		$= 4,00,000 \times 25\%$
		= Rs. 1,00,000
4. Cost of Goods Sold	=	Net Sales - Gross Profit
		$= 4,00,000 - 1,00,000$
		= Rs. 3,00,000
5. Inventory	=	$\frac{\text{Cost of Goods Sold}}{\text{Inventory Turnover}}$
		$= \frac{3,00,000}{4}$
		= Rs. 75,000
6. Receivable Turnover	=	$\frac{365}{73}$
		$= 5$
Receivables	=	$\frac{\text{Credit Sales}}{\text{Receivables Turnover}}$
		$= \frac{3,20,000}{5}$
		= Rs. 64,000
7. Cash	=	1/5 of Inventory
		$= 1/5 \times 75,000$
		= Rs. 5,000
8. Total Current Assets	=	Inventory + Receivables + Cash
		$= 75,000 + 64,000 + 5,000$
		= Rs. 1,44,000
9. Total Current Liabilities	=	$\frac{\text{Current Assets}}{2}$
		$= \frac{1,44,000}{2}$
		= Rs. 72,000
10. Bank Credit	=	$2/3 \times \text{Current Liabilities}$
		$= 2/3 \times 72,000$
		= Rs. 48,000
11. Trade Credit	=	1/2 of Bank Credit OR 1/3 of Current Liabilities
		Rs. 24,000
12. Total Debt	=	Current Liabilities x 3
		$72,000 \times 3$
		= Rs. 2,16,000
13. Long term debt	=	Total Debt - Current Liabilities
		$= 2,16,000 - 72,000$

		= Rs. 1,44,000
14. Fixed Assets	=	$1/2 \text{ of Net Sales} =$
		$1/2 \times 4,00,000$
		= Rs. 2,00,000
15. Other fixed Assets	=	Fixed Assets - Plant & Machinery
		$= 2,00,000 - 1,25,000$
		= Rs. 75,000
16. Total Assets	=	Fixed Assets + Current Assets
		$= 2,00,000 + 1,44,000$
		= 3,44,000
17. Net worth	=	Total Assets - Total Debt
		$3,44,000 - 2,16,000$
		= Rs. 1,28,000
18. Reserves & Surplus	=	Net worth - Paid Up capital
		$= 1,28,000 - 50,000$
		= Rs. 78,000

Balance Sheet

LIABILITIES	AMOUNT	ASSETS	AMOUNT
Paid Up Capital	50,000	Plant & machinery	1,25,000
Reserves & Surplus	78,000	Other Fixed Assets	75,000
Long term Debt	1,44,000	Inventory	75,000
Bank credit	48,000	Receivables	64,000
Trade credit	24,000	Cash	5,000
	3,44,000		3,44,000

Problem No: 10

The following is the Balance Sheet of a company as on 31st March:

Liabilities	Rs.	Assets	Rs.
Share Capital	2,00,000	Land and Buildings	1,40,000
Profit & Loss Account	30,000	Plant and Machinery	3,50,000
General Reserve	40,000	Stock	2,00,000
12% Debentures	4,20,000	Sundry Debtors	1,00,000
Sundry Creditors	1,00,000	Bills Receivable	10,000
Bills Payable	50,000	Cash at Bank	40,000
	8,40,000		8,40,000

Calculate :

- (1) Current Ratio
- (2) Quick Ratio
- (3) Inventory to working Capital
- (4) Debt to Equity Ratio
- (5) Proprietary Ratio
- (6) Capital Gearing Ratio
- (7) Current Assets to Fixed Assets

SOLUTION :

$$\begin{aligned} \text{(1) Current Ratio} &= \frac{\text{Current assets}}{\text{Current Liabilities}} \\ &= \frac{\text{Rs. 3,50,000}}{\text{Rs. 1,50,000}} = 2.33 : 1 \end{aligned}$$

$$\begin{aligned} \text{(2) Quick Ratio} &= \frac{\text{Liquid Assets}}{\text{Liquid Liabilities}} \\ &= \frac{\text{Rs. 1,50,000}}{\text{Rs. 1,50,000}} = 1 : 1 \end{aligned}$$

$$\begin{aligned} \text{(3) Inventory to Working Capital} &= \frac{\text{Inventory}}{\text{Working Capital}} \\ &= \frac{\text{Rs. 2,00,000}}{\text{Rs. 2,00,000}} = 1 : 1 \end{aligned}$$

$$\begin{aligned} \text{(Working Capital)} &= \text{Current Assets} - \text{Current Liabilities} \\ &= \text{Rs. 3,50,000} - \text{Rs. 1,50,000} = \text{Rs. 2,00,000} \end{aligned}$$

$$\text{(4) Debt to Equity Ratio} = \frac{\text{Long Term Debts}}{\text{Shareholders' Fund}}$$

$$= \frac{\text{Rs. 4,20,000}}{\text{Rs. 2,70,000}} = 1.56 : 1$$

(Or)

$$\begin{aligned} &= \frac{\text{Long Term Debts}}{\text{Shareholders' Fund} + \text{Long Term Debts}} \\ &= \frac{\text{Rs. 4,20,000}}{\text{Rs. 2,70,000} + 4,20,000} = 0.6 : 1 \end{aligned}$$

$$\begin{aligned} \text{(5) Proprietary Ratio} &= \frac{\text{Shareholders' Fund}}{\text{Total Assets}} \\ &= \frac{\text{Rs. 2,70,000}}{\text{Rs. 8,40,000}} = 0.32 : 1 \end{aligned}$$

$$\begin{aligned} \text{(6) Capital Gearing Ratio} &= \frac{\text{Fixed Interest Bearing Securities}}{\text{Equity Share Capital}} \\ &= \frac{\text{Rs. 4,20,000}}{\text{Rs. 2,00,000}} = 2.1 : 1 \end{aligned}$$

$$\begin{aligned} \text{(7) Current Assets to Fixed Assets Ratio} &= \frac{\text{Current Assets}}{\text{Fixed Assets}} \\ &= \frac{\text{Rs. 3,50,000}}{\text{Rs. 4,90,000}} = 0.71 : 1 \end{aligned}$$

Problem 11:

From the following Balance Sheet and additional information, you are required to calculate:

- (i) Return on Total Resources
- (ii) Return on Capital Employed
- (iii) Return on Shareholders' Fund

BALANCE SHEET as on 31st Dec.

	Rs.		Rs.
Share Capital (Rs. 10)	8,00,000	Fixed Assets	10,00,000
Reserves	2,00,000	Current Assets	3,60,000
8% Debentures	2,00,000		
Creditors	1,60,000		
	13,60,000		13,60,000

Net operating profit before tax is Rs. 2,80,000. Assume tax rate at 50%. Dividend declared amounts to Rs.1,20,000. (B.Com. MS.)

SOLUTION:

$$\begin{aligned}
 (i) \text{ Return on Total Resources} &= \frac{\text{Profit after Tax}}{\text{Total Assets}} \times 100 \\
 &= \frac{\text{Rs. 1,40,000}}{\text{Rs. 13,60,000}} \times 100 = 10.29\%
 \end{aligned}$$

$$\begin{aligned}
 (ii) \text{ Return on Capital Employed} &= \frac{\text{Profit before Tax \& Interest}}{\text{Capital Employed}} \times 100 \\
 &= \frac{\text{Rs. 2,96,000}}{\text{Rs. 12,00,000}} \times 100 = 24.7\%
 \end{aligned}$$

$$\begin{aligned}
 (iii) \text{ Return on Shareholders' Fund} &= \frac{\text{Profit after Tax}}{\text{Shareholders Fund}} \times 100 \\
 &= \frac{\text{Rs. 1,40,000}}{\text{Rs. 10,00,000}} \times 100 = 14\%
 \end{aligned}$$

Problem 12:

Extract from financial accounts of X, Y, Z Ltd. are:

	Year I		Year II	
	Assets Rs.	Liabilities Rs.	Assets Rs.	Liabilities Rs.
Stock	10,000		20,000	
Debtors	30,000		30,000	
Payment in Advance	2,000		—	
Cash in hand	20,000		15,000	
Sundry Creditors		25,000		30,000
Acceptances		15,000		12,000
Bank Overdraft		—		5,000
	62,000	40,000	65,000	47,000

Sales amounted to Rs.3,50,000 in the first year and Rs.3,00,000 in the second year.

You are required to comment on the solvency position of the concern with the help of accounting ratios.
(C.A. Final ;M. Com. Madras)

SOLUTION :

Short-term Solvency Analysis

$$(1) \text{ Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

$$\text{Year I : } \frac{10,000 + 30,000 + 2,000 + 20,000}{25,000 + 15,000} = \frac{62,000}{40,000} = 1.55 : 1$$

$$\text{Year II : } \frac{20,000 + 30,000 + 15,000}{30,000 + 12,000 + 5,000} = \frac{65,000}{47,000} = 1.38 : 1$$

$$(2) \text{ Liquid or Quick Ratio} = \frac{\text{Liquid Assets}}{\text{Liquid Liabilities}}$$

$$\text{Year I : } \frac{30,000 + 20,000 + 2,000}{25,000 + 15,000} = \frac{52,000}{40,000} = 1.30 : 1$$

$$\text{Year II : } \frac{30,000 + 15,000}{30,000 + 12,000 + 5,000} = \frac{45,000}{47,000} = 0.96 : 1$$

$$(3) \text{ Inventory Turnover Ratio} = \frac{\text{Net Sales}}{\text{Average Inventory}}$$

$$\text{Year I : } \frac{3,50,000}{10,000} = 35 : 1$$

$$\text{Year II : } \frac{3,00,000}{15,000} = 20 : 1$$

$$(4) \text{ Inventory Current Assets Ratio} = \frac{\text{Inventory}}{\text{Total Current Assets}} \times 100$$

$$\text{Year I : } \frac{10,000}{62,000} \times 100 = 16\%$$

$$\text{Year II : } \frac{20,000}{65,000} \times 100 = 31\%$$

$$(5) \text{ Average Collection Period} = \frac{\text{Trade Receivables}}{\text{Net Credit Sales}} \times \text{No. of Working Days}$$

$$\text{Year I: } \frac{30,000}{3,50,000} \times 365 = 31.3 \text{ days}$$

$$\text{Year II: } \frac{30,000}{3,00,000} \times 365 = 36.5 \text{ days}$$

Long-Term Solvency Analysis

$$(1) \text{ Debt Equity Ratio} = \frac{\text{External Equities}}{\text{Internal Equities}}$$

$$\text{Year I: } \frac{25,000 + 15,000}{62,000 - 40,000} = \frac{40,000}{22,000} = 1.82 : 1$$

$$\text{Year II: } \frac{30,000 + 12,000 + 5,000}{65,000 - 47,000} = \frac{47,000}{18,000} = 2.61 : 1$$

$$(2) \text{ Proprietary Ratio is } = \frac{\text{Shareholder's Equities}}{\text{Total Equities}}$$

$$\text{Year I: } \frac{22,000}{62,000} = 0.35 : 1$$

$$\text{Year II: } \frac{18,000}{65,000} = 0.28 : 1$$

3.2. METHODS OF DEPRECIATION:

Different methods of calculating provision for depreciation are mainly accounting customs which may be used by different concerns taking into consideration their individual peculiarities. The following are the main methods of providing depreciation:

3.2.1 Fixed Installment (or Fixed Percentage on Original Cost or Straight Line)

Method Under method of fixed percentage of the original value of the asset is written off every year so as to reduce the asset account to nil or to its scrap value at the end of the estimated life of the asset. To ascertain the annual charge under this method all that is necessary is to divide the original value of the asset (minus its residual value, if any) by the number of years of its estimated life i.e.,

$$\text{Depreciation} = \frac{\text{Cost price of asset} - \text{Scrap Value}}{\text{Estimated life of asset}}$$

If, for example, a machine costing Rs. 11,000/- is estimated to have a life of 10 years and the scrap value is estimated Rs. 1,000/- at the end of its life, the amount of depreciation would be

$$\frac{\text{Rs. } 11,000 - 1,000}{10} = \text{Rs. } 1,000$$

The amount of depreciation charged during each period of the asset's life is constant. If the charge of depreciation is plotted annually on a graph paper and the points joined together, then the graph will reveal a straight line that is why it is also called as straight line method.

This method is suggested in case of assets where in the service value declines as a function of time and that too at a uniform rate. The repairs, maintenance and revenue also remain more or less constant.

It should be noted carefully that if depreciation is given as some percentage per annum and if the asset is purchased during the accounting year, say on July 1st the depreciation for six months is to be charged, if the accounting year closes on 31st December.

3.2.1.1 Merit of Fixed Installment Method

- i. This method is simple to understand and easy to apply.
- ii. It can write down an asset to zero at the end of its working life, if so desired.
- iii. This method is very suitable for those assets which have a fixed life e.g., furniture, fixtures, short leases, patents and copyright and other assets of a small intrinsic value, repair charges are less and the possibility of obsolescence also less.

3.2.1.2 Demerits of Fixed Installment Method

- i. The charge for depreciation remains constant year after year. The expenses of repairs and maintenance are increasing as the asset grows older. The profit and loss account thus in the later years bears more than its share of valuation.
- ii. It becomes difficult to calculate the depreciation on additions made during year.
- iii. Under this method the depreciation charge remains the same from year to year irrespective of the use of the asset. Thus it does not take into consideration the effective utilization of the asset.
- iv. It is not taking into consideration the interest on capital invested in fixed assets.
- v. It does not provide funds for replacement of assets.
- vi. This method tends to report an increasing rate of return on investment in the asset amount due to the fact that the net balance of the asset amount is taken. In spite of these drawbacks, this method is mostly used by firms in U.S.A, Canada, U.K., and some firms in India.
- vii.

Example 1: Calculate the rate of depreciation under straight line method (SLM) in each of the following alternative cases:

Case	Purchase Price of Machine (₹)	Expenses to be Capitalized (₹)	Estimated Residual Value (₹)	Expected Useful Life
(a)	80,000	20,000	40,000	4 years
(b)	17,000	3,000	2,000	10 years

Solution:

Step 1: Calculation of Total Cost of Asset

Total cost of Asset = Purchase Price + Expenses to be capitalized

Case (a) = ₹80,000 + ₹20,000 = ₹1,00,000

Case (b) = ₹17,000 + ₹3,000 = ₹20,000

Step 2: Calculation of Amount of Depreciation per year

$$\text{Amount of Depreciation} = \frac{\text{Total Cost of Asset} - \text{Estimated Residual Value}}{\text{Expected Useful Life}}$$

$$\text{Case (a)} = \frac{₹1,00,000 - ₹40,000}{4} = ₹15,000$$

$$\text{Case (b)} = \frac{₹20,000 - ₹2,000}{10} = ₹1,800$$

Step 3: Calculation of the Rate of Depreciation under SLM

$$\text{Rate of Depreciation (under SLM)} = \frac{\text{Amount of Depreciation}}{\text{Total Cost of Asset}} \times 100$$

$$\text{Case (a)} = \frac{₹15,000}{₹1,00,000} \times 100 = 15\%$$

$$\text{Case (b)} = \frac{₹1,800}{₹20,000} \times 100 = 9\%$$

Example 2: On 1st January 2012, X Ltd. purchased a second-hand machine for ₹52,000 and spent ₹2,000 as shipping and forwarding charges, ₹5,000 as import duty, ₹500 as carriage inwards, ₹1,500 as repair charges, ₹500 as installation charges, ₹400 as brokerage of the middleman and ₹100 for an iron pad. It was estimated that the machine will have a scrap value of ₹2,000 at the end of its useful life which is 20 years. On 30th Sept 2012 repairs & renewals amounted to ₹2,000. On 1st July 2014, this machine was sold for ₹30,600.

Required: Prepare the machinery account for the first three years.

Solution:

Total Cost of Machinery = Purchase Price + Expenses to be capitalized

= ₹52,000 + ₹2,000 + ₹5,000 + ₹500 + ₹1,500 + ₹500 + ₹400 + ₹100

= ₹62,000

$$\text{Amount of Depreciation p.a.} = \frac{\text{Total Cost of Machine} - \text{Estimated Scrap value}}{\text{Expected Useful Life}}$$

$$= \frac{62,000 - 2,000}{20} = ₹3,000$$

Dr. Machinery Account			Cr.		
Date	Particulars	₹	Date	Particulars	₹
01.01.12	To Bank A/c (Cost)	52,000	31.12.12	By Depreciation A/c	3,000
	To Bank A/c (Expenses)	10,000		By Balance c/d	59,000
		62,000			62,000
01.01.13	To Balance b/d	59,000	31.12.13	By Depreciation A/c	3,000
		59,000		By Balance c/d	56,000
01.01.14	To Balance b/d	56,000	01.07.14	By Depreciation A/c	1,500
		56,000		By Bank A/c	30,600
				By P&L A/c (Loss)	23,900
					56,000

Working Notes:

i) Book Value as on date of sale = ₹56,000 – ₹1,500 = ₹54,500.

ii) Loss on sale = Book Value as on date of sale – Sale proceeds
= ₹54,500 – ₹30,600 = ₹23,900.

iii) The amount spent on repairs and renewals on 30.09.2012 is of revenue nature and not of capital nature and hence, not debited to machinery account.

Example 3: Kumaran Brothers purchased a Machinery on 1.1.2012 for ₹5,00,000. On 1.1.2014 the machinery was sold for ₹4,00,000. The firm charges depreciation at the rate of 15% per annum on Straight Line Method. The books are closed on 31st March every year. Prepare Machinery account and Depreciation account.

Solution:

Dr. Machinery Account			Cr.		
Date	Particulars	₹	Date	Particulars	₹
1-1-2012	To Bank A/c	5,00,000	31-3-2012	By Depreciation A/c	18,750
		5,00,000		By balance c/d	4,81,250
1-4-2012	To balance b/d	4,81,250	31-3-2013	By Depreciation A/c	75,000
		4,81,250		By balance c/d	4,06,250
1-4-2013	To balance b/d	4,06,250	1-1-2014	By Depreciation A/c	56,250
		4,06,250		By Bank A/c	3,50,000
					4,06,250

Dr. Depreciation Account			Cr.		
Date	Particulars	₹	Date	Particulars	₹
31-3-2012	To Machinery A/c	18,750	31-3-2012	By Profit & Loss A/c	18,750
31-3-2013	To Machinery A/c	75,000	31-3-2013	By Profit & Loss A/c	75,000
1-1-2014	To Machinery A/c	56,250	1-1-2014	By Profit & Loss A/c	56,250

Calculation of Profit or Loss on Sale of Machinery

Date	Particulars	₹
1.1.2012	Cost	5,00,000
31.3.2012	Depreciation $5,00,000 \times \frac{15}{100} \times \frac{3}{12}$	18,750
	Book Value	4,81,250
31.3.2013	Depreciation	75,000
	Book value	4,06,250
1.1.2014	Depreciation $5,00,000 \times \frac{15}{100} \times \frac{9}{12}$	56,250
	Book value	3,50,000
	Sales value	4,00,000
	Profit	50,000

3.2.2.1 MeritsofDiminishingBalanceMethod

- It tends to give a fairly even charge of depreciation against

revenue each year. Depreciation is generally heavy during the first few years and is counter –balanced by the repairs being light and in the later years when repairs are heavy this is counter – balanced by the decreasing charge for depreciation. This concept is based on the logic that as an asset grows older, the amount of depreciation goes on decreasing.

- ii. Fresh calculations of depreciation are not necessary as and when additions are made.
- iii. This method is recognized by the income tax authorities in India.
- iv. It does not provide for replacement of asset on the expiry of its useful life.
- v. This method is suitable for plant and machinery, building etc. Where the amount of repairs and renewals increase as the asset grows older and the possibilities of assets are more.

3.2.3. Diminishing Balance (or Reducing Installment or Written Down Value) Method

- Under this method, depreciation is calculated at a certain percentage each year on the balance of the asset which is brought forward from the previous year;
- The amount of depreciation charged in each period is not fixed but it goes on decreasing gradually as the beginning balance of the asset in each year will reduce.
- The charges in initial periods are higher than those in the later periods.
- Overall charges, i.e., amount of depreciation, repairs and maintenance taken together remain equal throughout the life of the asset.
- This method is justified in the cases where 1. there is much uncertainty of revenue in later years and 2.

3.2.2.2 .Demerits of Diminishing Balance Method

- i. The original cost of the asset is altogether lost sight of in subsequent years and the asset can never be reduced to zero.
- ii. This method does not take into consideration the asset as an investment and interest is not taken into consideration.

As

compared to the first method, it is difficult to determine the suitable rate of depreciation

3.2.3 DISTINCTION BETWEEN STRAIGHT LINE METHODS AND DIMINISHING BALANCE METHOD

Points of Distinction	Straight Line Method	Diminishing Balance Method
1. Change in Depreciation Amount	Throughout the life of the asset, the amount for depreciation remains to be equal.	Amount of depreciation is more during early years of the life of asset than later years and therefore amount is never equal.
2. Balance in Assets A/c	Assets A/c at the expiry of the expected life becomes nil.	The amount never becomes nil.
3. Overall Changes	The overall charge i.e., Depreciation and repairs taken together go on increasing from year to year. In other words the amount of depreciation and repairs is relatively less during the earlier years of the life of the asset than later years become repairs go on increasing with use of asset.	Overall charge remains more or less same for every year throughout the life of the asset. Since depreciation goes on decreasing and amount of repairs goes on increasing.
4. Profits	Profits under this method are more during the early years of the life of the asset.	Profits are less during early years than the later years.

•

Example 5: On 1.1.2010 a machine was purchased for ₹1,00,000. On 30.9.2012 a new machine was purchased for ₹20,000 installation expenses being ₹5,000.

Show the Machinery Account up to 31st Dec. 2013 assuming that the rate of depreciation was 10% on written down value method.

Solution:

In the books of					
Dr.			Cr.		
Date	Particulars	₹	Date	Particulars	₹
2010			2010		
1 Jan.	To Bank A/c	1,00,000	31 Dec.	By Depreciation A/c	10,000
				By Balance c/d	90,000
		1,00,000			1,00,000
2011			2011		
1 Jan.	To Balance b/d	90,000	31 Dec.	By Depreciation A/c	9,000
				By Balance c/d	81,000
		90,000			90,000
2012			2012		
1 Jan.	To Balance b/d	81,000	31 Dec.	By Depreciation A/c	8,725
30 Sept.	To Bank A/c	20,000		(8,100+ 625)	
	To Bank A/c	5,000		By Balance c/d	97,275
	(Installation expenses)				
		1,06,000			1,06,000
2013			2013		
1 Jan.	To Balance b/d	97,275	31 Dec.	By Depreciation A/c	9,728
				By Balance c/d	87,547
		97,275			97,275
2014					
1 Jan.	To Balance b/d	87,547			

Example 6: On 1st January 2012, X Ltd. purchased a second-hand machine for ₹58,000 and spent ₹2,000 on its erection. On 1st July 2014, this machine was sold for ₹28,600.

Required: Prepare the machinery account of the first 3 years according to the written down value taking the rate of depreciation at 10% p.a.

Dr.			Machinery Account		Cr.	
Date	Particulars	₹	Date	Particulars	₹	
01.01.2012	To Bank A/c	58,000	31.12.2012	By Depreciation A/c	6,000	
	To Bank A/c (Erection charges)	2,000		$\left[60,000 \times \frac{10}{100} \right]$		
				By Balance c/d	54,000	
		60,000			60,000	
01.01.2013	To Balance b/d	54,000	31.12.2013	By Depreciation A/c	5,400	
				$\left[54,000 \times \frac{10}{100} \right]$		
				By Balance c/d	48,600	
		54,000			54,000	
01.01.2014	To Balance b/d	48,600	01.07.2014	By Depreciation A/c	2,430	
				$\left[48,600 \times \frac{10}{100} \times \frac{6}{12} \right]$		
				By Bank A/c	28,600	
				By P&L A/c (Loss)	17,570	
		48,600			48,600	

i) Book value as on date of sale = ₹ 48,600 - $\left(48,600 \times \frac{10}{100} \times \frac{6}{12} \right)$ = ₹ 46,170

ii) Loss on Sale = Book value - Sale proceeds = ₹ 46,170 - ₹ 28,600 = ₹ 17,570

Example 7: A company whose accounting year is the calendar year purchased on 1st April, 2011 machinery costing ₹30,000. It further purchased machinery on 1st October 2011 costing ₹20,000 and on 1st July 2012, costing ₹10,000. On 1st January 2013 one third of the machinery which was installed on 1st April became obsolete and was sold for ₹3,000.

Show how the machinery account would appear in the books of company. The depreciation to be charged at 10% p.a. on written down value method.

Solution:

Dr.			Machinery Account		Cr.
Date	Particulars	₹	Date	Particulars	₹
2011			2011		
April 1	To Bank A/c	30,000	Dec. 31	By Dep. A/c (2,250 + 500)	2,750
Oct. 1	To Bank A/c	20,000	"	By Balance c/d	47,250
		50,000			50,000
2012			2012		
Jan. 1	To Balance b/d	47,250	Dec. 31	By Dep. A/c (4,725 + 500)	5,225
July 1	To Bank A/c	10,000		By Balance c/d	52,025
		57,250			57,250
2013			2013		
Jan. 1	To Balance b/d	52,025	Jan. 1	By Bank A/c	3,000
			Jan. 1	By P & L A/c	5,325
			Dec. 31	By Dep. A/c	4,370
			"	By Balance c/d	39,330
		52,025			52,025
2014 Jan 1	To Balance b/d	39,330			

3.4 ANNUITY METHOD

1. The fixed Installment Method and the Reducing Balance method of charging depreciation ignore the interest factor.
2. The Annuity Method takes care of this factor. Under this method, the depreciation is charged on the basis that besides losing the original cost of asset, the business

also loses interest on the amount used for buying the asset.

3. The terms "Interest" here means the interest which the business could have earned otherwise if the money used in purchasing the asset would have been invested in some other form of investment.
4. Thus, according to this method, such an amount is charged by the way of depreciation which taken into A/c not only the cost of the asset but also interest there on at an accepted rate.
5. The amount of interest is calculated on the book value of the asset, in the beginning of each year.
6. The amount of depreciation is uniform and is determined on the basis of annuity table. Follows: $\text{Rs. } 5,000 \times 2.48685 = \text{Rs } 12,434$ or (say) Rs 12,500.

Example 9: A firm purchases a lease-hold property for period of five years for ₹10,000 on 1.1.2009. It decides to write off the lease by Annuity method presuming the rate interest at 5% p.a. The Annuity table shows that the annual amount necessary to write off ₹1 at 5% p.a. is ₹0.230976. You are required to prepare the Lease Hold Property Account for five years and show the net amount to be charged to the Profit and Loss account for these five years.

Solution:

Dr.			Lease Hold Property Account			Cr.		
Date	Particulars	₹	Date	Particulars	₹			
2009			2009					
January 1	To Bank	10,000.00	December 31	By Depreciation	2,309.76			
December 31	To Interest	500.00	December 31	By Balance c/d	8,190.24			
		10,500.00			10,500.00			
2010			2010					
January 1	To Balance b/d	8,190.24	December 31	By Depreciation A/c	2,309.76			
December 31	To Interest	409.52	December 31	By Balance c/d	6,290.00			
		8,599.76			8,599.76			
2011			2011					
January 1	To Balance b/d	6,290.00	December 31	By Depreciation A/c	2,309.76			
December 31	To Interest	314.50	December 31	By Balance c/d	4,294.74			
		6,604.50			6,604.50			
2012			2012					
January 1	To Balance b/d	4,294.74	December 31	By Depreciation A/c	2,309.76			
December 31	To Interest	214.74	December 31	By Balance c/d	2,199.72			
		4,509.48			4,509.48			
2013			2013					
January 1	To Balance b/d	2,199.72	December 31	By Depreciation A/c	2,309.76			
December 31	To Interest	110.04			2,309.76			
		2,309.76						

Statement Showing the Amount Chargeable to the Profit and Loss Account

Year	Depreciation (Debited)	Interest (Credited)	Net Charge Against Profits
2009	2,309.76	500.00	1,809.76
2010	2,309.76	409.52	1,900.24
2011	2,309.76	314.50	1,995.26
2012	2,309.76	214.74	2,095.02
2013	2,309.76	110.04	2,199.72
	11,548.80	1,548.80	10,000.00

7.

5. Sinking fund method or Depreciation fund method; under this method, the

Analysis of Financial Statements

TEST YOUR UNDERSTANDING I

• Fill in the blanks with appropriate word(s).

Question 1. Analysis simply means----data.

Answer Simplification .

Question 2. Interpretation means-----data.

Answer Explaining

Question 3. Comparative analysis is also known as-----Analysis.

Answer Horizontal

Question 4. Common size analysis is also known as-----Analysis

Answer Vertical

Question 5. The analysis of actual movement of money inflow and outflow in an organisation is called----analysis.

Answer cash flow

DO IT YOURSELF I

From the following balance sheet and income statement of Day Dreaming Co.Ltd., for the year ending 2002 and 2003, prepare the comparative statements.

Income Statement

(₹ in lakhs)

Particulars	2005	2006
Net Sales	900	1,050
Cost of Goods Sold	650	850
Administrative Expenses	40	40
Selling Expenses	20	20
Net Profit	190	140

Balance Sheet

Particulars	2005	2006
Equity Share Capital	600	600
6% Preference Share capital	500	500
Reserves	400	445
Debenture	300	350
Bills Payable	250	275
Creditors	150	200
Tax Payable	150	200
Total Liabilities	2,350	2,570
Land	300	300
Buildings	500	470
Plant	400	470
Furniture	300	340
Stock	400	500
Cash	450	490
Total Assets	2,350	2,570

Answer Comparative Income statement of Day Dreaming Company Limited for the year ended 2005 and 2006

Particulars	2005	2006	Absolute Change	Change in %
Net Sales	900	1050	150	16.67
(-) Cost of Goods Sold	(650)	(850)	(200)	(30.77)
Gross Profit (A)	250	200	(50)	(20.0)
(-) Operating Expenses				
Administrative Expenses	(40)	(40)		
Selling Expenses	(20)	(20)		
Operating Profit (B)	190	140	(50)	(26.31)

Working Note

Absolute change = Current year – Previous year

$$\text{Change in \%} = \frac{\text{Absolute change}}{\text{Previous year}} \times 100$$

Comparative Balance Sheet of Day Dreaming Company Limited as on year ended 2005 and 2006.

Particulars	2005	2006	Absolute Change	Change in %
Assets				
Current Assets				
Stock	400	500	100	25.00
Cash	450	490	40	8.89
Total Current Assets	850	990	140	16.47
Fixed Assets				
Land	300	300		
Building	500	470	(30)	(6.0)
Plant	400	470	70	17.50
Furniture	300	340	40	13.33
Total Fixed Assets	1,500	1,580	80	5.33
Total Assets	2,350	2,570	220	9.36
Liabilities				
Current Liabilities				
Bills Payable	250	275	25	10.00
Creditors	150	200	50	33.30
Tax Payable	150	200	50	33.30
Total Current Liabilities	550	675	125	22.73
Debentures	300	350	50	16.67

Particulars	2005	2006	Absolute Change	Change in %
Total External Liabilities	850	1,025	175	20.59
Equity Share Capital	600	600		
6% Preference Share capital	500	500		
Reserves	400	445	45	11.25
Total Liabilities	2,350	2,570	220	9.36

DO IT YOURSELF II

The following are the Balance Sheets of Harsha Ltd. as on March 31, 2006 and March 31, 2007

Liabilities	2005 (₹)	2006 (₹)	Assets	2005 (₹)	2006 (₹)
Equity Capital	1,00,000	1,65,000	Fixed Assets	1,20,000	1,75,000
Preference Capital	50,000	75,000	Stock	20,000	25,000
Reserves	10,000	15,000	Debtors	50,000	62,500
Profit and Loss Account	7,500	10,000	Bills Receivable	10,000	30,000
Bank Overdraft	25,000	25,000	Prepaid Expenses	5,000	6,000
Creditors	20,000	25,000	Cash at Bank	20,000	26,500
Provision for Taxation	10,000	12,500	Cash in Hand	5,000	15,000
Proposed Dividend	7,500	12,500			
	2,30,000	3,40,000		2,30,000	3,40,000

Prepare common size Balance Sheet and interpret the same.

Answer

Common Size Balance Sheet as on March 31, 2005 and 2006

Particulars	2005		2006	
	Amount	Percentage	Amount	Percentage
Equity Capital	1,00,000	43.48	1,65,000	48.53
Preference capital	50,000	21.74	75,000	22.06
Reserves	10,000	4.35	15,000	4.41
Profit and Loss	7,500	3.26	10,000	2.94
Bank Overdraft	25,000	10.86	25,000	7.35
Creditors	20,000	8.69	25,000	7.35
Provision for Taxation	10,000	4.35	12,500	3.68
Proposed Dividend	7,500	3.27	12,500	3.68
Total Liabilities	2,30,000	100.00	3,40,000	100.00
Fixed Assets	1,20,000	52.17	1,75,000	51.47
Stock	20,000	8.69	25,000	7.35
Debtors	50,000	21.74	62,500	18.38
Bills Receivable	10,000	4.35	30,000	8.82
Prepaid Expenses	5,000	2.18	6,000	1.76
Cash at Bank	20,000	8.69	26,500	7.79
Cash in Hand	5,000	2.18	15,000	4.43
Total Assets	2,30,000	100.00	3,40,000	100.00

TEST YOUR UNDERSTANDING – II

Choose the right answer :

1. The financial statements of a business enterprise include:

- (a) Balance sheet
- (b) Profit and loss account
- (c) Cash flow statement
- (d) All the above

Answer (d) All of above

2. The most commonly used tools for financial analysis are:

- (a) Horizontal analysis
- (b) Vertical analysis
- (c) Ratio analysis
- (d) All the above

Answer (d) All of above

3. An Annual Report is issued by a company to its:

- (a) Directors
- (b) Auditors
- (c) Shareholders
- (d) Management

Answer (c) Shareholders

4. Balance Sheet provides information about financial position of the enterprise:

- (a) At a point in time
- (b) Over a period of time
- (c) For a period of time
- (d) None of the above

Answer (a) At a Point of time

5. Comparative statement are also known as:

- (a) Dynamic analysis
- (b) Horizontal analysis
- (c) Vertical analysis
- (d) External analysis

Answer (b) Horizontal analysis

DO IT YOURSELF III

Question 1. The following data is available from the P&L Account of Deepak Limited

Particulars	2003 (₹)	2004 (₹)	2005 (₹)	2006 (₹)
Sales	3,10,000	3,27,500	3,20,000	3,32,500
Wages	1,07,500	1,07,500	1,15,000	1,20,000
Selling Expenses	27,250	29,000	29,750	27,750
Gross Profit	90,000	95,000	77,500	80,000

Answer

Trend Percentage
(Base year 2003 = 100)

Year	Sales	Trend %	Wages	Trend %	Selling Exp	Trend %	Gross Profit	Trend %
2003	3,10,000	100	1,07,500	100	27,250	100	90,000	100
2004	3,27,500	106	1,07,500	100	29,000	106	95,000	105
2005	3,20,000	103	1,15,000	107	29,750	109	77,500	86
2006	3,32,500	107	1,20,000	112	27,750	102	80,000	89

TEST YOUR UNDERSTANDING III

• State whether each of the following is true or false

(a) The financial statements of a business enterprise include funds flow statement.

Answer False

(b) Comparative statements are the form of horizontal analysis.

Answer True

(c) Common size statements and financial ratios are the two tools employed in vertical analysis.

Answer True

(d) Ratio analysis establishes relationship between two financial statements.

Answer False

(e) Ratio analysis is a total for analysing the financial statements of any enterprise.

Answer True

(f) Financial analysis is used only by the creditors.

Answer False

(g) Profit and loss account shows the operating performance of an enterprise for a period of time.

Answer True

(h) Financial analysis helps an analyst to arrive at a decision.

Answer True

(i) Cash flow statement is a tool of financial statement analysis.

Answer True

(j) In a common size statement each item is expressed as a percentage of some common base.

Answer True

SHORT ANSWER TYPE QUESTIONS

Question 1. List the techniques of Financial Statement Analysis.

Answer The following are the commonly used techniques of Financial Statement analysis

(i) Ratio Analysis (ii) Cash Flow Statement

(iii) Fund Flow Statement

(iv) Comparative Financial Statements

(v) Common Size Financial Statements

(vi) Trend Analysis

Answer

Basis of Difference	Horizontal Analysis	Vertical Analysis
Meaning/Nature	It refers to the comparison of an item of the financial statement of one period or periods to its corresponding item of the base accounting period.	It refers to the comparison of items of the financial statement to the common item of the same accounting period.
Expression of change	In Horizontal Analysis, change in the item is expressed either in absolute figures or in percentage or in both terms.	In Vertical Analysis, change in the item is expressed either in ratio or in percentage terms.
Benefits	The benefit of Horizontal analysis is that it indicates growth or decline of the item.	Vertical Analysis helps in predicting and determining the future relative proportion of an item to the common item.
Purpose	Its purpose is to determine the change in an item during an accounting period.	Its purpose is to determine the proportion of item/items to the common item of the same accounting period.

Question 3. Explain the meaning of Analysis and Interpretation.

Answer Analysis and Interpretation refers to a systematic and critical examination of the financial statements. It not only establishes cause and effect relationship among the various items of the financial statements but also presents the financial data in a proper manner. The main purpose of Analysis and Interpretation is to present the financial data in such a manner that is easily understandable and self explanatory. This not only helps the accounting users to assess the financial performance of the business over a period of time but also enables them in decision making and policy and financial designing process.

Question 4. Bring out the importance of Financial Analysis.

Answer Financial Analysis has great importance to various accounting US' on various matters. Income Statements, Balance Sheets and other financ data that provides information about expenses and sources of income, profit loss and also helps in assessing the financial position of a business. The financial data are not useful until they are analysed. There are various tools a methods such as Ratio Analysis, Cash Flow Statements that make the financ data to cater varying needs of various accounting users.

The following are the reasons that advocate in favour of Financial Analys

- (i) It helps in evaluating the profit earning capacity and financ feasibility of a business.
- (ii) It helps in assessing the long-term solvency of the business.
- (iii) It helps in evaluating the relative financial status of a firm comparison to other competitive firms.
- (iv) It assists management in decision making process, plans and also in establishing an effective controlling

Question 5. What are Comparative Financial Statements?

Answer Those financial statements that enable intra-firm and comparisons of financial statements over a period of time are called Comparative Financial Statements. In other words, these statements help the accounting users to evaluate and assess the financial progress in the relative terms.

These statements express the absolute figures, absolute change and the percentage change in the financial items over a period of time. Comparative Financial Statements present the financial data in such a manner that is easily understandable and can be analysed without any ambiguity. If the accounting policies and practices for the treatment of the items are same over the period of study, only then the Comparative Financial Statements enable meaningful comparisons.

The following are the two Comparative Financial Statements that are commonly prepared

- (i) Comparative Balance Sheet
- (ii) Comparative Income Statements

Question 6. What do you mean by Common Size Statements?

Answer These statements depict the relationship between various items of financial statements and some common items (like Net Sales and the Total of Balance Sheet) in percentage terms. In other words, various items of Trading and Profit and Loss Account such as Cost of Goods Sold, Non-Operating Incomes and Expenses are expressed in terms of percentage of Net Sales.

On the other hand, different items of Balance Sheet such as Fixed Assets, Current Assets, Share Capital etc are expressed in terms of percentage of Total of Balance Sheet. These percentage figures are easily comparable with that of the previous years' and with that of the figures of other firms in the same industry (i.e., inter-firm comparison) as well.

The analyses based on these statements are commonly known as Vertical Analysis.

The following are commonly prepared Common Size Statements.

- (i) Common Size Balance Sheet
- (ii) Common Size Income Statements

LONG ANSWER TYPE QUESTIONS

Question 1. Describe the different techniques of financial analysis and explain the limitations of financial analysis.

Answer The most commonly used techniques of financial analysis are as follows

(i) Comparative Statements: These are the statements showing the profitability and financial position of a firm for different periods of time in a comparative form to give an idea about the position of two or more periods. The financial data will be comparative only when same accounting principles are used in preparing these statements. Comparative figures indicate the trend and direction of financial position and operating results. This analysis is also known as 'horizontal analysis'.

(ii) Common Size Statements: These are the statements which indicate the relationship of different items of a financial statement with some common item by expressing each item as a percentage of the common item. The percentage thus calculated can be easily compared with the results corresponding percentages of the previous year or of some other firms, as the numbers are brought to common base. Such statements also allow an analyst to compare the operating and financing characteristics of two companies of different sizes in the same industry. This analysis is also known as 'Vertical analysis'.

(iii) Trend Analysis :It is a technique of studying the operational results and financial position over a series of years. Using the previous years' data of a business enterprise, trend analysis can be done to observe the percentage changes over time in the selected data. Trend analysis is important because, with its long run view, it may point to basic changes in the nature of the business. By looking at a trend in a particular ratio, one may find whether the ratio is falling, rising or remaining relatively constant. From this observation, a problem is detected or the sign of good management is found. .

(iv) Ratio Analysis :It describes the significant relationship which exists between various items of a balance sheet and a profit and loss account of a firm. As a technique of financial analysis,

accounting ratios measure the comparative significance of the individual items of the income and position statements.

(v) Cash Flow Analysis :It refers to the analysis of actual movement of cash into and out of an organisation. The flow of cash into the business is called as cash inflow or positive cash flow and the flow of cash out of the firm is called as cash outflow or a negative cash flow. The difference between the inflow and outflow of cash is the net cash flow.

Limitations of Financial Analysis

The following are the limitations of Financial Analysis

(i) Ignorance of Price Level Changes :Financial statement is based on historical cost method and fails to capture the change in price level. The figures of different years are taken on nominal values and not in real terms (i.e., not taking price change into considerations).

(ii) Misleading and Wrong information : The financial analysis fails to reveal the change in the accounting procedures and practices. Consequently, they may provide wrong and misleading information.

(iii) Fail to Provide Final Picture : The financial analysis presents only the interim report and thereby provides incomplete information. They fail to provide the final and holistic picture.

(iv) Consider Only Monetary Aspect : This is one of the limitations of financial analysis that it reveals only the monetary aspects. Only those items are considered here which can be measured in term of money and fail to disclose managerial efficiency, growth prospects, and other non-operational efficiency of a business.

(v) Non-Reliable Conclusions :Conclusion base on financial analysis may be non reliable because financial statement are based on certain concepts and conventions.

(vi) Involves Personal Biasness : The financial analysis reflects the personal biasness and personal value judgments of the accountants and clerks involved. There are different techniques used by different personnel for charging depreciation (original cost or written-down value method) and also for inventory valuation. The use of different techniques by different people reduces the effectiveness of the financial analysis.

(vii) Unsuitable for Comparisons :Due to the involvement of personal value judgment, personal biasness and use of different techniques by different accountant, various types of comparisons such as inter-firm and intra-firm comparisons may not be possible and reliable.

Question 2. Explain the usefulness of trend percentages in interpretation of financial performance of a company.

Answer The Trend Analysis presents each financial item in percentage terms for each year. These Trend Analysis not only help the accounting users to assess the financial performance of the business but also assist them to form an opinion about various tendencies and predict the future trend of the business.

Usefulness and Importance of Trend Analysis:

The following are the various importance of Trend Analysis

(i) Assists in Forecasting : The trends provided by Trend Analysis help the accounting users to forecast the future trend of the business.

(ii) Percentage Terms : The trends are expressed in percentage terms. Analysing the percentage figures is easy and also less time consuming.

(iii) User Friendly : As the trends are expressed in percentage figures, so it is the most popular financial analysis to analyse the financial performance and operational efficiency of the company. In other words, one needs not to have an in-depth and sophisticated knowledge of accounting in order to analyse these percentage trends.

(iv) Presents a Broader Picture :The trend analysis presents a broader picture about the financial performance, viability and operational efficiency of a business. Generally, companies prefer to present their financial data for a period of 5 or 10 years in forms of percentage trends.

Question 3. What is the importance of comparative statements? Illustrate your answer with particular reference to comparative income statement.

Answer The following are the importance of Comparative Statements.

- (i) **Make Presentation Simpler** : Comparative statements presents the financial data in a simpler form. On the other hand, an year-wise data of the same items are presented side-by-side, which not only makes the presentation clear but also enables easy comparisons (both intra-firm and inter-firm) conclusive.
- (ii) **Help in Drawing Conclusion**: The presentation of comparative statement is so effective that it helps the analyst to draw conclusion quickly and easily and that too without any ambiguity.
- (iii) **Help in Forecasting** :The management may analyse the trend and forecast and draft various future plans and policy measures, with the help of comparative statement:
- (iv) **Help in Detection of Problems** :The comparative analysis not only enables the management in locating the problems but also helps them to put various budgetary controls and corrective measures to check whether the current performance is aligned with that of the " planned targets. With the help of the comparison of the financial data of two or more years, the financial management can easily detect the problems.

Question 4. What do you understand by analysis and interpretation of financial statements? Discuss their importance.

Answer Financial Analysis has great importance to various accounting users on various matters. Income Statements, Balance Sheets and other financial data provide information about expenses and sources of income, profit or loss and also helps in assessing the financial position of a business.

These financial data are not useful until they are analysed. There are various tools and methods such as Ratio Analysis, Cash Flow Statements that make the financial data to cater varying needs of various accounting users.

The following are the reasons that advocate in favour of Financial Analysis

- (i) It helps in evaluating the profit earning capacity and financial feasibility of a business.
- (ii) It helps in assessing the long-term solvency of the business.
- (iii) It helps in evaluating the relative financial status of a firm in comparison to other competitive firms.
- (iv) It assists management in decision making process, drafting various plans and also in establishing an effective controlling system.

Question 5. Explain how common size statements are prepared giving an example.

Answer Common size statements can be classified into two broad categories

- (i) Common Size Income Statements
- (ii) Common Size Balance Sheet

Common Size Statement is prepared in a columnar form for analysis. In a Common Size Statement, each item of the financial statements is compared to a common item. The analyses based on these statements are commonly known as Vertical Analysis.

The following are the columns prepared in a Common Size Statement

- (a) Particulars Column: This column shows the various financial items under their respective heads.
- (b) Amount Columns :These columns depict the amount of each item, sub-totals and the gross total of a particular year.
- (c) Percentage or Ratio Columns :These columns show the proportion of each item to the common item either in terms of percentage or ratio.

The Common Size Statements can be presented in the following two ways.

Method 1 Percentage column is shown beside the amount column of the year to which percentage column belongs.

Particulars	Year (2010) (₹)	%	Year (2011) (₹)	%

Method 2 Amount columns are shown first and their percentage columns are shown after the amount columns.

Particulars	Year (2010) (₹)	Year (2011) (₹)	% 2010	% 2011

Example :From the following information provided by Alfa Limited Prepare the Common Size Statements.

Balance Sheet of Indo Press Limited

Liabilities	2010 (₹)	2011 (₹)	Assets	2010 (₹)	2011 (₹)
Capital	3,30,000	3,60,000	Fixed Assets	3,00,000	3,20,000
Reserves and Surplus	90,000	1,60,000	Investments	2,40,000	2,40,000
Long term Loans	2,10,000	2,00,000	Current Asset	2,10,000	2,40,000
Current Liabilities	1,20,000	80,000			
	7,50,000	8,00,000		7,50,000	8,00,000

Alfa Limited
Comparative Size Balance Sheet
for the year 2010 and 2011

Particulars	2010 (₹)	2011 (₹)	% 2010	% 2011
Assets				
Fixed Assets	3,00,000	3,20,000	40	40
Investments	2,40,000	2,40,000	32	30
Current Assets	2,10,000	2,40,000	28	30
	7,50,000	8,00,000	100	100
Liabilities				
Capital	3,30,000	3,60,000	44	45
Reserved Surplus	90,000	1,60,000	12	20
Long Term Loans	2,10,000	2,00,000	28	25
Current Liabilities	1,20,000	80,000	16	10
	7,50,000	8,00,000	100	100

NUMERICAL QUESTIONS

1. From the following information of Narsimham Company Ltd., prepare a Comparative Income Statement for the years 2004-2005

Particulars	2011 (₹)	2012 (₹)
Gross Sales	7,25,000	8,15,000
(-) Return	(25,000)	(15,000)
Net Sales	7,00,000	8,00,000
Cost of Goods Sold	5,95,000	6,15,000
Gross Profit	1,05,000	1,85,000
Other Expenses		
Selling and Distribution Expenses	23,000	24,000
Administration Expenses	12,700	12,500
Total Expenses	35,700	36,500
Operating Income	69,300	1,48,500
Other Income	1,200	8,050
	70,500	1,56,550
Non-operating Expenses	1,750	1,940
Net Profit	68,750	1,54,610

Answer**Comparative Income Statement**

Particulars	2011	2012	Absolute Change	Change in Percentage
Gross Sales	7,25,000	8,15,000	90,000	12.41
(-) Return	(25,000)	(15,000)	(10,000)	(40.00)
Net Sales	7,00,000	8,00,000	1,00,000	14.28
(-) Cost of Goods Sold	(5,95,000)	(6,15,000)	(20,000)	(3.36)
Gross Profit	1,05,000	1,85,000	80,000	76.19
(-) Operating Expenses				
Administration Expenses	(12,700)	(12,500)	(200)	(1.57)
Selling and Distribution Expenses	23,000	24,000	1,000	4.34
Total Expenses	35,700	36,500	800	2.24
Income from operations	69,300	1,48,500	79,200	114.28
(+) Non-operating Income	1,200	8,050	6,850	570.83
Total Income	70,500	1,56,550	86,050	122.05
(-) Non-operating Expenses	(1,750)	(1,940)	(190)	(10.85)
Net Profit	68,750	1,54,610	85,860	124.88

Interpretation

- (i) The Net Profit of the company increased.
- (ii) Simultaneously the company has tried to reduce its costs to improve its profit margin.
- (iii) Profitability of the company has improved over the year.

Working Note

Absolute Change = Current year – Previous year

Change in Percentage = $\frac{\text{Absolute change}}{\text{Previous year}} \times 100$

2. The following are the Balance Sheets of Mohan Ltd., at the end of 2004 and 2005.

₹'000

Liabilities	2011	2012	Assets	2011	2012
Equity Share Capital	400	600	Land and Buildings	270	170
Reserves and Surplus	312	354	Plant and Machinery	310	786
Debentures	50	100	Furniture and Fixtures	9	18
Long Term Loans	150	255	Other Fixed Assets	20	30
Accounts Payable	255	117	Loans and Advances	46	59
Other Current Liabilities	7	10	Cash and Bank	118	10
			Account Receivable	209	190
			Inventory	160	130
			Prepaid Expenses	3	3
			Other Current Assets	29	40
	1,174	1,436		1,174	1,436

Prepare a Comparative Balance Sheet and study the financial position of the company.

Comparative Balance Sheet of Mohan Limited

Particulars	2011 (₹'000)	2012 (₹'000)	Absolute Change	Change in Percentage
Assets				
Current Assets				
Cash and Bank	118	10	(-) 108	(-) 91.52
Account Receivable	209	190	(-) 19	(-) 9.09
Inventory	160	130	(-) 30	(-) 18.75
Prepaid Expenses	3	3		
Loan and Advances	46	59	+13	+28.26
Other Current Assets	29	40	+11	+37.93
Total Current Assets (A)	565	432	(-) 133	(-) 23.54
Fixed Assets				
Land and Buildings	270	170	(-) 100	(-) 37.04
Plant and Machinery	310	786	+476	+153.54
Furniture and Fixtures	9	18	+9	+100.00
Other Fixed Assets	20	30	+10	+50.00
Total Fixed Assets (B)	609	1,004	+395	+64.86
Total Assets (A+B)	1,174	1,436	+262	+22.32
Liabilities				
Current Liabilities				
Account Payable	255	117	(-) 138	(-) 54.12
Other Current Liabilities	7	10	+3	+42.86
Total Current Liabilities (A)	262	127	(-) 135	(-) 51.53
Debentures	50	100	+50	+100.00
Long term Loan	150	255	+105	+70.00
Total Long Term External Liabilities (B)	200	355	+155	+77.50
Equity Share Capital	400	600	+200	+50.00
Reserve and Surplus	312	354	+42	+13.46
Shareholders Fund (C)	712	954	+242	+33.99
Total Liabilities and Shareholder Fund (A+B+C)	1,174	1,436	+262	+22.32

Working Note

Absolute Change = Current year – Previous year

Change in Percentage = $\frac{\text{Absolute change}}{\text{Previous year}} \times 100$

Comments

- (i) Decrease in current Liabilities is more than decrease in current assets which indicates that the current ratio has improved.
- (ii) Decrease in cash and bank may result in delay in payments.
- (iii) Fixed Assets have increased along with share capital. It indicates that such asset has been purchased using Long term sources of finance.
- (iv) Increase in reserve and surplus is a healthy indicator.

Question 3. The following are the balance sheets of Devi Company Limited at the end of 2011 and 2012. Prepare a comparative Balance Sheet and study the financial position of the concern.

Liabilities	2011 (₹)	2012 (₹)	Assets	2011 (₹)	2012 (₹)
Equity Capital	1,20,000	1,85,000	Fixed Assets	1,40,000	1,95,000
Preference Capital	70,000	95,000	Stock	40,000	45,000
Reserves	30,000	35,000	Debtors	70,000	82,500
P&L	17,500	20,000	Bills Receivables	20,000	50,000
Bank Overdraft	35,000	45,450	Prepaid Expenses	6,000	8,000
Creditors	25,000	35,000	Cash at Bank	40,000	48,500
Provision for Taxation	15,000	22,500	Cash in Hand	5,000	29,000
Proposed Dividend	8,500	20,050			
	3,21,000	4,58,000		3,21,000	4,58,000

Answer**Comparative Balance Sheet of Devi Company Limited**

Particulars	2011 (₹)	2012 (₹)	Absolute Increase (+) or Decrease (-) (₹)	Percentage Increase (+) or Decrease (-) %
Assets				
Current Assets				
Stock	40,000	45,000	+5,000	+12.50
Debtors	70,000	82,500	+12,500	+17.86
Bills Receivables	20,000	50,000	+30,000	+150.00
Prepaid Expenses	6,000	8,000	+2,000	+33.33
Cash at Bank	40,000	48,500	+8,500	+21.25
Cash in Hand	5,000	29,000	+24,000	+480.00
Total Current Assets (A)	1,81,000	2,63,000	+82,000	+45.30
Fixed Assets (B)	1,40,000	1,95,000	+55,000	+39.29
Total Assets (A+B)	3,21,000	4,58,000	+1,37,000	+42.68
Liabilities				
Current Liabilities				
Bank Overdraft	35,000	45,450	+10,450	+29.86
Creditors	25,000	35,000	+10,000	+40.00
Provision for Taxation	15,000	22,500	+7,500	+50.00
Proposed Dividend	8,500	20,050	+11,550	+135.88
Total Current Liabilities (A)	83,500	1,23,000	+39,500	+47.31
Equity Capital	1,20,000	1,85,000	+65,000	+54.17
Preference Capital	70,000	95,000	+25,000	+35.71
Reserves	30,000	35,000	+5,000	+16.67
P & L	17,500	20,000	+2,500	+14.29
Shareholder Fund (B)	2,37,500	3,35,000	+97,500	+41.05
Total Liabilities and Shareholder Fund (A+B)	3,21,000	4,58,000	+1,37,000	+42.68

Comments

- (i) Change in current assets and current Liabilities is almost same. It indicates that ratio is same as of previous year.
- (ii) Fixed Assets have increased along with share capital which shows that assets are purchased with long term sources of finance.
- (iii) The overall financial position of company is satisfactory.

Working Note

Absolute Change = Current year – Previous year

Change in Percentage = $\frac{\text{Absolute change}}{\text{Previous year}} \times 100$

Question 4. Convert the following Income Statement into Common Size Statement and interpret the changes in 2011 in the light of the conditions in 2010.

Particulars	2010 (₹)	2011 (₹)
Gross Sales	30,600	36,720
(-) Return	(600)	(700)
Net Sales	30,000	36,020
(-) Cost of Goods Sold	(18,200)	(20,250)
Gross Profit	11,800	15,770
(-) Operating Expenses		
Administration Expenses	(3,000)	(3,400)
Sales Expenses	(6,000)	(6,600)
Total Expenses	9,000	10,000
Income from Operations	2,800	5,770
(+) Non-operating Income	300	400
Total Income	3,100	6,170
(-) Non-operating Expenses	(400)	(600)
Net Profit	2,700	5,570

Answer Common Size Income Statement

Particulars	2010		2011	
	(₹)	%	(₹)	%
Gross Sales	30,600	102.00	36,720	101.94
(-) Return	(600)	(2.00)	(700)	(1.94)
Net Sales	30,000	100.00	36,020	100.00
(-) Cost of Goods Sold	(18,200)	(60.67)	(20,250)	(56.22)
Gross Profit	11,800	39.33	15,770	43.78
(-) Operating Expenses				
Administration Expenses	(3,000)	(10.00)	(3,400)	(9.43)
Sales Expenses	(6,000)	(20.00)	(6,600)	(18.32)
Total Expenses	9,000	30.00	10,000	27.75

Particulars	2010		2011	
	(₹)	%	(₹)	%
Income from operations	2,800	9.33	5,770	16.01
(+) Non-operating Income	300	1.00	400	1.11
Total Income	3,100	10.33	6,170	17.12
(-) Non-operating Expenses	(400)	(1.33)	(600)	(1.66)
Net Profit	2,700	9.00	5,570	15.46

Comment: Company has reduced its cost and expenses which has resulted in increase in income from operations and net profit.

Question 5. Following are the balance sheets of Reddy Limited as on 31 March, 2011 and 2012

Question 5. Following are the balance sheets of Reddy Limited as on 31 March, 2011 and 2012.

Liabilities	2011 (₹)	2012 (₹)	Assets	2011 (₹)	2012 (₹)
Share Capital	2,400	3,600	Land and Buildings	1,620	1,040
Reserves and Surplus	1,872	2,124	Plant and Machinery	1,860	4,716
Debentures	300	600	Furniture and Fixtures	54	108
Long Term Debt	900	1,530	Other Fixed Assets	120	180
Bills Payable	1,530	702	Long Term Loans	276	354
Other Current Liabilities	42	60	Cash and Bank Balances	708	60
			Bill Receivable	1,254	1,120
			Stock	960	780
			Prepaid Expenses	18	18
			Other Current Assets	174	240
	7,044	8,616		7,044	8,616

Analyse the financial position of the company with the help of the Common Size Balance Sheet.

Answer

Common Size Balance Sheet of Reddy Limited
as on March 11, 2011 and 2012

Particulars	2011		2012	
	(₹)	%	(₹)	%
Fixed Assets				
Land and Building	1,620	23.00	1,040	12.07
Plant and Machinery	1,860	26.41	4,716	54.73
Furniture and Fixtures	54	0.77	108	1.25
Other Fixed Assets	120	1.70	180	2.09
Total Fixed Assets (A)	3,654	51.88	6,044	70.14
Investments (B)				
Long Term Loan	276	3.91	354	4.12
Current Assets				
Cash and Bank Balances	708	10.05	60	0.70
Bill Receivable	1,254	17.80	1,120	13.00
Stock	960	13.63	780	9.05
Prepaid Expenses	18	0.26	18	0.21
Other Current Assets	174	2.47	240	2.78
Total Current Assets (C)	3,114	44.21	2,218	25.74
Total Assets (A+B+C)	7,044	100.00	8,616	100.00
Current Liabilities				
Bills Payable	1,530	21.72	702	8.14
Other Current Liabilities	42	0.59	60	0.70
Total Current Liabilities	1,572	22.31	762	8.84
Long Term External Liabilities				
Debentures	300	4.26	600	6.96
Long Term Debt	900	12.77	1,530	17.76
Total Long Term External Liabilities	1,200	17.03	2,130	24.72
Share Holders Fund				
Share Capital	2,400	34.07	3,600	41.78
Reserve and Surplus	1,872	26.57	2,124	24.66
	4,272	60.64	5,724	66.44
Total Liabilities	7,044	100.00	8,616	100.00

Comments

- (i) Inspite of decrease in current assets and current liabilities, the current ratio has improved.
- (ii) Decrease in cash and bank balance indicates that there will be delay in payments.
- (iii) Increase in fixed assets and share capital shows that assets are purchased with long term sources of finance.

Question 6. The accompanying balance sheet and profit and loss account related to SUMO Logistics Private Limited. Convert these into Common Size Statements.

Previous Year = 2010, Current Year = 2011

₹'000

Particulars	Previous Year	Current Year
Liabilities		
Equity Share Capital (of ₹ 10 each)	240	240
General Reserve	96	182
Long Term Loans	182	169.5
Creditors	67	52
Outstanding Expenses	6	
Other Current Liabilities	9	6.5
Total Liabilities	600	650
Assets		
Plant Assets Net of Accumulated Less Depreciation	402	390
Cash	54	78
Debtors	60	65
Inventories	84	117
Total Assets	600	650

Income Statement
for the year ended

₹ 000

Particulars	Previous Year	Current Year
Gross Sales	370	480
(-) Return	(20)	(30)
Net Sales	350	(450)
(-) Cost of Goods Sold	(190)	(215)
Gross Profit	160	(235)
(-) Selling General and Administration Expenses	(50)	(72)
Operating Profit	110	163
(-) Interest Expenses	(20)	(17)
Earnings Before Tax	90	146
(-) Taxes	(45)	(73)
Earnings After Tax	45	73

Answer

Common Size Balance Sheet of SUMO Logistics Private Limited
as on 2010 and 2011

Particulars	2010		2011	
	₹ ,000	%	₹ , 000	%
Liabilities				
Equity Share Capital (of ₹ 10 each)	240	40	240	36.92
General Reserve	96	16	182	28
Long Term Loan	182	30.33	169.5	26.08
Creditors	67	11.17	52	8
Outstanding Expenses	6	1		
Other Current Liabilities	9	1.5	6.5	1
Total Liabilities	600	100	650	100
Assets				
Plant less Accumulated Depreciation	402	67	390	60
Cash	54	9	78	12
Debtors	60	10	65	10
Inventories	84	14	117	18
Total Assets	600	100	650	100

Common Size Income Statement of SUMO Logistics Private Limited
For the year ended 2010 and 2011

Particulars	2010		2011	
	₹ 000	%	₹ 000	%
Gross Sales	370	105.71	480	106.67
(-) Return	(20)	(5.71)	(30)	(6.67)
Net Sales	350	100.00	450	100.00
(-) Cost of Goods Sold	(190)	(54.29)	(215)	(47.77)
Gross Profit	160	45.71	235	52.23
(-) Selling, General and Administration Expenses	(50)	(14.28)	(72)	(16.00)
Operating Profit	110	31.43	163	36.23
(-) Interest Expenses	(20)	(5.72)	(17)	(3.77)
Earnings Before Tax	90	25.71	146	32.46
(-) Taxes	(45)	(12.86)	(73)	(16.23)
Earnings After Tax	45	12.86	73	16.23

Question 7. From the following particulars extracted from P&L Account of 'Prashanth Limited, you are required to calculate trend percentages

Year	Sales (₹)	Wages (₹)	Bad Debts (₹)	Profit After Tax (₹)
2003	3,50,000	50,000	14,000	16,000
2004	4,15,000	60,000	26,000	24,500
2005	4,25,000	72,200	29,000	45,000
2006	4,60,000	85,000	33,000	60,000

Answer

Trend Percentages
(Base Year 2003 = 100)

Year	Sales (₹)	Trend (%)	Wages (₹)	Trend (%)	Bad debts (₹)	Trend (%)	Profit after Tax (₹)	Trend (%)
2003	3,50,000	100.00	50,000	100.00	14,000	100.00	16,000	100.000
2004	4,15,000	118.57	60,000	120.00	26,000	185.71	24,500	153.125
2005	4,25,000	121.43	72,200	144.40	29,000	207.14	45,000	281.250
2006	4,60,000	131.43	85,000	170.00	33,000	235.71	60,000	375.000

$$\text{Trend Percentage} = \frac{\text{Value of Present year}}{\text{Value of Base year}} \times 100$$

Question 8. Calculate trend percentages from the following figures of ABC Limited, taking 2000 as base and interpret them.

Year	Sales	Stock	Profit Before tax
2000	1,500	700	300
2001	2,140	780	450
2002	2,365	820	480
2003	3,020	930	530
2004	3,500	1,160	660
2005	4,000	1,200	700

Answer

Trend Percentages
(Base Year 2000 = 100)

Years	Sales (₹)	Trend (%)	Stock (₹)	Trend (%)	Profit after Tax (₹)	Trend (%)
2000	1,500	100.00	700	100.00	300	100.00
2001	2,140	142.67	780	111.43	450	150.00
2002	2,365	157.67	820	117.14	480	160.00
2003	3,020	201.33	930	132.86	530	176.67
2004	3,500	233.33	1,160	165.71	660	220.00
2005	4,000	266.67	1,200	171.43	700	233.33

$$\text{Trend Percentage} = \frac{\text{Present Year Value}}{\text{Base Year Value}} \times 100$$

Interpretations

- (i) Sales has exhibited continuous increasing trend over the period.

(ii) The value of stock also increases, with the increase in value of sales.

(iii) Profit increase more in earlier years as compare to later years. It implies cost of goods, sold and operating expenses are increased in later years.

Question 9. From the following data relating to the liabilities side of balance sheet of Madhuri Limited, as on 31st March, 2006, you are required to calculate trend percentages taking 2002 as the base year.

(₹ in lakhs)

Liabilities	2002	2003	2004	2005	2006
Share Capital	100	125	130	150	160
Reserves and Surplus	50	60	65	75	80
12% Debentures	200	250	300	400	400
Bank Overdraft	10	20	25	25	20
Profit and Loss A/c	20	22	28	26	30
Sundry Creditors	40	70	60	70	75

Answer

Trend Percentage (Base Year 2003 = 100)

Liabilities	2002 (₹) 00,000	Trend (%)	2003 (₹) 00,000	Trend (%)	2004 (₹) 00,000	Trend (%)	2005 (₹) 00,000	Trend (%)	2006 (₹) 00,000	Trend (%)
Share Capital	100	100	125	125	130	130	150	150	160	160
Reserve and Surplus	50	100	60	120	65	130	75	150	80	160
Profit and Loss Account	20	100	22	110	28	140	26	130	30	150
Shareholders' Fund	170	100	207	121.76	223	131.18	251	147.65	270	158.82
Long Term Debt										
12% Debentures	200	100	250	125	300	150	400	200	400	200
	200	100	250	125	300	150	400	200	400	200
Current Liabilities										
Bank Overdraft	10	100	20	200	25	250	25	250	20	200
Sundry Creditors	40	100	70	175	60	150	70	175	75	187.5
Total Currents Liabilities	50	100	90	180	85	170	95	190	95	190
Total Liabilities	420	100	547	130.24	608	144.76	746	177.62	765	182.14

Effects of Revised Schedule VI on Tools of Analysis of Financial Statements As per revised Schedule VI part II the Format of Profit of Loss Statement is as follows.

Name of the Company
Profit and Loss Statement
for the year ended

S.N.	Particulars	Note No	Figures for the Current Reporting Period	Figures for the Previous Reporting Period
1.	Revenue from Operations			
2.	Other Income			
3.	Total Revenue (I + II)			
4.	Expenses			
	Cost of Materials Consumed			
	Purchases of Stock-in-Trade			
	Changes in Inventories of Finished Goods			
	Work-in-Progress and Stock-in-Trade			
	Employee Benefits Expense			
	Finance Costs			
	Depreciation and Amortisation Expenses			
	Other Expenses			
	Total Expenses			
5.	Profit Before Exceptional and Extraordinary Items and Tax (III-IV)			
6.	Exceptional Items			
7.	Profit Before Extraordinary Items and Tax (V-VI)			
8.	Exceptional Items			
9.	Profit Before Tax (VII-VIII)			
10.	Tax Expense			
	(1) Current Tax			
	(2) Deferred Tax			
11.	Profit/(Loss) for the Period From Continuing Operations (VII-VIII)			
12.	Profit/(Loss) from Discontinuing Operations			
13.	Tax Expense of Discontinuing Operations			

S.N.	Particulars	Note No	Figures for the Current Reporting Period	Figures for the Previous Reporting Period
14.	Profit/(Loss) From Discontinuing Operations (after tax) (XII-XIII)			
15.	Profit/(Loss) for the Period (XI-XIV)			
16.	Earnings Per Equity Share (1) Basic (2) Diluted			

Question 10. Prepare comparative statements from the following.

Particulars	31-3-2011	31-3-2012
Revenue from Operations	10,00,000	15,00,000
Expenses	6,00,000	10,50,000
Other Income	2,00,000	1,80,000
Income Tax	50%	50%

Answer

Comparative Statement of Profit and Loss
For the year ended 31st March, 2012

	Particulars	Absolute Figures		Change (Base Year 2010-11)	
		31-3-2011 (₹)	31-3-2012 (₹)	Absolute Figures (₹)	Percentage (%)
I.	Revenue from Operations	10,00,000	15,00,000	5,00,000	50%
II.	(+) Other Incomes	2,00,000	1,18,000	(20,000)	10%
	Total Revenue (I + II)	12,00,000	16,80,000	4,80,000	40%
III.	(-) Expenses	(6,00,000)	(10,50,000)	(4,50,000)	75%
	Profit Before Tax	6,00,000	6,30,000	30,000	5%
IV.	(-) Tax (50%)	(3,00,000)	(3,15,000)	(15,000)	5%
	Profit After Tax	3,00,000	3,15,000	15,000	5%

RATIO ANALYSIS PROBLEMS AND SOLUTIONS

1. You are required to calculate the following:

a) Working capital turnover, b) Fixed assets turnover, c) Capital turnover.

The information available is as under:

Capital employed Rs.4,00,000

Current assets Rs.2,00,000; Current liabilities Rs.40,000

Net fixed assets Rs.2,50,000; Sales Rs.5,00,000

Solution:

1. Working capital turnover ratio:

Sales / Working capital

Sales: 500000 and Working capital = Current assets – Current liabilities
= 200000-40000 = 160000

W.C Turnover ratio = $500000 / 160000 = 3.125 \text{ Times}$

2. Fixed assets turnover ratio:

F.A Turnover ratio = Sales / Fixed Assets

Sales 500000 and Net F.A 250000

= $500000 / 250000 = 2 \text{ times}$

3.) Capital turnover ratio

Sales / Capital Employed

Sales = 500000; and capital employed 400000

C.T Ratio = $500000 / 400000 = 1.25 \text{ times}$

Problem - 1

The following Trading and Profit and Loss Account of Fantasy Ltd. for the year 31-3-2000 is given below:

Particular	Rs.	Particular	Rs.
To Opening Stock	76,250	By Sales	5,00,000
“ Purchases	3,15,250	“ Closing stock	98,500
“ Carriage and Freight	2,000		
“ Wages	5,000		
“ Gross Profit b/d	<u>2,00,000</u>		
	<u>5,98,500</u>		<u>5,98,500</u>
To Administration expenses	1,01,000	By Gross Profit b/d	2,00,000
“ Selling and Dist. expenses	12,000	“ Non-operating incomes:	
“ Non-operating expenses	2,000	“ Interest on Securities	1,500
“ Financial Expenses	7,000	“ Dividend on shares	3,750
Net Profit c/d	<u>84,000</u>	“ Profit on sale of shares	<u>750</u>
	<u>2,06,000</u>		<u>2,06,000</u>

Calculate:

1. Gross Profit Ratio 2. Expenses Ratio 3. Operating Ratio
1. Net Profit Ratio 5. Operating (Net) Profit Ratio 6. Stock Turnover Ratio.

Solution – 1 (Problem related to Revenue Ratio)

$$\begin{aligned}
 1. \quad \text{Gross Profit Margin} &= \frac{\text{Gross profit}}{\text{Sales}} \times 100 \\
 &= \frac{2,00,000}{5,00,000} \times 100 \\
 &= 40\%
 \end{aligned}$$

$$\begin{aligned}
 2. \quad \text{Expenses Ratio} &= \frac{\text{Op. Expenses}}{\text{Net Sales}} \times 100 \\
 &= \frac{1,13,000}{5,00,000} \times 100 \\
 &= 22.60\%
 \end{aligned}$$

$$\begin{aligned}
 3. \quad \text{Operating Ratio} &= \frac{\text{Cost of goods sold} + \text{Op. Expenses}}{\text{Net Sales}} \times 100 \\
 &= \frac{3,00,000 + 1,13,000}{5,00,000} \times 100 \\
 &= 82.60\%
 \end{aligned}$$

Cost of Goods sold = Op. stock + purchases + carriage and Freight + wages – Closing Stock

$$= 76250 + 315250 + 2000 + 5000 - 98500$$

$$= \text{Rs.}3,00,000$$

$$\begin{aligned}
 4. \quad \text{Net Profit Ratio} &= \frac{\text{Net Profit}}{\text{Net Sales}} \times 100 \\
 &= \frac{84,000}{5,00,000} \times 100 \\
 &= 16.8\%
 \end{aligned}$$

$$\begin{aligned}
 5. \quad \text{Operating Profit Ratio} &= \frac{\text{Op. Profit}}{\text{Net Sales}} \times 100 \\
 \text{Operating Profit} &= \text{Sales} - (\text{Op. Exp.} + \text{Admin Exp.}) \\
 &= \frac{87,000}{5,00,000} \times 100 \\
 &= 17.40\%
 \end{aligned}$$

$$\begin{aligned}
 6. \quad \text{Stock Turnover Ratio} &= \frac{\text{Cost of goods sold}}{\text{Avg. Stock}} \\
 &= \frac{3,00,000}{87,375} \\
 &= 3.43 \text{ times}
 \end{aligned}$$

Problem - 2

The Balance Sheet of Punjab Auto Limited as on 31-12-2002 was as follows:

Particular	Rs.	Particular	Rs.
Equity Share Capital	40,000	Plant and Machinery	24,000
Capital Reserve	8,000	Land and Buildings	40,000
8% Loan on Mortgage	32,000	Furniture & Fixtures	16,000
Creditors	16,000	Stock	12,000
Bank overdraft	4,000	Debtors	12,000
Taxation:		Investments (Short-term)	4,000
Current	4,000	Cash in hand	12,000
Future	4,000		
Profit and Loss A/c	12,000		
	<u>1,20,000</u>		<u>1,20,000</u>

From the above, compute (a) the Current Ratio, (b) Quick Ratio, (c) Debt-Equity Ratio, and (d) Proprietary Ratio.

Solution – 2 (Problem related to Balance Sheet Ratio)

1. Current Ratio =	<u>Current Assets</u> Current liabilities	
	Current Assets = Stock + debtors + Investments (short term) + Cash In hand	
	Current Liabilities = Creditors + bank overdraft + Provision for Taxation (current & Future)	
	CA = 12000 + 12000 + 4000 + 12000	
	= 40,000	
	CL = 16000 + 4000 + 4000 + 4000	
	= 28,000	
	= <u>40,000</u> 28,000	
	= 1.43 : 1	

2. Quick Ratio =	<u>Quick Assets</u> Quick Liabilities	
	Quick Assets = Current Assets - Stock	

Quick Liabilities = Current Liabilities – (BOD + PFT future)	
QA = 40,000 – 12,000	
= 28,000	
QL = 28,000 – (4,000 + 4,000)	
= 20,000	
= <u>28,000</u>	
20,000	
= 1.40 : 1	

3. Debt – Equity Ratio =	<u>Long Term Debt (Liabilities)</u> Shareholders Fund	
	LTL = Debentures + long term loans	
	SHF = Eq. Sh. Cap. + Reserves & Surplus + Preference Sh. Cap. – Fictitious Assets	
	LTL = 32,000	
	SHF = 40,000 + 8,000 + 12,000	
	= 60,000	
	= <u>32,000</u>	
	60,000	
	= 0.53 : 1	

4. Proprietary Ratio =	<u>Shareholders' Funds</u> Total Assets	
	SHF = Eq. Sh. Cap. + Reserves & Surplus + Preference Sh. Cap. – Fictitious Assets	
	Total Assets = Total Assets – Fictitious Assets	
	SHF = 40,000 + 8,000 + 12,000	
	= 60,000	

TA = 1,20,000	
= <u>60,000</u> 1,20,000	
= 0.5 : 1	

Problem - 3 [Sau. Uni. T. Y., April, 2000]

The details of Shreenath Company are as under:

Sales (40% cash sales)	15,00,000
Less: Cost of sales	<u>7,50,000</u>
Gross Profit:	7,50,000
Less: Office Exp. (including int. on debentures)	1,25,000
Selling Exp.	<u>1,25,000</u>
Profit before Taxes:	5,00,000
Less: Taxes	<u>2,50,000</u>
Net Profit:	2,50,000

Balance Sheet

Particular	Rs.	Particular	Rs.
Equity share capital	20,00,000	Fixed Assets	55,00,000
10% Preference share capital	20,00,000	Stock	1,75,000
Reserves	11,00,000	Debtors	3,50,000
10% Debentures	10,00,000	Bills receivable	50,000
Creditors Bank-	1,00,000	Cash	2,25,000
overdraft Bills	1,50,000	Fictitious Assets	1,00,000
payable	45,000		
Outstanding expenses	<u>5,000</u>		
	64,00,000		64,00,000

Beside the details mentioned above, the opening stock was of Rs. 3,25,000. Taking 360 days of the year, calculate the following ratios; also discuss the position of the company:

(1) Gross profit ratio. (2) Stock turnover ratio. (3) Operating ratio. (4) Current ratio. (5) Liquid ratio. (6) Debtors ratio. (7) Creditors ratio. (8) Proprietary ratio. (9) Rate of return on net capital employed. (10) Rate of return on equity shares.

Solution – 3 (Problem related to Composite Ratio)

1. Gross Profit Margin =	<u>Gross profit</u> Sales	X 100
	<u>7,50,000</u> 15,00,000	X 100
	= 50%	

2. Stock Turnover Ratio =	<u>Cost of goods sold</u>	
	Avg. Stock	
	Avg. stock = <u>Opening Stock + Closing Stock</u>	
	2	
	COGS = Sales – GP	
	<u>3,25,000 + 1,75,000</u>	
	2	
	AS = 2,50,000	
	COGS = 15,00,000 – 7,50,000	
	7,50,000	
	= <u>7,50,000</u>	
	2,50,000	
	= 3 times	

3. Operating Profit Ratio =	<u>Op. Profit</u>	X 100
	Net Sales	
	Operating Profit = Sales – (Op. Exp. + COGS.)	
	OP = 15,00,000 – (7,50,000 + 1,25,000 + 25,000)	
	= 6,00,000	
	(excluding Interest on Debentures)	
	= <u>6,00,000</u>	X 100
	15,00,000	
	= 40%	

4. Current Ratio =	<u>Current Assets</u>	
	Current liabilities	
	Current Assets = Stock + debtors + Bills receivable + Cash	
	Current Liabilities = Creditors + bank overdraft + Bills payable + Outstanding expenses	

CA = 1,75,000 + 3,50,000 + 50,000 + 2,25,000	
= 8,00,000	
CL = 1,00,000 + 1,50,000 + 45,000 + 5,000	
= 3,00,000	
= <u>8,00,000</u>	
3,00,000	
= 2.67 : 1	

5. Quick Ratio / Liquid Ratio	=	<u>Liquid Assets</u> Liquid Liabilities	
		(Liquid) Quick Assets = Current Assets - Stock	
		(Liquid) Quick Liabilities = Current Liabilities – BOD	
		QA = 8,00,000 – 1,75,000	
		= 6,25,000	
		QL = 3,00,000 – 1,50,000	
		= 1,50,000	
		= <u>6,25,000</u>	
		1,50,000	
		= 4.17 : 1	

6. Debtors Ratio	=	<u>Debtors + Bills receivable</u> Credit sales	X 365 / 360 days
		= <u>3,50,000 + 50,000</u> 9,00,000 (60% of 15,00,000)	X 360 days
		= 0.444	X 360 days
		= 160 days	
7. Creditors Ratio	=	<u>Creditors + Bills payable</u> Credit Purchase	X 365 / 360 days

	$= \frac{1,00,000 + 45,000}{7,50,000}$ Notes: If credit purchase could not find out at that point Cost of Goods sold consider Credit purchase	X 360 days
	= 0.193	X 360 days
	= 69 days	

8. Proprietary Ratio =	$\frac{\text{Shareholders' Funds}}{\text{Total Assets}}$	
	SHF = Eq. Sh. Cap. + Reserves & Surplus + Preference Sh. Cap. – Fictitious Assets	
	Total Assets = Total Assets – Fictitious Assets	
	$\text{SHF} = 20,00,000 + 20,00,000 + 11,00,000 - 1,00,000$ $= 50,00,000$	
	$\text{TA} = 64,00,000 - 1,00,000$ $= 63,00,000$	
	$= \frac{50,00,000}{63,00,000}$	
	= 0.79 : 1	

Notes:

Rate of Return on Capital Employed		Rate of Return on Shareholders Fund		Rate of return on Equity Shareholders Fund	
= $\frac{\text{EBIT}}{\text{Capital employed}}$	X 100	= $\frac{\text{PAT}}{\text{SHF}}$	X 100	= $\frac{\text{PAT} - \text{Pref. Div.}}{\text{ESHF}}$	X 100

CE = Eq Sh. Cap. + Pref. Sh. Cap. + Reserves & Surplus + Debenture + Long Term Loan – Fictitious Assets	SHF = Eq. Sh. Cap. + Pref. Sh.Cap. + Reserves & Surplus –Fictitious Assets	ESHF = Eq. Sh. Cap. +Reserves & Surplus –Fictitious Assets
--	---	---

Sales	15,00,000
Less: Cost of goods sold	7,50,000
Gross profit	7,50,000
Less: Operating expenses (including Depreciation)	1,50,000
Earnings before Interest & Tax (EBIT)	6,00,000
Less: Interest Cost	1,00,000
Earnings before Tax (EBT)	5,00,000
Less: Tax liability	2,50,000
Earnings after Tax (EAT/ PAT)	2,50,000
Less: Preference share dividend	2,00,000
Distributional Profit	50,000

9.		10.		11.	
Rate of Return on Capital Employed		Rate of Return on Share holders Fund		Rate of return on Equity Shareholders Fund	
= $\frac{\text{EBIT}}{\text{Capital employed}}$	X 100	= $\frac{\text{PAT}}{\text{SHF}}$	X 100	= $\frac{\text{PAT} - \text{Pref. Div.}}{\text{ESHF}}$	X 100
CE = Eq Sh. Cap. + Pref. Sh. Cap. + Reserves & Surplus + Debenture + Long Term Loan – Fictitious Assets		SHF = Eq. Sh. Cap. + Pref. Sh. Cap. + Reserves & Surplus – Fictitious Assets		ESHF = Eq. Sh. Cap. + Reserves & Surplus – Fictitious Assets	
CE = 20,00,000 + 20,00,000 + 11,00,000 + 10,00,000 – 1,00,000		SHF = 20,00,000 + 20,00,000 + 11,00,000 – 1,00,000		ESHF = 20,00,000 + 11,00,000 – 1,00,000	
= 60,00,000		= 50,00,000		= 30,00,000	
= $\frac{6,00,000}{60,00,000}$	X 100	= $\frac{2,50,000}{50,00,000}$	X 100	= $\frac{50,000}{30,00,000}$	X 100
= 10%		= 5%		= 1.67 %	

Problem = 4

From the following particulars extracted from the books of Ashok & Co. Ltd., compute the following ratios and comment:

(a) Current ratio, (b) Acid Test Ratio, (c) Stock-Turnover Ratio, (d) Debtors Turnover Ratio, (e) Creditors' Turnover Ratio, and Average Debt Collection period.

	1-1-2002	31-12-2002
	Rs.	Rs.
Bills Receivable	30,000	60,000
Bills Payable	60,000	30,000
Sundry Debtors	1,20,000	1,50,000
Sundry Creditors	75,000	1,05,000
Stock-in-trade	96,000	1,44,000

Additional information:

- (a) On 31-12-2002, there were assets: Building Rs. 2,00,000, Cash Rs. 1,20,000 and Cash at Bank Rs. 96,000.
 (b) Cash purchases Rs. 1,38,000 and Purchases Returns were Rs. 18,000.
 (c) Cash sales Rs. 1,50,000 and Sales returns were Rs. 6,000.
 Rate of gross profit 25% on sales and actual gross profit was Rs. 1,50,000.

Solution – 4 (Problem related to find out missing item)

Notes: In this problem available information is not enough to solve ratios asked so that need to prepare Trading Account to identify values which are not given in the question.

Trading Account

Particular	Amount Rs.	Particular	Amount Rs.
To Opening Stock	96,000	By Sales: Cash: 1,50,000	
To Purchase: Cash: 1,38,000		Credit : <u>4,56,000</u>	
Credit: <u>3,78,000</u>		6,06,000	
5,16,000		Less: S/R <u>6,000</u>	6,00,000
Less: P/R <u>18,000</u>	4,98,000	By Closing Stock	1,44,000
To Gross Profit	1,50,000		
	7,44,000		7,44,000

1. Gross Profit Margin =	$\frac{\text{Gross profit}}{\text{Sales}}$	X 100
	25% = $\frac{1,50,000}{\text{Sales}}$	X 100

Sales = $\frac{1,50,000}{25}$	X 100
Sales = 6,00,000	

2. Current Ratio =	$\frac{\text{Current Assets}}{\text{Current liabilities}}$	
	Current Assets = Stock + debtors + Bills receivable + Cash + Bank Balance	
	Current Liabilities = Creditors + Bills payable	
	CA = 1,44,000 + 1,50,000 + 60,000 + 1,20,000 + 96,000 = 5,70,000	
	CL = 1,05,000 + 30,000 = 1,35,000	
	= $\frac{5,70,000}{1,35,000}$	
	= 4.22 : 1	

3. Acid Test Ratio =	$\frac{\text{Cash \& Cash Equivalent Assets}}{\text{Liquid Liabilities}}$	
	Cash & Cash equivalent Assets = Cash + Bank + Short term Investments	
	(Liquid) Quick Liabilities = Current Liabilities – BOD	
	= 1,20,000 + 96,000 = 2,16,000	
	QL = 1,05,000 + 30,000 = 1,35,000	
	= $\frac{2,16,000}{1,35,000}$	
	= 1.6 : 1	

4. Stock Turnover Ratio =	$\frac{\text{Cost of goods sold}}{\text{Avg. Stock}}$
	Avg. stock = $\frac{\text{Opening Stock} + \text{Closing Stock}}{2}$

COGS = Sales – GP
$\frac{96,000 + 1,44,000}{2}$
AS = 1,20,000
COGS = 6,00,000 – 1,50,000
4,50,000
= <u>4,50,000</u>
1,20,000
= 3.75 times

5. Debtors Ratio (Avg. debt collection period)	=	$\frac{\text{Debtors + Bills receivable}}{\text{Credit sales}}$	X 365 / 360 days
		$= \frac{1,50,000 + 60,000}{4,56,000}$	X 365 days
		= 0.461	X 365 days
		= 168 days	

6. Creditors Ratio	=	$\frac{\text{Creditors + Bills payable}}{\text{Credit Purchase}}$	X 365 / 360 days
		$= \frac{1,05,000 + 30,000}{3,78,000}$	X 365 days
		= 0.357	X 365 days
		= 130 days	

Problem - 5

Following is the summarised Balance Sheet of Mona Ltd. as on 31-3-04.

Particular	Rs.	Particular	Rs.
Equity Shares of Rs. 10 each 10%	10,00,000	Fixed Assets	20,00,000
Pref. Sh. of Rs.100 each Reserves	4,00,000	Investments	2,00,000
and Surplus	7,00,000	Closing Stock	2,00,000
15% Debentures	5,00,000	Sundry Debtors	4,60,000
Sundry Creditors	2,40,000	Bills Receivable	60,000
Bank Overdraft	1,60,000	Cash at Bank	60,000
		Preliminary Expenses	20,000
	30,00,000		30,00,000

Summarised Profit and Loss Account is as under for the year ending on 31-3-'04:

Sales (25% Cash sales)	Rs. 80,00,000
Less: Cost of goods sold	<u>56,00,000</u>
Gross Profit	<u>24,00,000</u>
Net profit (Before interest and tax 50%)	9,00,000
Calculate the following ratios:	
(1) Rate on Return on Capital Employed (2) Proprietary Ratio (3) Debt-Equity (4) Capital gearing Ratio (5) Debtors Ratio (365 days of the year.) (6) Rate of Return on Shareholders' Funds (7) Rate of Return on Equity shareholders fund	

Solution - 5

Statement of Profitability

Sales	80,00,000
Less: Cost of goods sold	56,00,000
Gross profit	24,00,000
Less: Operating expenses (including Depreciation)	15,00,000
Earnings before Interest & Tax (EBIT)	9,00,000
Less: Interest Cost	75,000
Earnings before Tax (EBT)	8,25,000
Less: Tax liability (50%)	4,12,500
Earnings after Tax (EAT/ PAT)	4,12,500
Less: Preference share dividend	40,000
Distributional Profit	3,72,500

1.		6.		7.	
Rate of Return on Capital Employed		Rate of Return on Shareholders Fund		Rate of return on Equity Shareholders Fund	
= $\frac{\text{EBIT}}{\text{Capital employed}}$	X 100	= $\frac{\text{PAT}}{\text{SHF}}$	X 100	= $\frac{\text{PAT} - \text{Pref. Div.}}{\text{ESHF}}$	X 100
CE = Eq Sh. Cap. + Pref. Sh. Cap. + Reserves & Surplus + Debenture + Long Term Loan – Fictitious Assets		SHF = Eq. Sh. Cap. + Pref. Sh. Cap. + Reserves & Surplus – Fictitious Assets		ESHF = Eq. Sh. Cap. + Reserves & Surplus – Fictitious Assets	
CE = 10,00,000 + 4,00,000 + 7,00,000 + 5,00,000 – 20,000 = 25,80,000		SHF = 10,00,000 + 4,00,000 + 7,00,000 – 20,000 = 20,80,000		ESHF = 10,00,000 + 7,00,000 – 20,000 = 16,80,000	
= $\frac{9,00,000}{25,80,000}$	X 100	= $\frac{4,12,500}{20,80,000}$	X 100	= $\frac{3,72,500}{16,80,000}$	X 100

= 34.88%	= 19.83%	= 22.17 %
-----------------	-----------------	------------------

2. Proprietary Ratio =	<u>Shareholders' Funds</u> Total Assets	
	SHF = Eq. Sh. Cap. + Reserves & Surplus + Preference Sh. Cap. – Fictitious Assets	
	Total Assets = Total Assets – Fictitious Assets	
	SHF = 10,00,000 + 7,00,000 + 4,00,000 - 20,000 = 20,80,000	
	TA = 30,00,000 – 20,000 = 29,80,000	
	= <u>20,80,000</u> 29,80,000	
	= 0.70 : 1	

3. Debt – Equity Ratio =	<u>Long Term Debt (Liabilities)</u> Shareholders Fund	
	LTL = Debentures + long term loans	
	SHF = Eq. Sh. Cap. + Reserves & Surplus + Preference Sh. Cap. – Fictitious Assets	
	LTL = 5,00,000	
	SHF = 10,00,000 + 7,00,000 + 4,00,000 - 20,000 = 20,80,000	
	= <u>5,00,000</u> 20,80,000	
	= 0.24 : 1	

4. Capital Gearing Ratio =	<u>Fixed Interest or Dividend Securities</u> Equity Shareholders Fund	
	FIS = Debentures + Preference share capital	
	ESHF = Eq. Sh. Cap. + Reserves & Surplus – Fictitious Assets	
	LTL = 9,00,000	

ESHF = 10,00,000 + 7,00,000 - 20,000	
= 16,80,000	
= $\frac{9,00,000}{16,80,000}$	
= 0.54 : 1	

5. Debtors Ratio	=	<u>Debtors + Bills receivable</u>	X 365 / 360 days
(Avg. debt collection period)		Credit sales	
		= $\frac{4,60,000 + 60,000}{60,00,000}$	X 365 days
		= 0.461	X 365 days
		= 31.63 days	
		= 32 days (Aprox.)	

Problem - 6

Two years' Balance sheets of Jamuna Company Ltd. are as follows:[S. U. T.Y.-April, 1999]

Liabilities	31-3-03	31-3-04	Assets	31-3-03	31-3-04
Equity share capital	1,00,000	1,50,000	Land and Buildings	1,00,000	90,000
10%Pref. Sh. capital	50,000	50,000	Machinery	90,000	90,000
General Reserve Profit & Loss A/c 12%	30,000	30,000	Debtors	53,000	30,000
Debentures Creditors	20,000	-----	Bills Receivable	20,000	12,000
Bills payable	1,00,000	50,000	Stock	75,000	90,000
Bank overdraft	30,000	35,000	Bank Balance	15,000	35,000
O/s. Expenses	10,000	25,000	Cash Balance	2,000	13,000
	5,000	20,000	Profit & Loss A/c	----	10,000
		10,000			
	3,55,000	3,70,000		3,55,000	3,70,000

Additional Information:

	2002-'03	2003-04
	Rs.	Rs.
(1) Sales	3,65,000	2,19,000
(2) Cost of Goods sold	2,19,000	1,46,000
(3) Net profit (Before Pref. Dividend)	35,000	47,500
(4) Stock on 1-4-'02	71,000	---

Calculate following ratios and give your opinion about company position in 2003-'04 in comparison with 2002-'03. Whether it is positive or negative?

- (1) Current ratio (2) Liquid ratio (3) Debtors ratio (Take 365 days for calculations) (4) Gross profit ratio (5) Stock Turnover ratio (6) Rate of return on equity share-holders' funds.

Solution - 6 (problem related to comparative analysis between two years)

1. Current Ratio	=	<u>Current Assets</u>	
		Current liabilities	
		Current Assets = Stock + debtors + Bills receivable + Cash + Bank Balance	
		Current Liabilities = Creditors + Bills payable	
		2002-03:	
		= $\frac{53,000 + 20,000 + 75,000 + 15,000 + 2,000}{30,000 + 10,000 + 10,000 + 5,000}$	
		= $\frac{1,65,000}{55,000}$	
		= 3 : 1	
		2003-04:	
		= $\frac{30,000 + 12,000 + 90,000 + 35,000 + 13,000}{35,000 + 25,000 + 20,000 + 10,000}$	
2. Liquid Ratio	=	<u>Liquid Assets</u>	
		Liquid liabilities	
		(Liquid) Quick Assets = Current Assets - Stock	
		(Liquid) Quick Liabilities = Current Liabilities – BOD	
		2002-03:	
		= $\frac{1,65,000 - 75,000}{55,000 - 10,000}$	
		= $\frac{90,000}{45,000}$	
		= 2 : 1	
		2003-04:	
		= $\frac{1,80,000 - 90,000}{90,000 - 20,000}$	
		= $\frac{90,000}{70,000}$	
		= 1.29 : 1	

3. Debtors Ratio = (Avg. debt collection period)	$\frac{\text{Debtors + Bills receivable}}{\text{Credit sales}}$	X 365 / 360 days
	2002-03: $= \frac{53,000 + 20,000}{3,65,000}$	X 365 days
	$= \frac{73,000}{3,65,000}$	X 365 days
	$= 73 \text{ days}$	
	2003-04: $= \frac{30,000 + 12,000}{2,19,000}$	X 365 days
	$= \frac{42,000}{2,19,000}$	X 365 days
	$= 70 \text{ days}$	
4. Gross Profit Margin =	$\frac{\text{Gross profit}}{\text{Sales}}$	X 100
	GP = Sales - COGS 2002-03: $365000 - 219000$ $= 1,46,000$ 2003-04: $219000 - 146000$ $= 73,000$	
	2002-03: $= \frac{1,46,000}{3,65,000}$	X 100
	$= 40\%$	
	2003-04: $= \frac{73,000}{2,19,000}$	X 100
	$= 33.33\%$	
5. Stock Turnover Ratio =	$\frac{\text{Cost of goods sold}}{\text{Avg. Stock}}$	
	Avg. stock = $\frac{\text{Opening Stock} + \text{Closing Stock}}{2}$	

2002-03:	$\frac{71000 + 75000}{2}$ $= 73,000$
2003-04:	$\frac{75000 + 90000}{2}$ $= 82,500$
2002-03:	$= \frac{2,19,000}{73,000}$ $= 3 \text{ times}$
2003-04:	$= \frac{1,46,000}{82,500}$ $= 1.77 \text{ times}$

7. Rate of return on Equity Shareholders Fund:		
2002-03	$= \frac{\text{PAT} - \text{Pref. Div.}}{\text{ESHF}}$	X 100
ESHF = Eq. Sh. Cap. + Reserves & Surplus – Fictitious Assets		
ESHF = 1,00,000 + 30,000 + 20,000		
= 1,50,000		
$= \frac{35,000 - 5,000}{1,50,000}$	X 100	
= 20 %		
2003-04:		
ESHF: 1,50,000 + 30,000 - 10,000		
= 1,70,000		
$= \frac{47,500 - 5,000}{1,70,000}$	X 100	
= 25%		

Problem - 7

The Balance Sheet as on 2002 and 2003 are as under:

Liabilities	2002	2003	Assets	2002	2003
Equity share capital	1,00,000	1,25,000	Land and Buildings	50,000	75,000
General Reserve Profit &	12,500	15,000	Plant Machinery	57,500	55,000
Loss A/c Creditors	10,000	7,500	Stock	10,000	12,500
Bills payable	5,000	6,250	Debtors	7,500	10,000
O/s. Expenses	3,750	7,500	Cash & Bank	5,000	7,500
Provident Fund	1,250	3,750	Bills Receivable	2,500	5,000
	7,500	5,000	Preliminary Exp.	7,500	5,000
	1,40,000	1,70,000		1,40,000	1,70,000

Profit & Loss A/c.

Particulars	2002	2003	Particulars	2002	2003
To Op. Stock	5,000	10,000	By Sales	62,500	1,12,500
To Purchase	37,500	47,500	By Closing Stock	10,000	12,500
To Office Exp.	7,500	10,000	By Profit on Sale of		
To Selling exp.	5,000	12,500	Furniture	2,500	----
To Fin. Exp.	2,500	15,000			
To Net Profit	17,500	30,000			
	75,000	1,25,000		75,000	1,25,000

Find out (1) Current Ratio (2) Stock Turnover Ratio (3) Gross Profit Ratio (4) Liquid Ratio (5) Debtor Ratio (working days 300) (6) Return on Equity Capital employed (7) Ownership Ratio.

Solution - 7

1. Current Ratio	=	$\frac{\text{Current Assets}}{\text{Current liabilities}}$	
		Current Assets = Stock + debtors + Bills receivable + Cash & Bank Balance	
		Current Liabilities = Creditors + Bills payable + O/s Exp. + PF	
		2002:	
		$= \frac{10,000 + 7,500 + 5,000 + 2,500}{5,000 + 3,750 + 1,250 + 7,500}$	
		$= \frac{25,000}{17,500}$	
		$= 1.43 : 1$	
		2003-04:	
		$= \frac{12,500 + 10,000 + 7,500 + 5,000}{6,250 + 7,500 + 3,750 + 5,000}$	
		$= \frac{35,000}{22,500}$	
		$= 1.56 : 1$	

2. Stock Turnover Ratio =	$\frac{\text{Cost of goods sold}}{\text{Avg. Stock}}$
	$\text{Avg. stock} = \frac{\text{Opening Stock} + \text{Closing Stock}}{2}$
	2002-03: $\frac{5000 + 10000}{2} = 7,500$ 2003-04: $\frac{10000 + 12500}{2} = 11,250$
	Gross Profit = Sales + Closing Stock - (Opening Stock + Purchase) COGS = Sales - GP
	2002: = 62,500 + 10,000 - (5,000 + 37,500) = 30,000 COGS = 62,500 - 30,000 = 32,500
	2003: = 1,12,500 + 12,500 - (10,000 + 47,500) = 67,500 COGS = 1,12,500 - 67,500 = 45,000
	2002-03: $= \frac{32,500}{7,500}$
	= 4.33 times
	2003-04: $= \frac{45,000}{11,250}$
	= 4 times
3. Gross Profit Margin =	$\frac{\text{Gross profit}}{\text{Sales}} \times 100$
	GP = Sales - COGS 2002-03: 2002: = 62,500 + 10,000 - (5,000 + 37,500) = 30,000 2003-04: = 1,12,500 + 12,500 - (10,000 + 47,500)

= 67,500	
2002-03:	
= $\frac{30,000}{62,500}$	X 100
= 48%	
2003-04:	
= $\frac{67,500}{1,12,500}$	X 100
= 60%	

4. Liquid Ratio	=	$\frac{\text{Liquid Assets}}{\text{Liquid liabilities}}$	
		(Liquid) Quick Assets = Current Assets - Stock	
		(Liquid) Quick Liabilities = Current Liabilities – BOD	
		2002-03:	
		= $\frac{25,000 - 10,000}{17,500}$	
		= $\frac{15,000}{17,500}$	
		= 0.86 :1	
		2003-04:	
		= $\frac{35,000 - 12,500}{22,500}$	
		= $\frac{22,500}{22,500}$	
		= 1 : 1	

5. Debtors Ratio	=	$\frac{\text{Debtors + Bills receivable}}{\text{Credit sales}}$	X 300 days
(Avg. debt collection period)			
		2002-03:	
		= $\frac{7,500 + 2,500}{62,500}$	X 300 days
		= $\frac{10,000}{62,500}$	X 300 days
		= 48 days	

2003-04: = $\frac{10,000 + 5,000}{1,12,500}$	X 300 days
= $\frac{15,000}{1,12,500}$	X 300 days
= 40 days	

6. Rate of return on Equity Shareholders Fund:		
	2002 = $\frac{\text{PAT} - \text{Pref. Div.}}{\text{ESHF}}$	X 100
	ESHF = Eq. Sh. Cap. + Reserves & Surplus – Fictitious Assets	
	ESHF = 1,00,000 + 12,500 + 10,000 - 7,500 = 1,15,000	
	= $\frac{17,500}{1,15,000}$	X 100
	= 15.22 %	
	2003:	
	ESHF: 1,25,000 + 15,000 + 7,500 - 5,000 = 1,42,500	
	= $\frac{30,000}{1,42,500}$	X 100
	= 21.05%	

7.	Ownership Ratio =	<u>Shareholders' Funds</u> Total Assets	
		SHF = Eq. Sh. Cap. + Reserves & Surplus – Fictitious Assets	
		Total Assets = Total Assets – Fictitious Assets	
	2002 =	SHF = 1,00,000 + 12,500 + 10,000 - 7,500 = 1,15,000	
		TA = 1,40,000 - 7,500 = 1,32,500	
		= $\frac{1,15,000}{1,32,500}$	
		= 0.87 : 1 OR = 87%	

2003 = SHF = 1,25,000 + 15,000 + 7,500 - 5,000 = 1,42,500	
TA = 1,70,000 - 5,000 1,65,000	
= <u>1,42,500</u> 1,65,000	
= 0.86 : 1 OR = 86%	

Problem - 8

Following are incomplete Trading & Profit and Loss A/c. and Balance Sheet.

Trading A/c.

Particular	Rs.	Particular	Rs.
To Op. stock	3,50,000	By Sales	(?)
To Purchase	(?)	By Closing Stock	(?)
To Purchase Return	87,000		
To Gross Profit	7,18,421		
	14,96,710		14,96,710

Profit & Loss A/c.

Particular	Rs.	Particular	Rs.
To Office Exp.	3,70,000	By Gross Profit	7,18,421
To Int. on Deb.	30,000	By Commission	(?)
To Tax. Provision	18,421		
To Net Profit	3,50,000		
	(?)		(?)

Balance Sheet

Particular	Rs.	Particular	Rs.
Paid Up Capital	5,00,000	Plant & machinery	7,00,000
General Reserve	(?)	Stock	(?)
P & L a/c.	(?)	Debtors	(?)
10% Debenture	(?)	Bank	62,500
Current Liabilities	6,00,000	Other Fixed Assets	(?)
	(?)		(?)

Find out missing items with the help of other details are as under:

1. Current Ratio was 2:1.
2. Closing Stock is 25% of Sales.
3. Proposed Dividend was 40% of paid up capital.
4. Gross profit Ratio was 60%.
5. Amount transfer to General Reserve is same as proposed Dividend.
6. Balance of P & L Account is calculated 10% of proposed dividend.
7. Commission income is 1/7 of Net profit.
8. Balance of General reserve is twice the current year transfer amount.

Solution - 8

Trading A/c.

Particular	Rs.	Particular	Rs.
To Op. stock	3,50,000	By Sales (?)	11,97,368
To Purchase (?)	3,41,289	By Closing Stock (?)	2,99,342
To Purchase Return	87,000		
To Gross Profit	7,18,421		
	14,96,710		14,96,710

Profit & Loss A/c.

Particular	Rs.	Particular	Rs.
To Office Exp.	3,70,000	By Gross Profit	7,18,421
To Int. on Deb.	30,000	By Commission (?)	50,000
To Tax. Provision	18,421		
To Net Profit	3,50,000		
	7,68,421		7,68,421

Balance Sheet

LIABILITIES	AMOUNT	ASSETS	AMOUNT
Paid Up Capital	5,00,000	Plant & machinery	7,00,000
General Reserve (?)	6,00,000	Stock (?)	2,99,342
P & L a/c. (?)	20,000	Debtors (?)	8,38,158
10% Debenture (?)	3,00,000	Bank (?)	62,500
Current Liabilities	6,00,000	Other Fixed Assets	1,20,000
	20,20,000		20,20,000

1. Gross Profit Margin =	$\frac{\text{Gross profit}}{\text{Sales}} \times 100$	
	$60 = \frac{7,18,421}{\text{Sales}} \times 100$	
	$\text{Sales} = \frac{7,18,421}{60} \times 100$	
	Sales = 11,97,368	

2. Closing Stock =	Sales x 25%
	11,97,368 x 25%
	CS = 2,99,342

3. Proposed Dividend =	Paid up Capital x 40%
	= 5,00,000 x 40%
	PD = 2,00,000

4. General Reserve =	GR find out as per Proposed Dividend
	Proposed Dividend is 2,00,000
	So that Proposed Dividend = General Reserve
	GR = 2,00,000

5. Commission =	It is 1/7 part of Net Profit
	Commission = 3,50,000 x 1/7
	Commission = 50,000

6. Profit & Loss Account =	It is 10% of Proposed Dividend
	P & L A/c. = 2,00,000 x 10%
	P & L A/c. = 20,000

7. Debenture =	Rate of Interest is 10%
	Interest amount is Rs. 30,000
	So that, Debenture value is = 30,000 x 10/100
	= 3,00,000

8. Current Ratio =	<u>Current Assets</u> Current liabilities	
	2 = <u>Stock + debtors + Bank Balance</u> Current Liability	
	2 = <u>2,99,342 + debtors + 62,500</u>	
	6,00,000	
	12,00,000 = Debtors + 3,61,842	
	Debtors = 12,00,000 - 3,61,842	
	Debtors = 8,38,158	

8. Current Ratio	=	$\frac{\text{Current Assets}}{\text{Current liabilities}}$	
		$2 = \frac{\text{Stock} + \text{debtors} + \text{Bank Balance}}{\text{Current Liability}}$	
		$2 = \frac{2,99,342 + \text{debtors} + 62,500}{6,00,000}$	
		$12,00,000 = \text{Debtors} + 3,61,842$	
		$\text{Debtors} = 12,00,000 - 3,61,842$	
		Debtors = 8,38,158	
8. Balance of General Reserve	=	It is twice of current year provision for General Reserve	
		Current year provision is Rs. 2,00,000	
		So that, Balance of G. R. = 2,00,000 x 2	
		Balance of GR = 4,00,000	
		Now, General Reserve = 4,00,000 + 2,00,000	
		GR = 6,00,000	

Problem -9

From the following information, prepare the Balance Sheet of ABB Ltd. Showing the details of working:

Paid up capital	Rs. 50,000
Plant and Machinery	Rs. 1,25,000
Total Sales (p.a.)	Rs. 5,00,000
Gross Profit	25%
Annual Credit Sales	80% of net sales
Current Ratio	2
Inventory Turnover	4
Fixed Assets Turnover	2
Sales Returns	20% of sales
Average collection period	73 days
Bank Credit to trade credit	2
Cash to Inventory	1 : 15
Total debt to current Liabilities	3

Solution - 9

1. Net Sales	=	Total Sales - Sales Return
		= 5,00,000 - 1,00,000
		= Rs. 4,00,000
2. Credit Sales	=	80% of Net Sales
		= 4,00,000 x 80%
		= Rs. 3,20,000
3. Gross Profit	=	25% of Net sales

		$= 4,00,000 \times 25\%$
		= Rs. 1,00,000
4. Cost of Goods Sold	=	Net Sales - Gross Profit
		$= 4,00,000 - 1,00,000$
		= Rs. 3,00,000
5. Inventory	=	$\frac{\text{Cost of Goods Sold}}{\text{Inventory Turnover}}$
		$= \frac{3,00,000}{4}$
		= Rs. 75,000
6. Receivable Turnover	=	$\frac{365}{73}$
		$= 5$
Receivables	=	$\frac{\text{Credit Sales}}{\text{Receivables Turnover}}$
		$= \frac{3,20,000}{5}$
		= Rs. 64,000
7. Cash	=	1/5 of Inventory
		$= 1/5 \times 75,000$
		= Rs. 5,000
8. Total Current Assets	=	Inventory + Receivables + Cash
		$= 75,000 + 64,000 + 5,000$
		= Rs. 1,44,000
9. Total Current Liabilities	=	$\frac{\text{Current Assets}}{2}$
		$= \frac{1,44,000}{2}$
		= Rs. 72,000
10. Bank Credit	=	$2/3 \times \text{Current Liabilities}$
		$= 2/3 \times 72,000$
		= Rs. 48,000
11. Trade Credit	=	1/2 of Bank Credit OR 1/3 of Current Liabilities
		Rs. 24,000
12. Total Debt	=	Current Liabilities x 3
		$72,000 \times 3$
		= Rs. 2,16,000
13. Long term debt	=	Total Debt - Current Liabilities
		$= 2,16,000 - 72,000$

		= Rs. 1,44,000
14. Fixed Assets	=	$1/2 \text{ of Net Sales} =$
		$1/2 \times 4,00,000$
		= Rs. 2,00,000
15. Other fixed Assets	=	Fixed Assets - Plant & Machinery
		$= 2,00,000 - 1,25,000$
		= Rs. 75,000
16. Total Assets	=	Fixed Assets + Current Assets
		$= 2,00,000 + 1,44,000$
		= 3,44,000
17. Net worth	=	Total Assets - Total Debt
		$3,44,000 - 2,16,000$
		= Rs. 1,28,000
18. Reserves & Surplus	=	Net worth - Paid Up capital
		$= 1,28,000 - 50,000$
		= Rs. 78,000

Balance Sheet

LIABILITIES	AMOUNT	ASSETS	AMOUNT
Paid Up Capital	50,000	Plant & machinery	1,25,000
Reserves & Surplus	78,000	Other Fixed Assets	75,000
Long term Debt	1,44,000	Inventory	75,000
Bank credit	48,000	Receivables	64,000
Trade credit	24,000	Cash	5,000
	3,44,000		3,44,000

Problem No: 10

The following is the Balance Sheet of a company as on 31st March:

Liabilities	Rs.	Assets	Rs.
Share Capital	2,00,000	Land and Buildings	1,40,000
Profit & Loss Account	30,000	Plant and Machinery	3,50,000
General Reserve	40,000	Stock	2,00,000
12% Debentures	4,20,000	Sundry Debtors	1,00,000
Sundry Creditors	1,00,000	Bills Receivable	10,000
Bills Payable	50,000	Cash at Bank	40,000
	8,40,000		8,40,000

Calculate :

- (1) Current Ratio
- (2) Quick Ratio
- (3) Inventory to working Capital
- (4) Debt to Equity Ratio
- (5) Proprietary Ratio
- (6) Capital Gearing Ratio
- (7) Current Assets to Fixed Assets

SOLUTION :

$$\begin{aligned} \text{(1) Current Ratio} &= \frac{\text{Current assets}}{\text{Current Liabilities}} \\ &= \frac{\text{Rs. 3,50,000}}{\text{Rs. 1,50,000}} = 2.33 : 1 \end{aligned}$$

$$\begin{aligned} \text{(2) Quick Ratio} &= \frac{\text{Liquid Assets}}{\text{Liquid Liabilities}} \\ &= \frac{\text{Rs. 1,50,000}}{\text{Rs. 1,50,000}} = 1 : 1 \end{aligned}$$

$$\begin{aligned} \text{(3) Inventory to Working Capital} &= \frac{\text{Inventory}}{\text{Working Capital}} \\ &= \frac{\text{Rs. 2,00,000}}{\text{Rs. 2,00,000}} = 1 : 1 \end{aligned}$$

$$\begin{aligned} \text{(Working Capital)} &= \text{Current Assets} - \text{Current Liabilities} \\ &= \text{Rs. 3,50,000} - \text{Rs. 1,50,000} = \text{Rs. 2,00,000} \end{aligned}$$

$$\text{(4) Debt to Equity Ratio} = \frac{\text{Long Term Debts}}{\text{Shareholders' Fund}}$$

$$= \frac{\text{Rs. 4,20,000}}{\text{Rs. 2,70,000}} = 1.56 : 1$$

(Or)

$$\begin{aligned} &= \frac{\text{Long Term Debts}}{\text{Shareholders' Fund} + \text{Long Term Debts}} \\ &= \frac{\text{Rs. 4,20,000}}{\text{Rs. 2,70,000} + 4,20,000} = 0.6 : 1 \end{aligned}$$

$$\begin{aligned} \text{(5) Proprietary Ratio} &= \frac{\text{Shareholders' Fund}}{\text{Total Assets}} \\ &= \frac{\text{Rs. 2,70,000}}{\text{Rs. 8,40,000}} = 0.32 : 1 \end{aligned}$$

$$\begin{aligned} \text{(6) Capital Gearing Ratio} &= \frac{\text{Fixed Interest Bearing Securities}}{\text{Equity Share Capital}} \\ &= \frac{\text{Rs. 4,20,000}}{\text{Rs. 2,00,000}} = 2.1 : 1 \end{aligned}$$

$$\begin{aligned} \text{(7) Current Assets to Fixed Assets Ratio} &= \frac{\text{Current Assets}}{\text{Fixed Assets}} \\ &= \frac{\text{Rs. 3,50,000}}{\text{Rs. 4,90,000}} = 0.71 : 1 \end{aligned}$$

Problem 11:

From the following Balance Sheet and additional information, you are required to calculate:

- (i) Return on Total Resources
- (ii) Return on Capital Employed
- (iii) Return on Shareholders' Fund

BALANCE SHEET as on 31st Dec.

	Rs.		Rs.
Share Capital (Rs. 10)	8,00,000	Fixed Assets	10,00,000
Reserves	2,00,000	Current Assets	3,60,000
8% Debentures	2,00,000		
Creditors	1,60,000		
	13,60,000		13,60,000

Net operating profit before tax is Rs. 2,80,000. Assume tax rate at 50%. Dividend declared amounts to Rs.1,20,000. (B.Com. MS.)

SOLUTION:

$$\begin{aligned}
 (i) \text{ Return on Total Resources} &= \frac{\text{Profit after Tax}}{\text{Total Assets}} \times 100 \\
 &= \frac{\text{Rs. 1,40,000}}{\text{Rs. 13,60,000}} \times 100 = 10.29\%
 \end{aligned}$$

$$\begin{aligned}
 (ii) \text{ Return on Capital Employed} &= \frac{\text{Profit before Tax \& Interest}}{\text{Capital Employed}} \times 100 \\
 &= \frac{\text{Rs. 2,96,000}}{\text{Rs. 12,00,000}} \times 100 = 24.7\%
 \end{aligned}$$

$$\begin{aligned}
 (iii) \text{ Return on Shareholders' Fund} &= \frac{\text{Profit after Tax}}{\text{Shareholders Fund}} \times 100 \\
 &= \frac{\text{Rs. 1,40,000}}{\text{Rs. 10,00,000}} \times 100 = 14\%
 \end{aligned}$$

Problem 12:

Extract from financial accounts of X, Y, Z Ltd. are:

	Year I		Year II	
	Assets Rs.	Liabilities Rs.	Assets Rs.	Liabilities Rs.
Stock	10,000		20,000	
Debtors	30,000		30,000	
Payment in Advance	2,000		—	
Cash in hand	20,000		15,000	
Sundry Creditors		25,000		30,000
Acceptances		15,000		12,000
Bank Overdraft		—		5,000
	62,000	40,000	65,000	47,000

Sales amounted to Rs.3,50,000 in the first year and Rs.3,00,000 in the second year.

You are required to comment on the solvency position of the concern with the help of accounting ratios.
(C.A. Final ;M. Com. Madras)

SOLUTION :

Short-term Solvency Analysis

$$(1) \text{ Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

$$\text{Year I : } \frac{10,000 + 30,000 + 2,000 + 20,000}{25,000 + 15,000} = \frac{62,000}{40,000} = 1.55 : 1$$

$$\text{Year II : } \frac{20,000 + 30,000 + 15,000}{30,000 + 12,000 + 5,000} = \frac{65,000}{47,000} = 1.38 : 1$$

$$(2) \text{ Liquid or Quick Ratio} = \frac{\text{Liquid Assets}}{\text{Liquid Liabilities}}$$

$$\text{Year I : } \frac{30,000 + 20,000 + 2,000}{25,000 + 15,000} = \frac{52,000}{40,000} = 1.30 : 1$$

$$\text{Year II : } \frac{30,000 + 15,000}{30,000 + 12,000 + 5,000} = \frac{45,000}{47,000} = 0.96 : 1$$

$$(3) \text{ Inventory Turnover Ratio} = \frac{\text{Net Sales}}{\text{Average Inventory}}$$

$$\text{Year I : } \frac{3,50,000}{10,000} = 35 : 1$$

$$\text{Year II : } \frac{3,00,000}{15,000} = 20 : 1$$

$$(4) \text{ Inventory Current Assets Ratio} = \frac{\text{Inventory}}{\text{Total Current Assets}} \times 100$$

$$\text{Year I : } \frac{10,000}{62,000} \times 100 = 16\%$$

$$\text{Year II : } \frac{20,000}{65,000} \times 100 = 31\%$$

$$(5) \text{ Average Collection Period} = \frac{\text{Trade Receivables}}{\text{Net Credit Sales}} \times \text{No. of Working Days}$$

$$\text{Year I: } \frac{30,000}{3,50,000} \times 365 = 31.3 \text{ days}$$

$$\text{Year II: } \frac{30,000}{3,00,000} \times 365 = 36.5 \text{ days}$$

Long-Term Solvency Analysis

$$(1) \text{ Debt Equity Ratio} = \frac{\text{External Equities}}{\text{Internal Equities}}$$

$$\text{Year I: } \frac{25,000 + 15,000}{62,000 - 40,000} = \frac{40,000}{22,000} = 1.82 : 1$$

$$\text{Year II: } \frac{30,000 + 12,000 + 5,000}{65,000 - 47,000} = \frac{47,000}{18,000} = 2.61 : 1$$

$$(2) \text{ Proprietary Ratio is } = \frac{\text{Shareholder's Equities}}{\text{Total Equities}}$$

$$\text{Year I: } \frac{22,000}{62,000} = 0.35 : 1$$

$$\text{Year II: } \frac{18,000}{65,000} = 0.28 : 1$$