Senior Secondary Course

ACCOUNTANCY (320)

3

Course Coordinator
Dr. Piyush Prasad

NATIONAL INSTITUTE OF OPEN SCHOOLING
(An autonomous organisation under MHRD, Govt. of India)
A-24-25, Institutional Area, Sector-62, NOIDA-201309 (U.P.)
Website: www.nios.ac.in, Toll Free No. 18001809393

Printed on 60gsm. paper with NIOS water mark

MAY,2015 (22,000 copies)

Published by the Secretary, National Institute of Open Schooling, A-24-25, Institutional Area, Sector-62, Noida-201309 and Printed at M/s Kalyan Enterprises, D-20, Sector-B3, Tronica City, Indl. Area, Loni Gzb.

ADVISORY COMMITTEE

Prof. C.B. Sharma
Chairman
NIOS, NOIDA (UP)

Dr. Kuldeep Agarwal
Director (Academic)
NIOS, NOIDA (UP)

Dr. Rachna Bhatia
Assistant Director (Academic)
NIOS, NOIDA (UP)

CURRICULUM COMMITTEE

Prof. Jawahar Lal
Professor
Deptt. of Commerce
Delhi School of Eco.
Delhi

Dr. Shipra Vaidya
Professor, Department of
Social Sciences & Humanities
NCERT, New Delhi 16

Dr. A.K. Sahajpal
Reader
Deptt. of Correspondence
D-32, University Campus,
Sector-14, Chandigarh

Dr. H.V. Jhamb
Reader
Deptt. of Commerce
Khalsa College
Delhi

Dr. Jagmohan Gupta
Reader
Deptt. of Commerce,
Moti Lal Nehru College
New Delhi - 21

Ms. Meena Goel
Principal
Navhind Girls Sr. Sec. School
New Rohtak Road
New Delhi - 05

Sh. S.K. Bansal
Lecturer (Retd.)
Commercial Sr. Sec. School
Daryaganj
New Delhi

Dr. Piyush Prasad
Academic Officer
(Accountancy)
NIOS, NOIDA (UP)

COURSE WRITERS/REVIEWERS

Sh. S.K. Bansal
Lecturer (Retd.)
Commercial Senior
Secondary School,
Daryaganj, New Delhi

Smt. Siba S.
PGT Commerce
East Point School
Delhi

Dr. A.K. Yadav
HOD Commerce
KMPG, Badalpur

Dr. Shipra Vaidya
Professor, Department of
Social Sciences & Humanities
NCERT, New Delhi 16

Dr. Piyush Prasad
Academic Officer
(Accountancy)
NIOS, NOIDA (UP)

Dr. Neha Agarwal
Financial Expert
GAIL Town Ship
Pata, UP

Sh. Sanjeev Kumar
Vice Principal
Govt. Co-edu. School
Preet Vihar, Delhi

Smt. Alka Rani
PGT, Commerce
JP International School
Meerut

Dr. Amit Agarwal
Lecturer
Govt. Inter College
Champwat, UK

CONTENT EDITOR

Dr. Piyush Prasad
Academic Officer
(Accountancy)
NIOS, NOIDA (UP)

Sh. S.S. Seharawat
Former D. C
KVS, Delhi

Sh. Sanjeev Kumar
Vice Principal
Govt. Co-edu. School
Preet Vihar, Delhi

Dr. Neha Agarwal
Financial Expert
GAIL Town Ship
Pata, UP

Smt. Alka Rani
PGT, Commerce
JP International School
Meerut

GRAPHIC ILLUSTRATOR

M.K. Computers
Shop No. 19, DDA Market
Bhera Enclave, N. Delhi - 87

Chairman's Message

Dear learners

As the needs of the society in general, and some groups in particular, keep on changing with time, the methods and techniques required for fulfilling those aspirations also have to be modified accordingly. Education is an instrument of change. The right type of education at right time can bring about positivity in the outlook of society, attitudinal changes to face the new/fresh challenges and the courage to face difficult situations.

This can be very effectively achieved by the curriculum renewal at regular intervals of time. A static curriculum does not serve any purpose, as it does not cater to the current needs and aspirations of the individual and society.

For this purpose only, educationists from all over the country come together at regular intervals to deliberate on the issues of changes needed and required. As an outcome of such deliberations, the National Curriculum Framework (NCF 2005) came out, which spells out in detail the type of education desirable/needed at various levels of education – primary, elementary, secondary or senior secondary.

Keeping this framework and other national and societal concerns in mind, we have currently revised the curricula of Accountancy course at Senior Secondary Level, as per the Common Core Curriculum developed by COBSE (Council of Boards of School Education) and NCERT (National Council for Educational Research and Training) making it current and need based. Textual material production is an integral and essential part of all NIOS programmes offered through open and distance learning system. Therefore, we have taken special care to make the learning material user friendly, interesting and attractive for you.

I would like to thank all the eminent persons involved in making this material interesting and relevant to your needs. I hope you find it appealing and absorbing.

On behalf of National Institute of Open Schooling, I wish you all a bright and successful future.

Prof. C.B. Sharma
Chairman
NIOS

A Note From the Director

Dear Learner,

The Academic Department at the National Institute of Open Schooling tries to bring you new programmes every now and then in accordance with your needs and requirements.

The Accountancy course at Senior secondary level has now been revised as per the Common Core Curriculum developed by COBSE (Council of Boards of School Education) and NCERT (National Council for Educational Research and Training) making it current and need based.

The National Curriculum Framework developed by the National Council for Educational Research and Training was kept as a reference point. Leading experts in the subject of the country were involved and with their active involvement, study materials based on the new curriculum have been updated. Old, outdated information has been removed and new, relevant things have been added.

I am happy to place this new revised study material in Accountancy in your hands. I hope you will find the new material that is now in your hands interesting and exciting. Any suggestions for further improvement are welcome.

Let me wish you all a happy and successful future.

(Dr. Kuldeep Agarwal)
Director (Academic)
National Institute of Open Schooling

A Word With You

Dear Learner,

I welcome you to this course in Accountancy for the Senior Secondary level.

We all know the importance of business in our everyday life. It not only fulfills our basic needs of recording transactions but also provides accounting information to users for carrer decision making. It is a dynamic process that keeps on changing as per the requirements and demands of the society. The procedure and practices of business in the past are completely different from modern days. It is more informative than what it was in past. The use of modern technology, government's policies and the awareness among common masses have made it user friendly. Therefore, a systematic effort is required to understand, analyse and respond to the changes that affect the functioning of accounting in the present day society.

Keeping in mind the above, the curriculum in the subject of Accountancy at Senior Secondary level has been designed. The whole learning material of the subject has been published in the form three volumes for your convience. The first book has two modules. Learning experiences considered essential for Accountancy are described in the first two modules. The module on Basic Accounting consist lessons on how to record transaction in books of Accounts while the second module of Trial Balance & Computers explain about the pre work done for perfect financial statement with the use of computers in Accounting, and these two modules are Tutor Marked Assignment Based modules.

The second volume which contains three modules are again the core modules. The third module is Financial Statements of Profit & Not for Profit Organisations explains as how the financial statements are prepared by various organisations. The fourth module is Partnership Accounts explains how various types of accounts are maintained by Partnership firm under different situations. The fifth module is Accounting for Shares & Debentures, which contains lessons on different situations in raising capital by way of issue of Shares & Debentures by companies.

The third volume, which is a optional volume consist of two modules is Analysis of Financial Statement and Elementary Cost Accounting. Learners has to opt any one module out of the two. Analysis of Financial Statement consist four lessons as how to analyse the results of Business to corrective measures & take future decisions while the Application of Computer in Financial Accounting again consist of four lessons as how to do accounting with help of computers.

For your practice, a sample question paper along with the question paper design and marking scheme is provided at the end of the second book.

To make your learning process interesting and useful we have changed the layout of the pages. You will also find some attractive icons in the lesson symbolising the content of different sections. The details are given separately under the heading 'How to study your lessons'.

I am sure that you will find the lessons and their approach interesting and would be able to apply your knowledge in the real life situations. So read and practice all the lessons of this course carefully and be prepared for the examination with confidence. If you face any difficulty in your studies, please feel free to write to me. Your suggestions are valuable for us.

Good luck and happy learning.

Dr. Piyush Prasad
Academic Officer

How To Study Your Lessons

Congratulation! You have accepted the challenge to be a self-learner. It means, you have to organise your study, learn regularly, keep up your motivation and achieve your goal. Here it is solely you, who is responsible for your learning. NIOS is with you at every step. It has developed the material in Accountancy. A format supporting independent learning has been followed. You can take the best out of this material if you follow the instructions given below.

Title: The title of the lesson will give a clear indication of the contents within. Do read it.

Introduction: This will introduce you to the lesson and also link it to previous one.

Objectives: These are statements of outcomes of learning expected from you after studying the lesson. You are expected to achieve them. Do read them and check if you have achieved the same.

Content: Total content has been divided into sections and sub-sections. A section leads you from one content element to another and sub-section helps you in comprehension of the concepts in the content element. The text in bold, Italics or boxes is important and must be given attention.

Intext Questions: Objective types, self-check questions are asked after every section, the answers to which are given at the end of the lesson. These will help you to check your progress. Do solve them. Successful completion will allow you to decide whether to proceed further or go back and learn the unit again.

Notes: Each page carries empty space on the outer margins for you to write important points or make notes.

What You Have Learnt : It is the summary of the main points of the lesson. It will help in recapitulation and revision. You are welcome to add your own points to it also.

Terminal Questions : These are very short, short and long answer type questions that provide you an opportunity to practice for better understanding of the whole topic.

Answers to Intext Questions: These will help you to know, how correctly you have answered the Intext questions.

Activity : Activities, if done by you, will help you to understand the concept clearly.

CONTENTS

Overview of the Learning Material

1

2

3

Module - VI

ANALYSIS OF FINANCIAL STATEMENTS

Marks 20 **Hours 50**

Analysis of Financial Statement is a systematic process of analysing the financial information in the financial statements to understand and make decision regarding the operations of the enterprise. The analysis of Financial Statements is a study of relationship among various financial figures as set out in the financial statements *i.e.,* Balance Sheet and Statements of Profit & Loss. The complex data given in the Financial Statement is bifircated, divided and broken into simple and valuable elements and relationships are established between the elements of the same statements or different financial statement.

This module deals with the tools and techniques of analysing the financial statement such as Ratios, Cash Flow Statements, Comparative Statements etc. Using these tools, the process of division, establishing, relationships and interpretation thereof to understand the working and financial position of a business is Analysis of Financial Statements.

31

FINANCIAL STATEMENTS ANALYSIS - AN INTRODUCTION

You have already learnt about the preparation of financial statements i.e. Balance Sheet and Trading and Profit and Loss Account in the module titled 'Financial Statements of Profit and Not for Profit Organisations'. In the case of a company the Trading and Profit & Loss Account is known as Statement of Profit and Loss. After preparation of the financial statements, one may be interested in analysing the financial statements with the help of different tools such as comparative statement, common size statement, ratio analysis, trend analysis, fund flow analysis, cash flow analysis, etc. In this process a meaningful relationship is established between two or more accounting figures for comparison. In this lesson you will learn about analysing the financial statements by using comparative statement, common size statement and trend analysis.

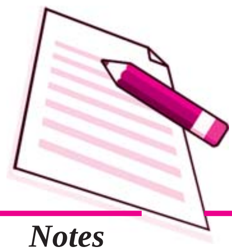
OBJECTIVES

After studying this lesson, you will be able to :

- understand the major and sub-headings of Statement of Profit & Loss and Balance Sheet.
- explain the meaning, need and purpose of financial statement analysis;
- identify the parties interested in analysis of financial statements;
- explain the various techniques and tools of analysis of financial statements.

31.1 FINANCIAL STATEMENTS OF A COMPANY

The way in which the various items of Statement of Profit and Loss and the Balance Sheet should be presented is given in schedule VI part I of the Companies Act 1956. The modified formats of both the Statements are given in Schedule VI part I is as under:



Notes

Form of Statement of Profit and Loss

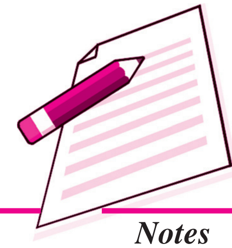
Statement of Profit and Loss

for the year ended ....

Particulars	*Note No.*	*Figures for the current Reporting Period*	*Figures for the Previous Reporting Period*
I. Revenue from Operations		....	....
II. Other Income		....	....
III. **Total Revenue (I + II)**		....	....
IV. **Expenses**			
Cost of Materials Consumed		....	....
Purchases of Stock-in-Trade		....	....
Change in inventories of Finished Goods, Work-in-Progress and Stock-in-Trade		....	....
Employees Benefit Expenses		....	....
Finance Costs		....	....
Depreciation and Amortisation Expenses		....	....
Other Expenses		....	....
Total Expenses		....	....
V. **Profit before Tax (III - IV)**		....	....
VI. *Less:* Tax		....	....
VII. **Profit or Loss for the Period (V - VI)**		....	....

It will be observed from the prescribed format that a column is prescribed for Note No. It is prescribed for the purpose of cross reference to the Note number in the Notes to Accounts where detail of the line item is given.

Statement of Profit and Loss is a financial statement that shows the performance of the company over a period of time. It shows the net result of the company *i.e.*, profit earned or loss suffered during the accounting period. It shows revenue from operations, other incomes and expenses incurred in a summarized form. Statement of Profit and Loss is similarly to the Trading and Profit & Loss Account prepared by proprietorship and partnership firms. The only difference is that it is prepared in the form of a statement and not an account.



Notes

Name of the Company ....

Balance Sheet *as at* ....

Particulars (1)	*Note No.* (2)	*Figures as at the end of the current reporting period* (3)	*Figures as at the end of the Previous reporting Period* (4)
I. EQUITY AND LIABILITIES			
1. Shareholders' Funds			
(a) Share Capital			
(b) Reserves and Surplus			
(c) Money Received against Share Warrants			
2. Share Application Money Pending Allotment			
3. Non-Current Liabilities			
(a) Long-term Borrowings			
(b) Deferred Tax Liabilities (Net)			
(c) Other Long-term Liabilities			
(d) Long-term Provisions			
4. Current Liabilities			
(a) Short-term Borrowings			
(b) Trade Payables			
(c) Other Current Liabilities			
(d) Short-term Provisions			
Total			
II. ASSETS			
1. Non-Current Assets			
(a) Fixed Assets			
(i) Tangible Assets			
(ii) Intangible Assets			
(iii) Capital Work-in-Progress			
(iv) Intangible Assets Under Development			
(b) Non-current Investments			
(c) Deferred Tax Assets (Net)			
(d) Long-term Loans and Advances			
(e) Other Non-current Assets			
2. Current Assets			
(a) Current Investment			
(b) Inventories			
(c) Trade Receivables			
(d) Cash and Cash Equivalents			
(e) Short-term Loans and Advances			
(f) Other Current Assets			
Total			

Notes

Balance Sheet as prescribed in schedule VI part I of the Companies Act 1956 is broadly divided into two parts :

(I) Equity and Liabilities and (II) Assets

I. EQUITY AND LIABILITIES

Equity : It is the liability of the company towards its shareholders and is called as 'Shareholders' Funds'. It includes Share Capital, Reserves & Surplus and Money Received Against Share Warrents.

Liabilities : It means external liabilities of the company or liabilities towards outsiders. In between Shareholders' Fund and Liabilities, Application Money Pending Allotment is placed as per the prescribed form of the Balance Sheet. Liabilities have further been divided into (a) Non-current Liabilities and (b) Current Liabilities.

Non-current Liabilities have been defined as liabilities which are not current liabilities. Current liability is that liability which is :

i. expected to be settled in the company's normal operating cycle; or

ii. due to be settled within 12 months after the reporting date *i.e.,* Balance Sheet date; or

iii. held primarily for the purpose of being traded; or

iv. there is no unconditional right to defer settlement for at least 12 months after the reporting date.

The various items that are presented under the various heads of liabilities are given below :

(a) Long-term Borrowings
   - (i) Debentures;
   - (ii) Bonds;
   - (iii) Term Loans;
   - (iv) Public Deposits and
   - (v) Other loans and advances

(b) Current Liabilities :
   - (i) Short-term borrowings;
   - (ii) Trade Payables;
   - (iii) Other Current Liabilities and
   - (iv) Short-term Provision.

Illustration : 1 (*Classification of Equity and Liabilities*)

State the major heads under Equity and Liabilities part of the company's Balance Sheet.

Solution :

Major heads on 'Equity and Liabilities' part are :

- Shareholders' Funds,
- Share Application Money Pending Allotment,
- Non-current Liabilities, and
- Current Liabilities

Illustration : 2 (*Classification of 'Shareholders' Funds'*)

Name the sub-heads under the head 'Shareholders' Funds'.

Solution :

(i) Share Capital,

(ii) Reserves and Surplus, and

(iii) Money Received against Share Warrants

Illustration : 3 (*Classification of 'Non-current Liabilities'*)

Name the sub-heads under the head 'Non-current Liabilities' in the Equity and Liabilities part of the Balance Sheet under Schedule VI.

Solution :

(i) Long-term Borrowings,

(ii) Deferred Tax Liabilities (Net),

(iii) Other Long-term Liabilities, and

(iv) Long-term Provisions.

Illustration : 4 (*Classification of 'Current Liabilities'*)

Name the sub-heads under the head 'Current Liabilities' in the Equity and Liabilities part of the Balance Sheet as per Schedule VI.

Solution :

(i) Short-term Borrowings,

(ii) Trade Payables,

(iii) Other Current Liabilities, and

(iv) Short-term Provisions.

Notes

Illustration : 5 (*Reserves and Surplus*)

Name **any five** items that are shown under Reserves and Surplus.

Solution :

(i) Capital Reserve,

(ii) Capital Redemption Reserve,

(iii) Securities Premium Reserve,

(iv) Debenture Redemption Reserve (DRR), and

(v) Revaluation Reserve

Illustration : 6 (*Long-term Borrowings*)

Name **any four** items that are shown under Long-term Borrowings.

Solution :

(i) Debentures/Bonds,

(ii) Term-loan from banks/other parties,

(iii) Deposits, and

(iv) Long-term Loans and Advances

Illustration : 7

Give major heads under which the following items will be shown in a company's Balance Sheet as per Schedule VI, Part I of Companies Act, 1956:

(i) Trade Payables,

(ii) Provision for Tax,

(iii) Surplus, *i.e.,* Balance in Statement of Profit and Loss (Dr.) and

(iv) Surplus, *i.e.,* Balance in Statement of Profit and Loss.

Solution :

S.No.	*Item*	*Major Head*	*Sub-head*
(i)	Trade Payables	Current Liabilities	....
(ii)	Provision for Tax	Current Liabilities	Short-term Provisions
(iii)	Surplus, *i.e.,* Balance in Statement of Profit and Loss (Dr.)	Reserves and Surplus	As negative amount
(iv)	Surplus, *i.e.,* Balance in Statement of Profit and Loss	Reserves and Surplus	....

Notes

II. ASSETS

Like liabilities, assets are also divided into 'non-current assets' and 'current assets'. Non-current assets have been defined as assets that are not current. Current assets have been defined in Schedule VI of the Companies Act, 1956 as follows :

Current Assets are those assets which are :

i. expected to be realized in or intend for sale or consumption in the company's normal operating cycle; or

ii. held primarily for the purpose of trading; or

iii. expected to be realized within 12 months from reporting date *i.e.*, Balance Sheet date; or

iv. Cash and Cash equivalents unless they are restricted from being exchanged or used to settle a liability for at least 12 months after reporting date *i.e.,* Balance Sheet date.

Non-Current Assets are classified into the following five major heading as given below:

(a) Fixed Assets;

(b) Non-Current Investments;

(c) Deferred Tax Assets;

(d) Long-term Loans and Advances and

(e) Other non-current assets.

The items presented under these sub-heads are as follows :

1. *Fixed Assets :*

(i) Tangible Assets;

(ii) Intangible Assets;

(iii) Capital Work-in-Progress and

(iv) Intangible Assets under Development

Non-Current Investments :

(i) Investment in Property;

(ii) Investment in Equity Investments;

(iii) Investments in preference shares;

(iv) Investment in Govt. or Trust Securities;

(v) Investments in Debentures or Bonds;

Notes

(vi) Investments in Mutual Funds;

(vii) Investments in Partnership Firms and

(viii) Other Non-Current Investments.

Lont-Term Loans and Advances :

(i) Capital Advances;

(ii) Security Deposits;

(iii) Other Loans and Advances

2. **Current Assets :** These are shown under the following six heads :

(i) Current Investments;

(ii) Inventories

(iii) Trade Receivables;

(iv) Cash and Cash Equivalents;

(v) Short term loans and advances and

(vi) Other Current Assets.

31.2 FINANCIAL STATEMENTS ANALYSIS (MEANING, PURPOSE AND PARTIES INTERESTED)

We know business is mainly concerned with the financial activities. In order to ascertain the financial status of the business every enterprise prepares certain statements, known as financial statements. Financial statements are mainly prepared for decision making purposes. But the information as provided in the financial statements is not adequately helpful in drawing a meaningful conclusion. Thus, an effective analysis and interpretation of financial statements is required.

Analysis means establishing a meaningful relationship between various items of the two financial statements with each other in such a way that a conclusion is drawn.

The term financial analysis is also known as analysis and interpretation of financial statements. It refers to the establishing meaningful relationship between various items of the two financial statements i.e., Statement of Profit & Loss and Balance Sheet. It determines financial strength and weaknesses of the firm.

Analysis of financial statements is an attempt to assess the efficiency and performance of an enterprise. Thus, the analysis and interpretation of financial statements is very essential to measure the efficiency, profitability, financial soundness and future prospects of the business units. Financial analysis serves the following purposes :

- **Measuring the Profitability :** The main objective of a business is to earn a satisfactory return on the funds invested in it. Financial analysis helps in ascertaining whether adequate profits are being earned on the capital invested in the business or not. It also helps in knowing the capacity to pay the interest and dividend.

- **Indicating the Trend of Achievements :** Financial statements of the previous years can be compared and the trend regarding various expenses, purchases, sales, gross profits and net profit etc. can be ascertained. Value of assets and liabilities can be compared and the future prospects of the business can be envisaged.

- **Assessing the Growth Potential of the Business :** The trend and other analysis of the business provides sufficient information indicating the growth potential of the business.

- **Comparative Position in Relation to Other Firms :** The purpose of financial statements analysis is to help the management to make a comparative study of the profitability of various firms engaged in similar businesses. Such comparison also helps the management to study the position of their firm in respect of sales, expenses, profitability and utilising capital, etc.

- **Assess overall financial strength :** The purpose of financial analysis is to assess the financial strength of the business. Analysis also helps in taking decisions, whether funds required for the purchase of new machines and equipments are provided from internal sources of the business or not if yes, how much? And also to assess how much funds have been received from external sources.

- **Assess solvency of the firm :** The different tools of an analysis tell us whether the firm has sufficient funds to meet its short term and long term liabilities or not.

Parties Interested

Analysis of financial statements has become very significant due to widespread interest of various parties in the financial results of a business unit. The various parties interested in the analysis of financial statements are :

(i) **Investors :** Shareholders or proprietors of the business are interested in the well being of the business. They like to know the earning capacity of the business and its prospects of future growth.

(ii) **Management :** The management is interested in the financial position and performance of the enterprise as a whole and of its various divisions. It helps them in preparing budgets and assessing the performance of various departmental heads.

(iii) **Trade Unions :** They are interested in financial statements for negotiating the wages or salaries or bonus agreement with the management.

(iv) **Lenders :** Lenders to the business like debenture holders, suppliers of loans and lease are interested to know short term as well as long term solvency position of the entity.

(v) **Suppliers and Trade Creditors :** The suppliers and other creditors are interested to know about the solvency of the business i.e. the ability of the company to meet the debts as and when they fall due.

(vi) **Tax Authorities :** Tax authorities are interested in financial statements for determining the tax liability.

(vii) **Researchers :** They are interested in financial statements for undertaking research work in business affairs and practices.

(viii) **Employees :** They are interested to know the growth of profit. As a result of which they can demand better remuneration and congenial working environment.

(ix) **Government and their Agencies :** Government and their agencies need financial information to regulate the activities of the enterprises/industries and determine taxation policy. They suggest measures to formulate policies and regulations.

(x) **Stock Exchange :** The stock exchange members take interest in financial statements for the purpose of analysis because they provide useful financial information about companies.

Thus, we find that different parties have interest in financial statements for different reasons.

Limitations of Financial Analysis

Financial analysis helps the interested parties to make an assessment of the earning capacity and financial soundness of a business enterprise. But such analysis has its own limitations. Such limitations should be kept in mind while using the informations provided by the financial analysis. Some of the limitations are as follows :

(i) **Limitations of Financial Statements :** Financial analysis is based on financial statements. But financial statements themselves suffer from certain limitations, hence the limitations of financial statements are also the limitations of their analysis. For example, (*a*) sometimes the information given in financial statements are incomplete and not authentic, (*b*) financial Statements are based on accounting concepts and conventions. As such, the utility of financial analysis is decreased due to the shortcomings of financial statements.

(ii) **Affected by Window-dressing :** Some firms resort to window-dressing their financial statements to cover up bad financial position on the eve of accounting date. For example, they may not record the purchases made at the end of the year or they may overvalue their closing stock. In such cases, the results obtained by analysis of financial statements will be misleading.

(iii) **Different Accounting Policies :** If two firms adopt different accounting policies, the comparison between the two will be unreliable. For example, one firm may provide depreciation on original cost method, whereas the other firm may adopt the written-down value method for providing the depreciation. Similarly, the method of valuation of closing stock may also differ from one firm to another. The results obtained from the comparison of the financial statements of such firms may give misleading picture.

(iv) **Difficulty in Forecasting :** Financial statements are a record of past events and historical facts. In the fast changing and developing modern business, the analysis of past information may not be of much use in future forecasting. Continuous changes take place in the demand of the product, policies adopted by the firm, the position of competition etc. As such, no estimate based on the analysis of historical facts can be made for future.

(v) **Lack of Qualitative Analysis :** Financial statements record only those events and transactions which can be expressed in terms of money. qualitative aspects of business units are omitted from the books at all as these cannot be expressed in monetary terms. Thus, changes in management, reputation of the business, cordial management-labour relations, firm's ability to develop new products, efficiency of management, satisfaction of firm's customers etc. which have a vital bearing on the profitability of the company are all ignored and omitted from being recorded because all of these are qualitative in nature.

(vi) **Limited Use of Single Year's Analysis of Financial Statements :** Results obtained from financial analysis assume significance only when compared with the figures of previous periods. For example, the profit of a firm to sales is 12%, whether this is satisfactory or not, will depend upon the figures of previous years. If the firm earned 10% of sales as profit in the previous year, it may be considered to have done better this year. However, the financial statements of two years may not be comparable due to the changes in accounting policies.

It is clear from the above mentioned limitations that the results obtained from analysis of financial statements should not be taken as the true indicators of the strength and weaknesses of the concern. The results obtained from analysis must be read carefully and cautiously. The limitations of analysis must be kept in mind while taking decisions based on the results obtained from such analysis.

INTEXT QUESTIONS 31.1

I. Fill in the blanks with suitable word/words :

(i) Financial statements are .... and ....

(ii) The term financial analysis include both .... and ....

(iii) In order to ascertain the financial status of the business every enterprise prepares .... statements.

(iv) Financial statements are mainly prepared for .... purposes.

II. Two columns are given below. Column I lists the parties interested in analysis and column II states the subject of their interest. Match the two columns.

Column I	Column II
(i) Management	(a) about solvency of the business
(ii) Employees	(b) Profitability
(iii) Shareholders	(c) Performance of the enterprise as a whole
(iv) Suppliers and creditors	(d) Better remunerations

III. State whether the following statements are true or false :

(i) If two firms adopt different accounting policies, the comparison between the two will be unreliable.

(ii) Figures given in the financial statements do not speak by themselves.

(iii) Financial statements are records of past events and historical facts.

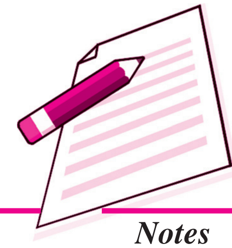
31.3 TECHNIQUES AND TOOLS OF FINANCIAL STATEMENT ANALYSIS

Financial statements give complete information about assets, liabilities, equity, reserves, expenses and profit & loss of an enterprise. They are not readily understandable to interested parties like creditors, shareholders, investors etc. Thus, various techniques are used for analysing and interpreting the financial statements. Techniques of analysis of financial statements are mainly classified into three categories :

(i) Cross-sectional Analysis : It is also known as inter firm comparison. This analysis helps in analysing financial characteristics of an enterprise with financial characteristics of another similar enterprise in that accounting period. For example, if company A has earned 15% profit on capital invested. This does not say whether it is adequate or not. If we analyse further and find that a similar company has earned 16% during the same period, then only we can make a conclusion that company B is better than company A. Thus, it turns into a meaningful analysis.

(ii) Time Series Analysis : It is also called as intra-firm comparison. According to this method, the relationship between different items of financial statements is established, comparisons are made and results obtained. The basis of comparison may be :

- Comparison of the financial statements of different years of the same business unit.



Notes

- Comparison of financial statements of a particular year of different business units.

(iii) Cross-sectional cum Time Series Analysis : This analysis is intended to compare the financial characteristics of two or more enterprises for a defined accounting period. It is possible to extend such a comparison over the year. This approach is most effective in analysing of financial statements.

The analysis and interpretation of financial statements is used to determine the financial positon. A number of tools or methods or devices are used to study the relationship between financial statements. However, the following are the important tools which are commonly used for analysing and interpreting financial statements :

- Comparative financial statements
- Common size statements
- Trend analysis
- Ratio analysis
- Funds flow analysis
- Cash flow analysis

- **Comparative financial Statements**

In brief, comparative study of financial statements is the comparison of the financial statements of the business with the previous year's financial statements. It enables identification of weakpoints and applying corrective measures. Practically, two financial statements (balance sheet and income statement) are prepared in comparative form for analysis purposes.

1. **Comparative Balance Sheet :** The comparative balance sheet shows the different assets and liabilities of the firm on different dates to make comparison of balances from one date to another. The comparative balance sheet has two columns for the data of original balance sheets. A third column is used to show change (increase/decrease) in figures. The fourth column may be added for giving percentages of increase or decrease. While interpreting comparative Balance sheet the interpreter is expected to study the following aspects :

   (i) Current financial position and Liquidity position

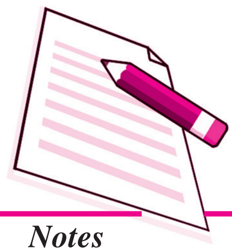
   (ii) Long-term financial position

   (iii) Profitability of the concern

   (i) For studying current financial position or liquidity position of a concern one should examine the working capital in both the years. Working capital is the excess of current assets over current liabilities.

   (ii) For studying the long-term financial position of the concern, one should examine the changes in fixed assets, long-term liabilities and capital.

   (iii) The next aspect to be studied in a comparative balance sheet is the profitability of the concern. The study of increase or decrease in profit will help the interpreter to observe whether the profitability has improved or not.



Notes

After studying various assets and liabilities, an opinion should be formed about the financial position of the concern.

Format of Comparative Balance Sheet

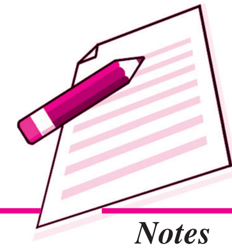
Comparative Balance Sheet

as at ....

Particulars	*Note No.*	*Previous Year* ₹ *(A)*	*Current Year* ₹ *(B)*	*Absolute Change (Increase/Decrease)* ₹ *(C = B - A)*	*Percentage Change (Increase/Decrease)* ₹ *(D = C/A X 100)*
I. EQUITY AND LIABILITIES					
1. Shareholders' Funds					
(a) Share Capital:					
(i) Equity Share Capital		...	...	...	...
(ii) Preference Share Capital		...	...	...	...
(b) Reserves and Surplus		...	...	...	...
2. Non-Current Liabilities					
(a) Long-term Borrowings		...	...	...	...
(b) Long-term Provisions		...	...	...	...
3. Current Liabilities					
(a) Short-term Borrowings		...	...	...	...
(b) Trade Payables		...	...	...	...
(c) Other Current Liabilities		...	...	...	...
(d) Short-term Provisions		...	...	...	...
Total		...	...	...	...
II. ASSETS					
1. Non-Current Assets					
(a) Fixed Assets:					
(i) Tangible Assets		...	...	...	...
(ii) Intangible Assets		...	...	...	...
(b) Non-current Investments		...	...	...	...
(c) Long-term Loans and Advances		...	...	...	...
2. Current Assets					
(a) Current Investments		...	...	...	...
(b) Inventories		...	...	...	...
(c) Trade Receivables		...	...	...	...
(d) Cash and Cash Equivalents		...	...	...	...
(e) Short-term Loans and Advances		...	...	...	...
(f) Other Current Assets		...	...	...	...
Total		...	...	...	...

Illustration : 8

From the following Balance Sheets of Exe Ltd. as at 31st March, 2014 and 2013, prepare a Comparative Balance Sheet :



Notes

Balance Sheets

as at 31st March, 2014 and 2013

Particulars	*Note No.*	*31st March, 2014 (₹)*	*31st March, 2013 (₹)*
I. EQUITY AND LIABILITIES			
1. Shareholders' Funds			
Share Capital (Equity)		18,00,000	12,00,000
2. Non-Current Liabilities			
Long-term Borrowings: 8% Debentures (Secured)		6,00,000	6,00,000
3. Current Liabilities			
Trade Payables		6,00,000	3,00,000
Total		**30,00,000**	**21,00,000**
II. ASSETS			
1. Non-Current Assets			
Fixed Assets : Tangible Assets		18,00,000	15,00,000
2. Current Assets			
(a) Trade Receivables		10,00,000	5,00,000
(b) Cash and Cash Equivalents		2,00,000	1,00,000
Total		**30,00,000**	**21,00,000**

Solution :

Exe Ltd.
Comparative Balance Sheet

as at 31st March, 2013 and 2014

Particulars	*Note No.*	*31st March, 2013 ₹ (A)*	*31st March, 2014 ₹ (B)*	*Absolute Change (Increase/Decrease) ₹ (C = B - A)*	*Percentage Change (Increase/Decrease) % (D = C/A x 100)*
I. EQUITY AND LIABILITIES					
1. Shareholders' Funds					
Share Capital :					
Equity Share Capital		12,00,000	18,00,000	6,00,000	50.00
2. Non-Current Liabilities					
Long-term Borrowings :					
Secured Loans - 8% Debentures		6,00,000	6,00,000	.....	.....
3. Current Liabilities					
Trade Payables		3,00,000	6,00,000	3,00,000	100.00
Total		**21,00,000**	**30,00,000**	**9,00,000**	**42.86**
II. ASSETS					
1. Non-Current Assets					
Fixed Assets (Tangible)		15,00,000	18,00,000	3,00,000	20.00
2. Current Assets					
(a) Trade Receivables		5,00,000	10,00,000	5,00,000	100.00
(b) Cash and Cash Equivalents		1,00,000	2,00,000	1,00,000	100.00
Total		**21,00,000**	**30,00,000**	**9,00,000**	**42.86**

Illustration : 9

Prepare Comparative Balance Sheet of *XY* Ltd. :

Particulars	*31st March, 2014 (₹)*	*31st March, 2013 (₹)*
I. EQUITY AND LIABILITIES		
1. Shareholders' Funds		
(*a*) *Share Capital :* Equity Share Capital	3,60,000	3,00,000
(*b*) *Reserves and Surplus*	1,50,000	1,20,000
2. Non-Current Liabilities		
Long-term Borrowings	2,55,000	1,70,000
3. Current Liabilities		
Trade Payables	1,20,000	1,50,000
Total	**8,85,000**	**7,40,000**
II. ASSETS		
1. Non-Current Assets		
Fixed Assets :		
(*i*) Tangible Assets	6,50,000	5,00,000
(*ii*) Intangible Assets	1,00,000	1,00,000
2. Current Assets		
(a) Trade Receivables	1,25,000	1,20,000
(b) Cash and Cash Equivalents	10,000	20,000
Total	**8,85,000**	**7,74,000**

Solution :

Comparative Balance Sheet of *XY* Ltd.

as at 31st March, 2013 and 2014

Particulars	*Note No.*	*31st March, 2013 ₹ (A)*	*31st March, 2014 ₹ (B)*	*Absolute Change (Increase/Decrease) ₹ (C = B - A)*	*Percentage Change (Increase/Decrease) % (D = C/A x 100)*
I. EQUITY AND LIABILITIES					
1. Shareholders' Funds					
(*a*) *Share Capital :* Equity Share Capital		3,00,000	3,60,000	60,000	20.00
(*b*) Reserves and Surplus		1,20,000	1,50,000	30,000	25.00
2. Non-Current Liabilities					
Long-term Borrowings		1,70,000	2,55,000	85,000	50.00
3. Current Liabilities					
Trade Payables		1,50,000	1,20,000	(30,000)	(20.00)
Total		**7,40,000**	**8,85,00**	**1,45,000**	**19.60**
II. ASSETS					
1. Non-Current Assets					
Fixed Assets :					
(i) Tangible Assets		5,00,000	6,50,000	1,50,000	30.00
(ii) Intangible Assets		1,00,000	1,00,000	.....	.....
2. Current Assets					
(a) Trade Receivables		1,20,000	1,25,000	5,000	4.17
(b) Cash and Cash Equivalents		20,000	10,000	(10,000)	(50.00)
Total		**7,40,000**	**8,85,000**	**1,45,000**	**19.60**

Notes

Comparative Income statement or Comparative Statement of Profit & Loss

The income statement provides the results of the operations of a business. This statement traditionally is known as trading and profit and loss A/c. Important components of income statement are net sales, cost of goods sold, selling expenses, office expenses etc. The figures of the above components are matched with their corresponding figures of previous years individually and changes are noted. The comparative income statement gives an idea of the progress of a business over a period of time. The changes in money value and percentage can be determined to analyse the profitability of the business. Like comparative balance sheet, income statement also has four columns. The first two columns shows figures of various items for two years. Third and fourth columns are used to show increase or decrease in figures in absolute amount and percentages respectively.

The analysis and interpretation of income statement will involve the following :

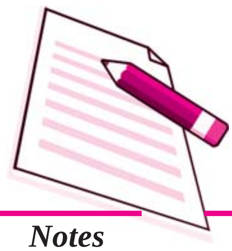
- The increase or decrease in sales should be compared with the increase or decrease in cost of goods sold.
- To study the operating profits
- The increase or decrease in net profit is calculated that will give an idea about the overall profitability of the concern.

Format of Comparative Statement of Profit & Loss

COMPARATIVE STATEMENT OF PROFIT AND LOSS

for the year ended 31st March, 2013 and 2014

Particulars	*Note No.*	*31st March, 2013* ₹	*31st March, 2014* ₹	*Absolute Change (Increase/Decrease)* ₹	*Percentage Change (Increase/Decrease)* %
I. Revenue from Operations		....	....	....	....
II. Other Income		....	....	....	....
III. **Total Revenue (I + II)**		....	....	....	....
IV. Expenses					
(a) Cost of Materials Consumed		....	....	....	....
(b) Purchases of Stock-in-Trade		....	....	....	....
(c) Change in Inventories of Finsished Goods, Work-in-Progress and Stock-in-Trade		....	....	....	....
(d) Employees Benefit Expenses		....	....	....	....
(e) Finance Costs		....	....	....	....
(f) Depreciation and Amortisation Expenses		....	....	....	....
(g) Other Expenses		....	....	....	....
Total		....	....	....	....
V. ***Profit before Tax (III - IV)***		....	....	....	....
Less : Income Tax		....	....	....	....
VI. **Profit after Tax**		....	....	....	....



Notes

Illustration 10 :

Prepare Comparative Statement of Profit and Loss from the following :

Particulars	*Note No.*	*31st March, 2012 (₹)*	*31st March, 2011 (₹)*
Revenue from Operations		15,00,000	10,00,000
Expenses		10,50,000	6,00,000
Other Income		1,80,000	2,00,000

Solution :

Comparative Statement of Profit and Loss
for the years ended 31st March, 2011 and 2012

Particulars	*Note No.*	*31st March, 2011 ₹ (A)*	*31st March, 2012 ₹ (B)*	*Absolute Change (Increase/Decrease) ₹ (C = B - A)*	*Percentage Change (Increase/Decrease) % (D = C/A x 100)*
I. Revenue from Operations		10,00,000	15,00,000	5,00,000	50.00
II. Other Income		2,00,000	1,80,000	(20,000)	(10.00)
III. **Total Revenue (I + II)**		12,00,000	16,80,000	4,80,000	40.00
IV. *Less:* Expenses		6,00,000	10,50,000	4,50,000	75.00
V. **Profit before Tax (III - IV)**		6,00,000	6,30,000	30,000	5.00

Illustration 11 :

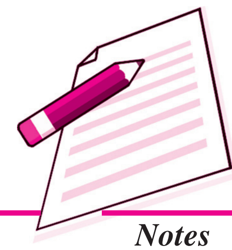
From the following statement of Profit and Loss of Star Ltd. for the years ended 31st March, 2011 and 2012, Prepare a Comparative Statement of Profit and Loss :

Particulars	*Note No.*	*31st March, 2012 (₹)*	*31st March, 2011 (₹)*
Revenue from Operations		20,00,000	16,00,000
Employees Benefit Expenses		10,00,000	8,00,000
Other Expenses		1,00,000	2,00,000

Solution :

Comparative Statement of Profit and Loss
for the years ended 31st March, 2011 and 2012

Particulars	*Note No.*	*31st March, 2011 ₹ (A)*	*31st March, 2012 ₹ (B)*	*Absolute Change (Increase/Decrease) ₹ (C = B - A)*	*Percentage Change (Increase/Decrease) % (D = C/A x 100)*
I. Revenue from Operations		16,00,000	20,00,000	4,00,000	25.00
II. *Less :* Expenses					
(a) Employees Benefit Expenses		8,00,000	10,00,000	2,00,000	25.00
(b) Other Expenses		2,00,000	1,00,000	(1,00,000)	(50.00)
Total Expenses		10,00,000	11,00,000	1,00,000	10.00
III. **Profit before Tax (I - II)**		6,00,000	9,00,000	3,00,000	50.00



Notes

Illustration 12 :

Following information is extracted from the Statement of Profit and Loss of Gold Star Ltd., for the years ended 31st March, 2014 and 2013. Prepare Comparative Statement of Profit and Loss.

Particulars	*Note No.*	*31st March, 2014 (₹)*	*31st March, 2013 (₹)*
Revenue from Operations		40,00,000	32,00,000
Employees Benefit Expenses		20,00,000	16,00,000
Depreciation and Amortisation Expenses		50,000	40,000
Other Expenses		1,50,000	3,60,000
Tax Rate 30%			

Solution :

Comparative Statement of Profit and Loss

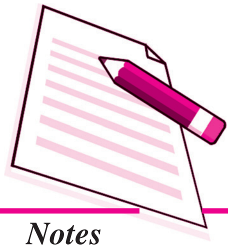
for the years ended 31st March, 2013 and 2014

Particulars	*Note No.*	*31st March, 2013 ₹ (A)*	*31st March, 2014 ₹ (B)*	*Absolute Change (Increase/Decrease) ₹ (C = B - A)*	*Percentage Change (Increase/Decrease) % (D = C/A x 100)*
I. Revenue from Operations		32,00,000	40,00,000	8,00,000	25.00
II. **Expenses**					
(a) Employees Benefit Expenses		16,00,000	20,00,000	4,00,000	25.00
(b) Depreciation and Amortisation Expenses		40,000	50,000	10,000	25.00
(c) Other Expenses		3,60,000	1,50,000	(2,10,000)	(58.33)
Total xpenses		**20,00,000**	**22,00,000**	**2,00,000**	**10.00**
III. **Profit before Tax (I - II)**		**12,00,000**	**18,00,000**	**6,00,000**	**50.00**
Less : Tax @ 30%		3,60,000	5,40,000	1,80,000	50.00
IV. **Profit after Tax**		**8,40,000**	**12,60,000**	**4,20,000**	**50.00**

Illustration 13 :

Prepare Comparative Statement of Profit and Loss from the following :

Particulars	*Note No.*	*31st March, 2014 (₹)*	*31st March, 2013 (₹)*
Revenue from Operations		8,00,000	4,20,000
Purchases of Stock-in-Trade		4,50,000	2,50,000
Change in Inventories of Stock-in-Trade		50,000	50,000
Other Expenses (% of Cost of Goods Sold)		8%	10%
Tax		30%	30%



Notes

Solution :

Comparative Statement of Profit and Loss
for the years ended 31st March, 2013 and 2014

Particulars	*Note No.*	*31st March, 2013 ₹ (A)*	*31st March, 2014 ₹ (B)*	*Absolute Change (Increase/Decrease) ₹ (C = B - A)*	*Percentage Change (Increase/Decrease) % (D = C/A x 100)*
I. Revenue from Operations (Sales)		4,20,000	8,00,000	3,80,000	90.47
II. **Expenses**					
(a) Purchases of Stock-in-Trade		2,50,000	4,50,000	2,00,000	80.00
(b) Change in Inventories of Stock-in-Trade		50,000	50,000	.....	.....
(c) Other Expenses		30,000	40,000	10,000	33.33
Total Expenses		**3,30,000**	**5,40,000**	**2,10,000**	**63.64**
III. **Profit before tax (I - II)**		**90,000**	**2,60,000**	**1,70,000**	**188.89**
Less: Tax		27,000	78,000	51,000	188.89
IV. **Profit after Tax**		63,000	1,82,000	1,19,000	188.89

Note : Cost of Goods Sold = Purchases + Change in Inventories.

INTEXT QUESTIONS 31.2

Fill in the blanks with appropriate word/words :

(i) Time series analysis is a technique of ....

(ii) Comparative statement is a .... for financial statement analysis.

(iii) .... is the comparison of the financial statements of business with the previous years financial statements.

(iv) Comparative .... shows the different assets and liabilities of the firm on different dates to make comparison of balances from one date to another.

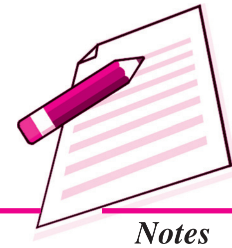
(v) .... income statement gives an idea of the progress of a business over a period of time.

31.4 COMMON SIZE STATEMENTS AND TREND ANALYSIS

The common size statements (Balance Sheet and Income Statement) are shown in analytical percentages. The figures of these statements are shown as percentages of total assets, total liabilities and total sales respectively. Take the example of Balance Sheet. The total assets are taken as 100 and different assets are expressed as a percentage of the total. Similarly, various liabilities are taken as a part of total liabilities.

Common Size Balance Sheet

A statement where balance sheet items are expressed in the ratio of each asset to total assets and the ratio of each liability is expressed in the ratio of total liabilities is called common size balance sheet.



Thus the common size statement may be prepared in the following way.

- The total assets or liabilities are taken as 100
- The individual assets are expressed as a percentage of total assets i.e. 100 and different liabilities are calculated in relation to total liabilities.

For example, if total assets are ₹10 lakhs and value of inventory is ₹ 1,00,000, then inventory will be 10% of total assets $\left(\frac{1,00,000 \times 100}{10,00,000}\right)$

Format of Common-size Balance Sheet

COMMON-SIZE BALANCE SHEET

as at 31st March, 2013 and 2014

Particulars	*Note No.*	*Absolute Amounts*		*Percentage of Balance Sheet Total*	
		31st March, 2013 (₹)	*31st March, 2014 (₹)*	*31st March, 2013 (%)*	*31st March, 2014 (%)*
(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*
I. EQUITY AND LIABILITIES					
1. Shareholders' Funds					
(a) *Share Capital:*					
(i) Equity Share Capital		....	....	....	....
(ii) Preference Share Capital		....	....	....	....
(b) Reserves and Surplus		....	....	....	....
2. Non-Current Liabilities					
(a) Long-term Borrowings		....	....	....	....
(b) Long-term Provisions		....	....	....	....
3. Current Liabilities					
(a) Short-term Borrowings		....	....	....	....
(b) Trade Payables		....	....	....	....
(c) Other Current Liabilities		....	....	....	....
(d) Short-term Provisions		....	....	....	....
Total		....	....	100	100
II. ASSETS					
1. Non-Current Assets					
(a) *Fixed Assets:*					
(i) Tangible Assets		....	....	....	....
(ii) Intangible Assets		....	....	....	....
(b) Non-Current Investments		....	....	....	....
(c) Long-term Loans and Advances		....	....	....	....
2. Current Assets					
(a) Current investments		....	....	....	....
(b) Inventories		....	....	....	....
(c) Trade Receivables		....	....	....	....
(d) Cash and Cash Equivalents		....	....	....	....
(e) Short-term Loans and Advances		....	....	....	....
(f) Other Current Assets		....	....	....	....
Total		....	....	100	100

Illustration 14

From the following Balance Sheets of *XYZ* Ltd. as at 31st March, 2014 and 2013, prepare a Common-size Balance Sheet.

Balance Sheets
as at 31st March, 2014 and 2013

Particulars	*Note No.*	*31st March, 2014 (₹)*	*31st March, 2013 (₹)*
I. EQUITY AND LIABILITIES			
1. Shareholders' Funds			
(a) Share Capital		10,00,000	5,00,000
(b) Reserves and Surplus		2,00,000	3,00,000
2. Non-Current Liabilities			
Long-term Borrowings		8,00,000	5,00,000
3. Current Liabilities			
Trade Payables		4,00,000	2,00,000
Total		**24,00,000**	**15,00,000**
II. ASSETS			
1. Non-Current Assets			
Fixed Assets - Tangible Assets		15,00,000	10,00,000
2. Current Assets			
Cash and Cash Equivalents		9,00,000	5,00,000
Total		**24,00,000**	**15,00,000**

Solution :

Common-size Balance Sheet of *XYZ* Ltd.
as at 31st March, 2013 and 2014

Particulars	*Note No.*	*Absolute Amounts*		*Percentage of Balance Sheet Total*	
		31st March, 2013 (₹)	*31st March, 2014 (₹)*	*31st March, 2013 (%)*	*31st March, 2014 (%)*
(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*
I. EQUITY AND LIABILITIES					
1. Shareholders' Funds					
(a) Share Capital		5,00,000	10,00,000	33.33	41.67
(b) Reserves and Surplus		3,00,000	2,00,000	20.00	8.33
2. Non-Current Liabilities					
Long-term Borrowings		5,00,000	8,00,000	33.34	33.33
3. Current Liabilities					
Trade Payables		2,00,000	4,00,000	13.33	16.67
Total		15,00,000	24,00,000	100.00	100.00

II. ASSETS					
1. Non-Current Assets					
Fixed Assets - Tangible Assets		10,00,000	15,00,000	66.67	62.50
2. Current Assets					
Cash and Cash Equivalents		5,00,000	9,00,000	33.33	37.50
Total		**15,00,000**	**24,00,000**	**100.00**	**100.00**

Note : % is calculated on the basis of total of equity and liabilities/total assets

$$\% \text{ of Share Capital (31st March, 2013)} = \frac{5,00,000}{15,00,000} \times 100 = 33.33\%$$

In the same manner, other percentages may be calculated.

Illustration 15

From the following Balance Sheets of Sun Ltd., as at 31st March, 2014 and 2013, prepare Common-Size Balance Sheet.

Particulars	*Note No.*	*31st March, 2014 (₹)*	*31st March, 2013 (₹)*
I. EQUITY AND LIABILITIES			
1. Shareholders' Funds			
(a) Share Capital		80,00,000	60,00,000
(b) Reserves and Surplus		12,00,000	8,00,000
2. Non-Current Liabilities			
Long-term Borrowings		24,00,000	20,00,000
3. Current Liabilities			
Short-term Borrowings		4,00,000	12,00,000
Total		**1,20,00,000**	**1,00,00,000**
II. ASSETS			
1. Non-Current Assets			
Fixed Assets :			
(i) Tangible Assets		80,00,000	60,00,000
(ii) Intangible Assets		4,00,000	12,00,000
2. Current Assets			
(a) Inventories		24,00,000	20,00,000
(b) Cash and Cash Equivalents		12,00,000	8,00,000
Total		**1,20,00,000**	**1,00,00,000**

Notes

Solution :

Common-size Balance Sheet of Sun Ltd.

as at 31st March, 2013 and 2014

Particulars	*Note No.*	*Absolute Amounts*		*Percentage of Balance Sheet Total*	
(1)	*(2)*	*31st March, 2013 (₹) (3)*	*31st March, 2014 (₹) (4)*	*31st March, 2013 (%) (5)*	*31st March, 2014 (%) (6)*
I. EQUITY AND LIABILITIES					
1. Shareholders' Funds					
(a) Share Capital		60,00,000	80,00,000	60.00	66.70
(b) Reserves and Surplus		8,00,000	12,00,000	8.00	10.00
2. Non-Current Liabilities					
Long-term Borrowings		20,00,000	24,00,000	20.00	20.00
3. Current Liabilities					
Short-term Borrowings		12,00,000	4,00,000	12.00	3.30
Total		**10,00,000**	**1,20,00,000**	**100.00**	**100.00**
II. ASSETS					
1. Non-Current Assets					
Fixed Asset:					
(i) Tangible Assets		60,00,000	80,00,000	60.00	66.70
(ii) Intangible Assets		12,00,000	4,00,000	12.00	3.30
2. Current Assets					
(a) Inventories		20,00,000	24,00,000	20.00	20.00
(b) Cash and Cash Equivalents		8,00,000	12,00,000	8.00	10.00
Total		**1,00,00,000**	**1,20,00,000**	**100.00**	**100.00**

Common Size Income Statement

The items in income statement can be shown as percentages of sales to show the relations of each item to sales.

Format of Common Size Statement of Profit and Loss (Income Statement)

Particulars	*Note No.*	*Absolute Amounts*		*Percentage of Revenue from Operations (Net Sales)*	
(1)	*(2)*	*2013 (₹) (3)*	*2014 (₹) (4)*	*2013 (%) (5)*	*2014 (%) (6)*
I. Revenue from Operations (Net Sales)		....	....	....	....
II. Other Income		....	....	....	....
III. **Total Revenue (I + II)**		....	....	....	....
IV. **Expenses**					
(a) Cost of Materials Consumed		....	....	....	....
(b) Purchases of Stock-in-Trade		....	....	....	....
(c) Change in Inventories of					

Finished Goods, Work-in-Progress and Stock-in-Trade		....	....	....	....
(d) Employees Benefit Expenses		....	....	....	....
(e) Finance Costs		....	....	....	....
(f) Depreciation and Amortisation Expenses		....	....	....	....
(g) Other Expenses		....	....	....	....
Total Expenses		....	....	....	....
V. **Profit before Tax (III - IV)**		....	....	....	....
VI. *Less:* Income Tax		....	....	....	....
VII. **Profit after Tax (V - VI)**		....	....	....	....

Illustration : 16

From the following Statement of Profit and Loss of Star Ltd. for the years ended 31st March, 2014 and 2013, prepare a Common-size Statement of Profit and Loss:

Particulars	*31st March, 2014 (₹)*	*31st March, 2013 (₹)*
Revenue from Operations	20,00,000	16,00,000
Employees Benefit Expenses	10,00,000	8,00,000
Other Expenses	1,00,000	2,00,000

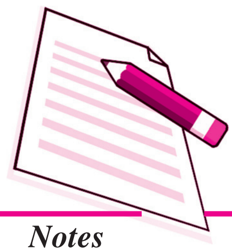
Solution :

Common-size Statement of Profit and Loss
for the years ended 31st March, 2013 and 2014

Particulars	*Note No.*	*Absolute Amounts*		*Percentage of Revenue from Operations (Net Sales)*	
		2013 (₹)	*2014 (₹)*	*2013 (%)*	*2014 (%)*
(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*
I. Revenue from Operations		16,00,000	20,00,000	100.00	100.00
II. Employees Benefit Expenses		8,00,000	10,00,000	50.00	50.00
Other Expenses		2,00,000	1,00,000	12.50	5.50
III. Total Expenses		10,00,000	11,00,000	62.50	55.00
IV. **Profit before Tax (I - III)**		**6,00,000**	**9,00,000**	**37.50**	**45.00**

Illustration : 17

From the following Statement of Profit and Loss, prepare Common-size Statement of Profit and Loss and give comments.



Notes

Particulars	*31st March, 2014 (₹)*	*31st March, 2013 (₹)*
I. **Income**		
Revenue from Operations (Net Sales)	12,50,000	10,00,000
II. **Expenses**		
Purchases of Stock-in-Trade	8,70,000	7,20,000
Change in Inventories of Stock-in-Trade	(20,000)	30,000
Depreciation and Amortisation Expenses	30,000	20,000
Other Expenses	50,000	30,000
Total	**9,30,000**	**8,00,000**
III. **Profit before Tax (I - II)**	**3,20,000**	**2,00,000**
IV. *Less:* Income Tax	96,000	60,000
V. **Profit after Tax (III - IV)**	**2,24,000**	**1,40,000**

Solution :

Common-size Statement of Profit and Loss

for the years ended 31st March, 2013 and 2014

Particulars	*Note No.*	*Absolute Amounts*		*Percentage of Revenue from Operations (Net Sales)*	
(1)	*(2)*	*2013 (₹) (3)*	*2014 (₹) (4)*	*2013 (%) (5)*	*2014 (%) (6)*
I. Revenue from Operations (Net Sales)		10,00,000	12,50,000	100.00	100.00
II. **Expenses**					
(a) Purchases of Stock-in-Trade		7,20,000	8,70,000	72.00	69.60
(b) Change in Inventories of Stock-in-Trade		30,000	(20,000)	3.00	(1.60)
(c) Depreciation and Amortisation Expenses		20,000	30,000	2.00	2.40
(d) Other Expenses		30,000	50,000	3.00	4.00
III. **Total Expenses**		**8,00,000**	**9,30,000**	**80.00**	**74.40**
IV. **Profit before Tax (I - II)**		**2,00,000**	**3,20,000**	**20.00**	**25.60**
V. *Less :* Income Tax		60,000	96,000	6.00	7.68
VI. **Profit after Tax (III - IV)**		**1,40,000**	**2,24,000**	**14.00**	**17.92**

Comments :

1. Purchases of Stock-in-Trade and Change in Inventories of Stock-in-Trade have decreased from 75% to 68%. There are two possible reasons for this change :

   i. Efficient functioning of the purchase and production department.

   ii. Increase in the sale price of the product without corresponding increase in the cost of inputs.

2. Increase in net profit is mainly due to decrease in the percentage of Cost of Goods Sold.

INTEXT QUESTIONS 31.3

Fill in the blanks with appropritate word/words

(i) .... statement shows analytical percentage. (comparative, common size)

(ii) .... balance sheet items are expressed in the ratio of each asset to total assets and ratio of each liability to total liabilities. (comparative, common size)

(iii) .... analysis is a technique of studying several financial statements over a series of years. (Trend, time series)

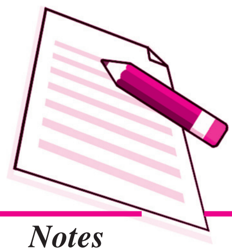
(iv) Trend percentage is calculated on the basis of .... year. (current, base)

WHAT YOU HAVE LEARNT

- Analysis of financial statements means establishing meaningful, relationship between various items of the two financial statements i.e. income statement and position statement.
- Limitations of Financial Analysis
  (i) Affected by window dressing
  (ii) Do not reflect changes in price level.
  (iii) Different Accounting policies.
  (iv) Difficulty in forecasting.
  (v) Limitations of financial statements.
- The main parties interested in analysis of financial statements are

(i)	Investors	(ii)	Management
(iii)	Trade unions	(iv)	Lenders
(v)	Trade creditors	(vi)	Employees
(vii)	Tax authorities	(viii)	Government
(ix)	Stock exchange	(x)	Researchers

- The major techniques of financial statement analysis are
  (i) Cross-sectional analysis
  (ii) Time series analysis
  (iii) Cross-sectional and time series analysis.



- The major tools for financial statement analysis are :

  (i) comparative statement (ii) Common size statement
  (iii) Ratio analysis (iv) Funds flow analysis
  (v) cash flow analysis

- Comparative study of financial statements is the comparison of the financial statements of the business with the previous years financial statements.
- Comparative Balance Sheet shows the different assets and liabilites of the firm on different dates to make comparison of balances from one date to another.
- Common size balance sheet items are expressed in the ratio of each asset to total assets and the ratio of each liability is expressed in the ratio of total liablities.

TERMINAL EXERCISE

1. State any four tools which are commonly used for analysing and interpreting financial statements.
2. What are the main limitations of financial Analysis? Explain in detail.
3. How do limitations of financial statements became limitation of analysis of financial statements.
4. State any three limitations of analysis of financial statements.
5. Briefly explain the limitations of analysis of financial statements.
6. What are the main techniques of financial statement analysis?
7. Briefly explain the parties interested in analysis of financial statements.
8. Write a brief note on comparative statement, common size statement and trend analysis.
9. Following are the Balance Sheets of Radha Ltd. as at 31st March, 2014 and 2013 :

Particulars	*31st March, 2014 (₹)*	*31st March, 2013 (₹)*
I. EQUITY AND LIABILITIES		
1. Shareholders' Funds		
(a) Share Capital	15,00,000	10,00,000
(b) Reserves and Surplus	10,00,000	10,00,000
2. Non-Current Liabilities		
Long-term Borrowings	8,00,000	2,00,000
3. Current Liabilities		
Trade Payables	5,00,000	3,00,000
Total	**38,00,000**	**25,00,000**

II. ASSETS		
1. Non-Current Assets		
Fixed Assets :		
(i) Tangible Assets	25,00,000	15,00,000
(ii) Intangible Assets	5,00,000	5,00,000
2. Current Assets		
(a) Trade Receivables	6,00,000	3,50,000
(b) Cash and Cash Equivalents	2,00,000	1,50,000
Total	**38,00,000**	**25,00,000**

Notes

You are required to prepare Comparative Balance Sheet on the basis of the information given in the above Balance Sheets.

10. Prepare Comparative Balance Sheet of Deepankur Ltd.:

Particulars	*March 31, 2014 (₹)*	*March 31, 2013 (₹)*
I. EQUITY AND LIABILITIES		
1. Shareholders' Funds		
(a) Share Capital	9,00,000	7,50,000
(b) Reserves and Surplus	3,30,000	2,85,000
2. Non-Current Liabilities		
Long-term Borrowings:		
12% Debentures, Secured	3,00,000	4,50,000
3. Current Liabilities		
(a) Short-term Borrowings	1,40,000	1,70,000
(b) Trade Payables	2,00,000	1,50,000
(c) Other Current Liabilities	60,000	45,000
(d) Short-term Provisions	20,000	10,000
Total	**19,50,000**	**18,60,000**
II. ASSETS		
1. Non-Current Assets		
(a) Fixed Assets	9,55,000	10,45,000
(b) Non-Current Investments	2,00,000	2,00,000
2. Current Assets		
(a) Inventories	2,50,000	2,00,000
(b) Trade Receivables	2,50,000	2,25,000
(c) Cash and Cash Equivalents	1,95,000	1,10,000
(d) Other Current Assets	1,00,000	80,000
Total	**19,50,000**	**18,60,000**

11. From the following Statement of Profit and Loss, prepare Comparative Statement of Profit and Loss (Income Statement) :

Particulars	*31st March, 2014 (₹)*	*31st March, 2013 (₹)*
I. Income		
Revenue from Operations (Sales)	19,20,000	16,00,000
II. Expenses		
Purchases of Stock-in-Trade	11,70,000	9,50,000
Change in Inventories of Stock-in-Trade	(10,000)	50,000
Employees Benefit Expenses	3,80,000	2,80,000
Other Expenses	1,50,000	2,00,000
Total	**16,90,000**	**14,80,000**
III. Net Profit (I - II)	**2,30,000**	**1,20,000**

12. From the following information taken from the Statement of Profit and Loss of Star Products Ltd. for the years ended 31st March, 2014 and 2013, prepare Comparative Statement of Profit and Loss:

Particulars	*Note No.*	*31st March, 2014 (₹)*	*31st March, 2014 (₹)*
Revenue from Operations		50,00,000	40,00,000
Employees Benefit Expenses		13,10,000	12,00,000
Other Expenses		15,00,000	13,00,000
Tax Rate (30%)			

ANSWERS TO INTEXT QUESTIONS

31.1 I. (i) Statement of Profit and Loss, Balance Sheet.
(ii) analysis, interpretation
(iii) financial
(iv) decision making

II. (i) (c) (ii) (d) (iii) (b) (iv) (a)

III. (i) True (ii) True (iii) True

31.2 (i) financial statement analysis (ii) tool
(iii) comparative statement (iv) balance sheet
(v) comparative

31.3 (i) Comparative (ii) Comparative (iii) Trend (iv) base

32

ACCOUNTING RATIOS - I

In the previous lesson, you have learnt the relationship between various items of the financial statements. You have also learnt various tools of analysis of financial statements such as comparative statements, common size statement, and trend analysis. However, like the above tools another important tool which is very useful to examine the financial statements is ratio analysis. Accounting ratios are calculated from the financial statements to arrive at meaningful conclusions pertaining to liquidity, profitability, and solvency. Accounting ratios can be of different types. In this lesson, we will learn about different types of accounting ratios and their methods of calculation.

OBJECTIVES

After studying this lesson, you will be able to :

- state the meaning of accounting ratio;
- classify the accounting ratios;
- explain various types of accounting ratios on the basis of liquidity and turnover.

32.1 OBJECTIVES OF RATIO ANALYSIS

Ratios are regarded as a test of earning capacity, financial soundness and operating efficiency of a business organisation. The use of ratios in accounting and financial management analysis helps the management to know the profitability, financial position (liquidity and solvency) and operating efficiency of an enterprises.

The objectives of ratio analysis may be better understood by the following advantages of ratio analysis.

Advantages and Uses of Ratio Analysis

The advantages derived by an enterprise by the use of accounting ratios are:

Notes

i. **Useful in Analysis of Financial Statements :** Accounting ratios are useful for understanding the financial position of the enterprise. Bankers, investors, creditors, etc., all analyse Balance Sheets and Profit and Loss Accounts by means of ratios.

ii. **Useful in Simplifying Accounting Figures :** Accounting ratio simplifies, summarises and systematises a long array of accounting figures to make them understandable. Its main contribution lies in communicating precisely the inter-relationships which exist between various elements of financial statements.

iii. **Useful in Judging the Operating Efficiency of Business :** Accounting ratios are essential for understanding the affairs of an enterprise, specially its operating efficiency. Accounting ratios are also useful for diagnosis of the financial health of an enterprise. This is done by evaluating liquidity, solvency, profitability, etc. Such an evaluation enables the management to assess financial requirements and the capabilities of various business units.

iv. **Useful for Forecasting :** Ratios are helpful in business planning and forecasting. The trend ratios are analysed and used as a guide to future planning. What should be the course of action in the immediate future is decided, many a times, on the basis of trend ratios, *i.e.,* ratios calculated for a number of years.

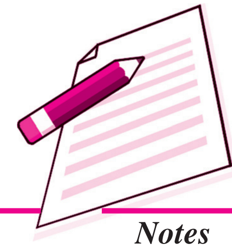
v. **Useful in Locating the Weak Spots :** Accounting ratios are of great assistance in locating the weak spots in the business even though the overall performance may be quite good. Management can pay attention to the weakness and take remedial action. For example, if the firm finds that the increase in distribution expenses is more than proportionate to the results achieved, these can be examined in detail and depth to remove any wastage that may be there.

vi. **Useful in Inter-firm and Intra-firm Comparison :** A firm would like to compare its performance with that of other firms and of industry in general. The comparison is called inter-firm comparison. If the performance of different units belonging to the same firm is to be compared, it is called intra-firm comparison. Such comparison is almost impossible without accounting ratios. Even the progress of a firm from year to year cannot be measured without the help of ratios. The accounting ratios are the best tools to compare the various firms and divisions of a firm.

32.2 MEANING AND ITS CLASSIFICATION

The ratio is an arithmetical expression i.e. relationship of one number to another. It may be defined as an indicated quotient of the mathematical expression. It is expressed as a proportion or a fraction or in percentage or in terms of number of times. A financial ratio is the relationship between two accounting figures expressed mathematically. Suppose two accounting figures of a concern are sales ₹ 1,00,000 and profits ₹ 15,000. The ratio between these two figures will be

$$\frac{15{,}000}{1{,}00{,}000} = 3 : 20 \text{ or } 15\%$$



Notes

Ratios provide clues to the financial position of a concern. These are the indicators of financial strength, soundness, position or weakness of an enterprise. One can draw conclusions about the financial position of a concern with the help of accounting ratios.

Suppose one shopkeeper (X) earns a profit of ₹ 1,000 and another (Y) earns ₹ 20,000 which one is more efficient? We may say that the one who earns a higher profit is running his shop better. In fact to answer the questions, we must ask, how much is the capital employed by each shopkeeper? Let, X employ ₹1,00,000 and Y ₹ 4,00,000. We can work out the percentage of profit earned by each to the capital employed. Thus,

$$X = \frac{₹\ 10,000}{₹\ 1,00,000} \times 100 = 10\%$$

$$Y = \frac{₹\ 20,000}{₹\ 4,00,000} \times 100 = 5\%$$

These figures show that for every ₹100 of capital, X earns ₹ 10 and Y earns ₹ 5. X is obviously making a better use of the funds employed by him. He must be treated as more efficient of the two. The above example shows that absolute figures by themselves do not communicate the meaningful information.

Broadly accounting ratios can be grouped into the following categories :

(a) Liquidity ratios (b) Activity ratios (c) Solvency ratios

(c) Profitability ratios

Liquidity Ratios

The term liquidity refers to the ability of the company to meet its current liabilities. Liquidity ratios assess capacity of the firm to repay its short term liabilities. Thus, liquidity ratios measure the firms' ability to fulfil short term commitments out of its liquid assets. The important liquidity ratios are :

(i) Current Ratio

(ii) Quick Ratio

(i) Current Ratio : Current ratio is a ratio between current assets and current liabilities of a firm for a particular period. This ratio establishes a relationship between current assets and current liabilities. The objective of computing this ratio is to measure the ability of the firm to meet its short term liability. It compares the current assets and current liabilities of the firm. This ratio is calculated as under :

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

Current Assets are those assets which can be converted into cash within a short period i.e. not exceeding one year. It includes the following :

Cash in hand, Cash at Bank,Trade Receivables, Short term investment, Stock, Prepaid expenses.

Trade Receivables include Bills Receivables and Sundry Debtors.

Current liabilities are those liabilities which are expected to be paid within a year. It includes the following :

Trade Payables, Bank overdraft, Provision for tax, Outstanding expenses.

Trade Payables include Sundry Creditors and Bills Payables.

Significance

It indicates the amount of current assets available for repayment of current liabilities. Higher the ratio, the greater is the short term solvency of a firm and vice - versa. However, a very high ratio or very low ratio is a matter of concern. If the ratio is very high it means the current assets are lying idle. Very low ratio means the short term solvency of the firm is not good. Thus, the ideal current ratio of a company is 2 : 1 i.e. to repay current liabilities, there should be twice current assets.

Illustration 1

Calculate current ratio from the following :

	₹
Sundry debtors	4,00,000
Stock	160,000
Marketable securities	80,000
Cash	120,000
Prepaid expenses	40,000
Bill payables	80,000
Sundry creditors	160,000
Debentures	200,000
Outstanding Expenses	160,000

Solution :

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

Current Assets = Sundry Debtors + Stock + Marketable Securities + Cash + Prepaid Expenses

= ₹ (400,000 + 160,000 + 80,000 + 120,000 + 40,000)

= ₹ 800,000

Current Liabilities = Bill Payables + Sundry Creditors + Outstanding Expenses

= ₹ (80,000 + 160,000 + 160,000) = ₹ 400,000

$$\text{Current Ratio} = \frac{₹\ 8{,}00{,}000}{₹\ 4{,}00{,}000} = 2 : 1$$

(ii) Quick Ratio : Quick ratio is also known as Acid test or Liquid ratio. It is another ratio to test the short-term solvency of the concern. This ratio establishes a relationship between quick assets and current liabilities. This ratio measures the ability of the firm to pay its current liabilities. The main purpose of this ratio is to measure the ability of the firm to pay its current liabilities. For the purpose of calculating this ratio, stock and prepaid expenses are not taken into account as these may not be converted into cash in a very short period. This ratio is calculated as under:

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

where, liquid assets = current assets – (stock + prepaid expenses)

Significance

Quick ratio is a measure of the instant debt paying capacity of the business enterprise. It is a measure of the extent to which liquid resources are immediately available to meet current obligations. A quick ratio of 1 : 1 is considered good/favourable for a company.

Illustration 2

Taking the same information as given in illustrated 1 calculate the quick ratio.

Solution :

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

Quick Assets = Currents Assets – (Stock + Prepaid Expenses)

= ₹ 8,00,000 – (₹ 1,60,000 + ₹ 40,000) = ₹ 6,00,000

Current Liabilities = ₹ 6,00,000

$$\text{Quick Ratio} = \frac{₹\ 6{,}00{,}000}{₹\ 6{,}00{,}000} = 1 : 1$$

Illustration 3

Calculate liquidity ratios from the following information :

Total current assets	₹ 90,000
Stock (included in current assets)	₹ 30,000
Prepaid expenses	₹ 3,000
Current liabilities	₹ 60,000

Solution :

A. Current Ratio $= \dfrac{\text{Current Assets}}{\text{Current Liabilities}} = \dfrac{₹90{,}000}{₹60{,}000}$

$= 3 : 2 \text{ or } 1.5 : 1$

B. Liquid ratio $= \dfrac{\text{Current Asset - (Stock + Prepaid Expenses)}}{\text{Current Liabilities}}$

$= \dfrac{₹57{,}000}{₹60{,}000} = 0.95 : 1.0$

Illustration 4

The balance sheet of ABCD Ltd. shows the following figures :

Share capital	₹ 152,000
Cash in hand and at Bank	₹ 30,000
Fixed Assets	₹ 113,000
Creditors	₹ 20,000
5% Debentures	₹ 24,000
Bill Payables	₹ 4,000
Debtors	₹ 18,000
Stock	₹ 52,000
General reserve	₹ 8,000
Profit and Loss A/c	₹ 5,000

Calculate (i) current ratio and (ii) liquid ratio.

Solution :

(i) Current Ratio $= \dfrac{\text{Current Assets}}{\text{Current Liabilities}}$

where,

Current Assets = Cash in hand and at bank + Debtors + Stock

= ₹ 30,000 + ₹ 18,000 + ₹ 52,000

= ₹ 1,00,000

Current Liabilities = Creditors + Bill Payable

= ₹ 20,000 + ₹ 4,000

= ₹ 24,000

$$= \frac{₹\ 1,00,000}{₹\ 24,000} = 4.26 : 1$$

(ii) Quick Ratio $= \dfrac{\text{Current Assets}}{\text{Current Liabilities}}$

where,

Quick assets = Current Assets – Stock

= ₹ 1,00,000 – ₹ 52,000

= ₹ 48,000

Quick ratio $= \dfrac{₹48,000}{₹24,000} = 2 : 1$

Illustration 5

From the following information, if ₹ 1000 is paid to creditors what will be the effect (increase or decrease or no change) on current ratio, if before payment, balances are : Cash ₹ 15000, Creditors ₹ 7,500?

Solution :

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

Before payment $= \dfrac{\text{Cash}}{\text{Creditors}} = \dfrac{₹15,000}{₹7,500} = 2 : 1$

After payment = ₹1000 to creditors

Current Ratio $= \dfrac{\text{Cash}}{\text{Creditors}} = \dfrac{₹15,000 - ₹1,000}{₹7,500 - ₹1,000}$

$$= \frac{₹14,000}{₹6,500} = 2.15 : 1$$

Hence, it increases the current ratio from 2 : 1 to 2.15 : 1

INTEXT QUESTIONS 32.1

I. Select the current assets from the list given below

Cash at bank	Debtors
Inventory	Prepaid expenses
Short term investment	Goodwill
Building	Cash in hand
Furniture	
Bill Receivables	

II. Fill in the blanks with suitable words or figures :

(i) Current Ratio = $\dfrac{\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots}{\text{Current Liabilities}}$

(ii) The ideal current ratio is ....

(iii) The ideal liquid ratio is ....

(iv) Liquid assets = ... – (Stock + prepaid expenses)

III. State whether the following statements are true or false :

(i) Ratios are not helpful in business planning and forecasting.

(ii) Accounting ratios are useful for understanding the financial position of the enterprise.

32.3 ACTIVITY OR TURNOVER RATIOS

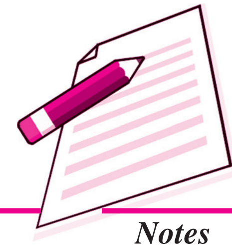
Activity ratios measure the efficiency or effectiveness with which a firm manages its resources. These ratios are also called turnover ratios because they indicate the speed at which assets are converted or turned over in Revenue from operations (sales). These ratios are expressed as 'times' and should always be more than one. Some of the important activity ratios are :

(i) Inventory turnover ratio (Stock turnover ratio)

(ii) Trade Receivables turnover ratio (Debtors turnover ratio)

(iii) Trade Paybles turnover ratio (Creditors turnover ratio)

(iv) Working capital turnover ratio



Notes

(i) Inventory Turnover Ratio (Stock Turnover Ratio)

Inventory turnover ratio is a ratio between cost of revenue from operation and the average inventory. Every firm has to maintain a certain level of inventory of finished goods. But the level of inventory should neither be too high nor too low. It evaluates the efficiency with which a firm is able to manage its inventory. This ratio establishes relationship between cost of revenue from operation and average inventory.

$$\text{Inventory Turnover Ratio} = \frac{\text{Cost of Revenue from Operations}}{\text{Average Inventory}}$$

$$\text{Cost of Revenue from Operation} = \text{Opening Inventory} + \text{Net Purchases} + \text{Direct expenses} - \text{Closing Inventory}$$

OR $\text{Cost of Revenue from Operation} = \text{Net Sales} - \text{Gross Profit}$

$$\text{Average Inventory} = \frac{\text{Opening Inventory} + \text{Closing Inventory}}{2}$$

(i) If cost of revenue from operation is not given, the ratio is calculated from revenue from operations (sales).

(ii) If only closing inventory is given, then that may be treated as average inventory.

Significance

The ratio signifies the number of times on an average the inventory or stock is disposed off during the period. The high ratio indicates efficiency and the low ratio indicates inefficiency of stock management.

Illustration 6

Calculate inventory turnover ratio from the following information:

Opening inventory	₹ 45000
Closing inventory	₹ 55000
Net Purchases	₹ 160000

Solution :

$$\text{Inventory Turnover Ratio} = \frac{\text{Cost of Revenue from Operations}}{\text{Average Inventory}}$$

$$\text{Average Inventory} = \frac{\text{Opening Inventory} + \text{Closing Inventory}}{2}$$

$$\text{Average Inventory} = \frac{₹(45{,}000 + 55{,}000)}{2}$$

= ₹ 50000

Cost of Revenue from Operations = Opening Inventory + Net Purchases – Closing Inventory

= ₹ 45000 + ₹ 160000 – ₹ 55000

= ₹ 150000

Inventory Turnover Ratio = $\dfrac{₹\ 1,50,000}{₹\ 50,000}$ = 3 times

Illustration 7

Opening Inventory	₹	19,000
Closing Inventory	₹	21,000
Revenue from Operations (Sales)	₹	2,00,000

Gross Profit 25% of revenue from operations. Calculate inventory turnover ratio.

Solution :

Cost of Revenue from Operations = Revenue from Operations – Gross profit

= ₹ 2,00,000 – 25% of ₹ 2,00,000

= ₹ (2,00,000 – 50,000)

= ₹ 1,50,000

Average Inventory = $\dfrac{\text{Opening Inventory} + \text{Closing Inventory}}{2}$

= $\dfrac{₹(19,000 + 21,000)}{2}$

= ₹ 20,000

Inventory turn over Ratio = $\dfrac{\text{Cost of Revenue from Operations}}{\text{Average Inventory}}$

= $\dfrac{₹\ 1,50,000}{₹\ 20,000}$ = 7.5 times

Notes

Illustration 8

Annual sales	₹ 4,00,000
Gross profit 20% on sales	
Opening Inventory	₹ 38,500
Closing Inventory	₹ 41,500

Calculate inventory turnover ratio.

Solution :

Inventory turnover Ratio $= \dfrac{\text{Cost of Revenue from Operations}}{\text{Average Inventory}}$

Costs of revenue from Ooperations = Sales – Gross profit

= ₹ 4,00,000 – (20% on ₹ 4,00,000)

= ₹ 4,00,000 – ₹ 80,000

= ₹ 320,000

Average Inventory $= \dfrac{\text{Opening Inventory + Closing Inventory}}{2}$

$= \dfrac{38{,}500 + 41{,}500}{2} = \dfrac{80{,}000}{2}$

= ₹ 40,000

Inventory turnover Ratio $= \dfrac{₹\ 3{,}20{,}000}{₹\ 40{,}000} = 8$ times

Illustration 9

From the following information calculate opening inventory and closing inventory:

Revenue from operations (sales) during the year	=	₹ 2,00,000
Gross profit on sales	=	50%
Inventory turnover ratio	=	4 times

If closing inventory was ₹ 10,000 more than the opening inventory what will be the amount for the opening inventory and closing inventory?

Solution :

Revenue from Operations (Sales) = ₹ 2,00,000 (given)

Gross profit on sales = 50% (given)

Gross profit = $2,00,000 \times \frac{50}{100} = 1,00,000$

Cost of Revenue from operation = Sales – Gross profit

= ₹ 2,00,000 – ₹ 1,00,000

= ₹1,00,000

$$\text{Inventory Turnover Ratio} = \frac{\text{Cost of Revenue from Operations}}{\text{Average Inventory}}$$

$$4 = \frac{1,00,000}{\text{Average Inventory}}$$

∴ By cross multiplying

$$\text{Average Inventory} = \frac{₹1,00,000}{4} = ₹\ 25,000$$

$$\text{Average Inventory} = \frac{\text{Opening Inventory} + \text{Closing Inventory}}{2}$$

Let opening inventory be x

Closing Inventory = $x + 10,000$

$$\text{Average Inventory} = \frac{x + x + 10,000}{2} = 25,000 \text{ (given)}$$

or $x + x + 10,000 = 50,000$

or $2x = 50,000 - 10,000$

or $2x = 40,000$

or $x = 20,000$

Hence, Opening Inventory = ₹ 20,000

Closing Inventory = ₹ 20,000 + ₹ 10,000

= ₹ 30,000

INTEXT QUESTIONS 32.2

Fill in the blanks with suitable word/words :

(i) Inventory turnover ratio is .... divided by average inventory.

(ii) Average inventory = $\dfrac{\text{Opening Inventory} + \text{...............................}}{2}$

(iii) Inventory turnover ratio = $\dfrac{10{,}000}{?}$ = 5 times

(iv) Inventory turnover ratio = $\dfrac{30{,}000}{10{,}000}$ =

(ii) Trade Receivable Turnover Ratio (Debtors Turnover ratio)

This ratio establishes a relationship between cost of revenue from operations and average trade receivables i.e. average trade debtors and bill receivables. The objective of computing this ratio is to determine the efficiency with which the trade receivables are managed. This ratio is also known as Ratio of Revenue from Operations (Net Sales) to Average Trade Receivables. It is calculated as under

Trade Receivable Turnover Ratio =

$$\frac{\text{Credit Revenue from Operations (Net Credit Sales)}}{\text{Average Trade Receivables}}$$

In case, figure of credit revenue from operations (net credit sale) is not available then the sales are treated as credit sales :

Average Trade Receivables =

$$\frac{\text{Opening Debtors \& Bills Receivable} + \text{Closing Debtors \& Bills Receivable}}{2}$$

Note : If opening trade receivables are not available, then closing trade receivables are taken as average trade receivables.

Significance

Debtors turnover ratio is an indication of the speed with which a company collects its debts. The higher the ratio, the better it is because it indicates that debts are being collected quickly. In general, a high ratio indicates the shorter collection period which implies prompt payment by debtor and a low ratio indicates a longer collection period which implies delayed payment for debtors.

Illustration 10

Find out trade receivable turnover from the following information for one year ended 31st March 2014.

	31st March 2014
Annual credit revenue from operations	500000
Trade receivable in the beginning	80000
Trade receivable at the end	100000

Solution

$$\text{Average Trade Receivables} = \frac{\text{Opening Trade Receivable + Closing Trade Receivable}}{2}$$

$$\text{Trade Receivables Turnover} = \frac{\text{Credit Revenue from Operations}}{\text{Average Trade Receivables}}$$

$$\text{Average Trade Receivables} = \frac{80{,}000 + 1{,}00{,}000}{2} = ₹\ 90{,}000$$

$$\text{Trade Receivable Turnover Ratio} = \frac{5{,}00{,}000}{90{,}000} = 5.56 \text{ times}$$

(iii) Trade Payables Turnover Ratio (Creditors Turnover Ratio)

It is a ratio between net credit purchases and average trade payables (i.e creditors and Bill payables). In the course of business operations, a firm has to make credit purchases. Thus a supplier of goods will be interested in finding out how much time the firm is likely to take in repaying the trade payables. This ratio helps in finding out the exact time a firm is likely to take in repaying to its trade payables. This ratio establishes a relationship between credit purchases and average trade payables.

$$\text{Trade Payables Turnover Ratio} = \frac{\text{Net Credit Purchases}}{\text{Average Trade Payables}}$$

$$\text{Average Trade Payables} = \frac{\text{Opening Creditors + Opening Bill Payables + Closing Creditors + Closing Bills Payables}}{2}$$

Significance

Trade Payables turnover ratio helps in judging the efficiency in getting the benefit of credit purchases offered by suppliers of goods. A high ratio indicates the shorter payment period and a low ratio indicates a longer payment period.

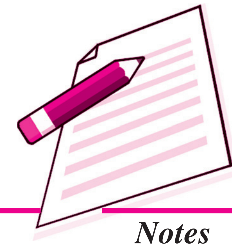


Illustration 11

Calculate trade payables turnover ratio from the following information :

	₹		₹
Cash purchases	1,00,000	Total purchases	4,07,000
Opening creditors	25,000	Closing creditors	50,000
Closing bill payables	25,000	Opening bill payables	20,000
Purchase returns	7,000		

Solution :

$$\text{Trade Payables Turnover Ratio} = \frac{\text{Net Credit Purchases}}{\text{Average Trade Payables}}$$

Net purchases = Total purchases – Purchase returns

= ₹ 407000 – ₹ 7000 = ₹ 400000

Net credit purchases = Net purchases – cash purchases

= ₹ 4,00,000 – ₹ 1,00,000

= ₹ 3,00,000

Average Trade Payables =

$$\frac{\text{Opening Creditors + Opening Bill Payables + Closing Creditors + Closing Bills Payables}}{2}$$

$$= \frac{₹25{,}000 + ₹20{,}000 + ₹5{,}000 + ₹25{,}000}{2}$$

$$= \frac{₹1{,}20{,}000}{2} = \text{Rs } 60{,}000$$

$$\text{Trade Payables Turnover Ratio} = \frac{₹3{,}00{,}000}{₹60{,}000} = 5 \text{ times}$$

Illustration 12

Calculate trade payables turnover ratio.

Credit purchases during the year	₹ 14,40,000
Closing creditors	₹ 1,44,000
Closing Bill payables	₹ 96,000

Solution :

$$\text{Trade Payables Turnover Ratio} = \frac{\text{Net Credit Purchases}}{\text{Average Trade Payables}}$$

Notes

$$= \frac{₹14,40,000}{₹1,44,000 + ₹96,000}$$

$$= \frac{₹14,40,000}{₹2,40,000} = 6 \text{ times}$$

Note : Where opening creditors and opening bill payables are not given then closing creditors and bill payables are taken as average trade payables.

Working Capital Turnover Ratio

Working capital of a concern is directly related to revenue from operations (sales). The current assets like debtors, bill receivables, cash, stock etc, change with the increase or decrease in revenue from operations.

Working Capital = Current Assets – Current Liabilities

Working capital turnover ratio indicates the speed at which the working capital is utilised for business operations. It is the velocity of working capital ratio that indicates the number of times the working capital is turned over in the course of a year. This ratio measures the efficiency at which the working capital is being used by a firm. A higher ratio indicates efficient utilisation of working capital and a low ratio indicates the working capital is not properly utilised.

This ratio can be calculated as

$$\text{Working Capital Turnover Ratio} = \frac{\text{Cost of Revenue from Operations}}{\text{Average Working Capital}}$$

$$\text{Average Working Capital} = \frac{\text{Opening Working Capital} + \text{Closing Working Capital}}{2}$$

If the figure of cost of revenue from operations is not given, then the figure of revenue from operations (sales) can be used. On the other hand if opening working capital is not given then working capital at the year end will be used.

Illustration 13

Find out working capital turnover ratio for the year 2014.

	₹
Cash	10,000
Bills receivable	5,000
Sundry debtors	25,000
Inventory	20,000

Sundry creditors	30,000
Cost of Revenue from Operations	1,50,000

Solution :

$$\text{Working Capital Turnover Ratio} = \frac{\text{Cost of Revenue from Operations}}{\text{Average Working Capital}}$$

Current Assets = ₹10,000 + ₹5,000 + ₹25,000 + ₹20,000

= ₹ 60,000

Current Liabilities = ₹ 30,000

Net working capital = CA – CL = ₹ 60,000 – ₹ 30,000

= ₹ 30,000

$$\text{So, Working Capital Turnover Ratio} = \frac{₹1,50,000}{₹30,000} = 5 \text{ times}$$

INTEXT QUESTIONS 32.3

I. Fill in the blanks with suitable word or words.

(i) Low trade receivables turnover ratio indicates .... collection.

(ii) $\text{Debtors turnover ratio} = \frac{\qquad\qquad}{\text{Average Trade Paybles}}$

(iii) $? = \frac{\text{Net Credit Purchases}}{\text{Average Trade Paybles}}$

(iv) $\text{Trade Receivable Turnover Ratio} = \frac{?}{50,000} = 4$

(v) $\text{Trade Receivable turnover ratio} = \frac{1,50,000}{?} = 3$

(vi) $\text{Trade Payables turnover ratio} = \frac{75,000}{15,000} = ?$

(viii) $\text{Trade Payables turnover ratio} = \frac{1,00,000}{?} = 4$

II. Fill in the blanks with suitable word or words :

(i) Working capital = ... – current liabilities

(ii) .... $= \frac{\text{Cost of Revenue from Operations}}{\text{Average Working Capital}}$

(iii) Average working capital =

$$\frac{\text{Opening Working Capital + Closing Working Capital}}{?}$$

(iv) Working Capital Turnover Ratio = $\dfrac{\text{Cost of Revenue from Operations}}{\text{Average Working Capital}}$

WHAT YOU HAVE LEARNT

- The term ratio means an arithmatical relationship between two numbers.
- Advantages and uses of Ratio Analysis
  - (i) Useful in Analysis of Financial Statements.
  - (ii) Useful in Simplying Accounting Figures.
  - (iii) Useful for Forecasting.
  - (iv) Useful in Locating the Weak spots.
- Liquidity ratios assesses the capacity of the firm to repay short term liability. It measures the ability to fulfil short term commitments out of liquid assets.
- The important liquidity ratios are :
  - (i) Current Ratio : It measures the short term solvency of a business

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

  - (ii) Liquid Ratio : It measurs the ability of the firm to pay current liabilities immediately

    Liquid Ratio = $\dfrac{\text{Liquid Assets}}{\text{Current Liabilities}}$

    Liquid assets = Current assets – (Inventory + Prepaid expenses)
- Activity or turnover ratios measures the effectiveness with which a concern uses resources at its disposal.
- The important activity ratios are
  - (i) Inventory turnover ratio : It measures the efficiency with which the Inventory is managed.

    Inventory Turnover Ratio = $\dfrac{\text{Cost of Revenue from Operations}}{\text{Average Inventory}}$

(ii) Trade Receivable turnover ratio : It is calculated to indicate the efficiency of the company to collect its debts.

$$\text{Trade Receivable Turnover Ratio} = \frac{\text{Revenue from Operations}}{\text{Average Trade Receivables}}$$

(iii) Trade Payable turnover ratio : It indicates the efficiency with which suppliers are paid.

$$\text{Trade Payable Turnover Ratio} = \frac{\text{Net Credit Purchases}}{\text{Average Trade Payables}}$$

TERMINAL EXERCISE

1. What are the Advantages and uses of ratio analysis? Explain in detail.
2. Explain the significance of trade receivable turnover ratio and liquid ratio.
3. Explain the meaning and significance of the following ratios.
   (a) Current ratio
   (b) Trade Payables turnover ratio
   (c) Inventory turnover ratio
4. From the following compute current ratio and quick ratio :

	₹
Fixed Assets	100000
Inventory	30000
Debtors	20,000
Cash	40,000
Prepaid expenses	10,000
Creditors	30,000
Reserves	10,000

5. Following figures have been extracted from the books of XY Ltd. as on 31st December 2013 is

	₹		₹
Equity share capital	100000	Cash in hand	20000
7% debentures	100000	Cash at Bank	20,000

Bank overdraft	40,000	Bill receivables	100000
Creditors	60000	Investment	10000
Debtors	50000	General reserve	30000
Inventory	150000		

Cost of Revenue from operations during the year 2014 were ₹ 4,70,000. Calculate inventory turnover ratio.

6. Given : Current ratio 5 : 2

   Liquidity ratio 3 : 2

   working capital ₹ 60,000

   Calculate (a) current liabilites (b) current assets (c) Liquid assets (d) stock

7. XYZ Ltd. supplies you following information regarding the year ending 31st, December 2013.

Cash sales	₹ 80,000
Credit sales	₹ 2,00,000
Return inward	₹ 10,000
Opening inventory	₹ 25,000
Closing inventory	₹ 30,000

Gross profit ratio is 25%. Calculate inventory turnover ratio.

ANSWERS TO INTEXT QUESTIONS

32.1 I. Cash at Bank, inventory, short term investment, Bills receivable, debtors, prepaid expenses, cash in hand

II. (i) current assets (ii) 2 : 1 (iii) 1 : 1 (iv) current assets

III. (i) False (ii) False

32.2 (i) Cost of revenue from operations (ii) Closing inventory

(iii) 2000 (iv) 3 times

32.3 I. (i) Delay in collection of debt

(ii) Net credit revenue from operations

(iii) Trade Payables turnover ratio

(iv) 2,00,000 (v) 50,000 (vi) 5 times (vii) 25,000

II. (i) Current assets (ii) Working capital turnover ratio

(iii) 2 (iv) Average working capital

ANSWERS TO TERMINAL EXERCISE

4. Current Ratio 3.33 : 1, Quick Ratio 2.337 : 1
5. 3.13 times
6. (a) 40,000 (b) 1,00,000 (c) 60,000 (d) 40,000
7. 7.36 times

33

ACCOUNTING RATIOS - II

You have learnt in the previous lesson that accounting ratios can be classified into four major groups viz. liquidity ratios, activity ratios, solvency ratios and profitability ratios. You have already learnt the meaning, computations and significance of liquidity and activity ratios. In this lesson, you will learn about the various solvency ratios and profitability ratios.

OBJECTIVES

After studying this lesson you will be able to :

- explain various types of accounting ratios i.e. solvency and profitability;
- calculate the various ratios on the basis of given information;
- describe the limitations of accounting ratios.

33.1 SOLVENCY RATIOS

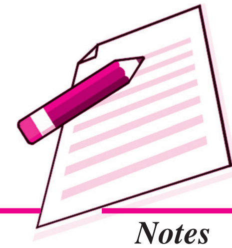
The term 'solvency' refers to the ability of a concern to meet its long term obligations. The long-term liability of a firm is towards debenture holders, financial institutions providing medium and long term loans and other creditors selling goods on credit. These ratios indicate firm's ability to meet the fixed interest and its costs and repayment schedules associated with its long term borrowings.

The following ratios serve the purpose of determining the solvency of the business firm.

- Debt equity Ratio
- Proprietary Ratio

Debt-equity Ratio

It is also otherwise known as external to internal equity ratio. It is calculated to know the relative claims of outsiders and the owners against the firm's assets. This ratio



establishes the relationship between the outsiders funds and the shareholders funds. Thus,

$$\text{Debt-equity Ratio} = \frac{\text{Outsiders' Funds}}{\text{Shareholders' Funds}}$$

The two basic components of the ratio are outsiders' funds and shareholders' funds. The outsiders' funds include all debts/liabilities to outsiders i.e. debentures, long term loans from financial institutions, etc. Shareholders' funds mean preference share capital, equity share capital, reserves and surplus and fictitious assets like preliminary expenses. This ratio indicates the proportion between shareholders' funds and the long-term borrowed funds. In India, this ratio may be taken as acceptable if it is 2 : 1. If the debt-equity ratio is more than that, it shows a rather risky financial position from the long term point of view.

Significance

The purpose of debt equity ratio is to derive an idea of the amount of capital supplied to the concern by the proprietors. This ratio is very useful to assess the soundness of long term financial position of the firm. It also indicates the extent to which the firm depends upon outsiders for its existence. A low debt equity ratio implies the use of more equity than debt.

Illustration 1

From the following, calculate the debt-equity ratio

	₹
Equity Shares Capital	1,00,000
General Reserve	45,000
Accumulated Profits	30,000
Debentures	75,000
Sundry trade creditors	40,000
Outstanding expenses	10,000

Solution :

$$\text{Debt-equity Ratio} = \frac{\text{Debt (Total Long term Loans)}}{\text{Equity (Shareholders Funds)}}$$

$$= \frac{₹75{,}000}{₹1{,}75{,}000} = 3 : 7$$

Working Notes : Shareholders' Fund = Equity Share Capital + Reserves + Accumulated Profits

(i) ₹ 1,00,000 + ₹ 45,000 + ₹ 30,000 = ₹ 1,75,000

(ii) Long term debt = Debentures = ₹ 75,000

Illustration 2

Calculate the debt-equity ratio from the following data :

Total Assets ₹1,20,000. Total debts ₹1,00,000 current liabilities ₹ 60,000.

Solution :

Calculation of debt-equity ratio

Long Term Debt = Total debt – current liabilities

= ₹ 1,00,000 – ₹ 60,000

= ₹ 40,000

Shareholders' Fund = Total Assets – total debt

= ₹ 1,20,000 – ₹ 1,00,000

= ₹ 20,000

$$\text{Debt Equity Ratio} = \frac{\text{Debt (Total Long term Loans)}}{\text{Equity (Shareholders Funds)}}$$

$$= \frac{₹45{,}000}{₹20{,}000} = 2$$

Proprietory Ratio

It is also known as equity ratio. This ratio establishes the relationship between shareholders' funds to total assets of the firm. The shareholders' funds is the sum of equity share capital, preference share capital, reserves and surpluses. Out of this amount, accumulated losses should be deducted. On the other hand, the total assets mean total resources of the concern. The ratio can be calculated as under:

$$\text{Proprietory Ratio} = \frac{\text{Shareholders' Funds}}{\text{Total Assets}}$$

Significance

Proprietary ratio throws light on the general financial position of the enterprise. This ratio is of particular importance to the creditors who can ascertain the proportion of shareholders' funds in the total assets employed in the firm. A high ratio shows that there is safety for creditors of all types. Higher the ratio, the better it is for concern.

A ratio below 50% may be alarming for the creditors since they may have to lose heavily in the event of company's liquidation on account of heavy losses.

Illustration 3

From the following calculate the proprietary ratio :

	₹
Equity share capital	1,00,000
Preference share capital	50,000
Reserves and surpluses	25,000
Debentures	60,000
Creditors	15,000
Total	2,50,000
Fixed assets	1,25,000
Current Assets	50,000
Investment	75,000
Total	2,50,000

Solution :

$$\text{Proprietary Ratio} = \frac{\text{Shareholders' Funds}}{\text{Total Assets}}$$

$$= \frac{\text{Equity Share Capital + Preference Share Capital + Reserve \& Surpluses}}{\text{Total Asset}}$$

$$= \frac{₹1,75,000}{₹2,50,000} = 0.7 \text{ or } 70\%$$

Interest Coverage Ratio

This ratio establishes the relationship between Net Profit before Interest and Tax and Interest on long-term debts. It is calculated as follows :

$$\text{Interest Coverage Ratio} = \frac{\text{Net Profit before Interest and Tax}}{\text{Interest on Long-term Debts}}$$

Illustration 4

X Ltd. has a 10% long-term loan of ₹ 20,00,000. Its net profit before interest and tax was ₹ 9,00,000. Calculate interest coverage ratio.

$$\text{Interest Coverage Ratio} = \frac{\text{Net Profit before Interest and Tax}}{\text{Interest on Long-term Debts}}$$

Net profit before interest and tax = 9,00,000

Interest on long term loan = $\frac{10}{100}$ X 20,00,000 = 2,00,000

$\therefore$ Interest Coverage ratio = $\frac{9,00,000}{2,00,000}$ = 4.5 times

Significance

This ratio is very useful to the long term lending agencies like debenture holders and lenders of long term funds as it indicates the number of times the interest on long term funds is covered by profits. A high ratio is considered better for the lenders because it provides higher safety margin.

INTEXT QUESTIONS 33.1

Fill in the blanks with suitable word/words/figures :

(i) Debt equity ratio = ...

(i) .... ratio measures the long term obligation of a firm.

(iii) .... = $\frac{\text{Shareholders' Funds}}{\text{Total Assets}}$

(iv) Debt equity ratio = $\frac{2,00,000}{3,00,000}$ = ...

33.2 PROFITABILITY RATIOS

The main aim of an enterprise is to earn profit which is necessary for the survival and growth of the business enterprise. It is earned with the help of amount invested in business. It is necessary to know how much profit has been earned with the help of the amount invested in the business. This is possible through profitability ratios. These ratios examine the current operating performance and efficiency of the business concern. These ratios are helpful for the management to take remedial measures if there is a declining trend. The important profitability ratios are :

(i) Gross Profit Ratio

(ii) Net Profit Ratio

(iii) Operating Profit Ratio

(iv) Return on Investment Ratio

(i) Gross Profit Ratio

It expresses the relationship of gross profit to revenue from operations (net sales). It is expressed in percentage. It is computed as

$$\text{Gross Profit Ratio} = \frac{\text{Gross Profit}}{\text{Revenue from Operations (Net Sales)}} \times 100$$

where,

Net Sales = Total sales – (sales returns + excise duty)

Gross Profit = Revenue from operations – Cost of revenue from operations

Significance

Gross profit ratio shows the margin of profit. A high gross profit ratio is a great satisfaction to the management. It represents the low cost of revenue from operations. Higher the rate of gross profit, lower the cost of revenue from operations.

Illustration 5

From the following detail of a business concern ascertain the gross profit ratio:

Details	*2013* (₹)	*2014* (₹)
Revenue from operations (sales)	120,000	160,000
Gross profit	40,000	60,000

Solution :

2013 Gross Profit Ratio $= \frac{₹\ 40{,}000}{₹\ 1{,}20{,}000} \times 100 = 33.33\%$

2014 Gross Profit Ratio $= \frac{₹\ 60{,}000}{₹\ 1{,}60{,}000} \times 100 = 37.5\%$

Illustration 6

Calculate the gross profit ratio from the following data :

Sales ₹ 3,25,000 sales returns ₹ 25,000 and cost of revenue from operations ₹ 2,40,000.

Solution :

$$\text{Gross Profit Ratio} = \frac{\text{Gross Profit}}{\text{Revenue from Operations (Net Sales)}} \times 100$$

Gross Profit = Net sales – Cost of revenue from operations

= 300,000 – 2,40,000 = 60,000

Gross Profit Ratio = $\dfrac{₹\ 60{,}000}{₹\ 3{,}00{,}000} \times 100 = 20\%$

Note : Net Sales = Sales - Sales return = 3,25,000 - 25,000 = ₹ 3,00,000

(ii) Net Profit Ratio

A ratio of net profit to revenue from operations (sales) is called Net profit ratio. It indicates sales margin on sales. This is expressed as a percentage. The main objective of calculating this ratio is to determine the overall profitability. The ratio is calculated as:

$$\text{Net Profit Ratio} = \frac{\text{Net Profit}}{\text{Revenue from Operations (Net Sales)}} \times 100$$

Significance

Net profit ratio determines overall efficiency of the business. It indicates the extent to which management has been effective in reducing the operational expenses. Higher the net profit ratio, better it is for the business.

Illustration 7

Calculate Net profit ratio from the following :

Net Profit	₹ 45,000
Sales	₹ 6,40,000
Sales Returns	₹ 40,000

Solution :

Net Profit Ratio = $\dfrac{\text{Net Profit}}{\text{Revenue from Operations (Net Sales)}} \times 100$

Net Sales = Sales – Sales returns

= ₹ 640,000 – ₹ 40,000 = ₹ 600,000

Net profit ratio = $\dfrac{₹\ 45{,}000}{₹\ 6{,}00{,}000} \times 100 = 7.5\%$

Illustration 8

Calculate gross profit ratio and net profit ratio from the following figures.

Revenue from operations (Sales)	₹ 1,50,000
Cost of revenue from operations	₹ 1,20,000
Operating expenses	₹ 12,000

Solution :

$$\text{Gross Profit Ratio} = \frac{\text{Gross Profit}}{\text{Revenue from Operations (Net Sales)}} \times 100$$

Gross Profit = Sales – Cost of revenue from operations

= ₹ 150,000 – ₹ 120,000

= ₹ 30,000

$$\text{Gross Profit Ratio} = \frac{₹\ 30,000}{₹1,50,000} \times 100 = 20\%$$

$$\text{Net Profit Ratio} = \frac{\text{Net Profit}}{\text{Revenue from Operations (Net Sales)}} \times 100$$

Net Profit = Gross Profit – Operating Expenses

= ₹ 30,000 – ₹ 12,000

= ₹ 18,000

$$\text{Net Profit Ratio} = \frac{₹\ 18,000}{₹\ 1,50,000} \times 100 = 7.5\%$$

(iii) Operating Profit Ratio

Operating profit is an indicator of operational efficiencies. It reveals only overall efficiency. It establishes relationship between operating profit and revenue from operation (net sales). This ratio is expressed as a percentage. It is calculated as:

$$\text{Operating Profit Ratio} = \frac{\text{Operating Profit}}{\text{Revenue from Operations (Net Sales)}} \times 100$$

Operating Profit = Gross Profit – (Administration expenses + selling expenses)

Significance

It helps in examining the overall efficiency of the business. It measures profitability and soundness of the business. Higher the ratio, the better is the profitability of the business. This ratio is also helpful in controlling cash.

Illustration 9

From the following details of a business concern ascertain the operating profit ratio

Details	*2013* ₹	*2014* ₹
Revenue from Operations (Sales)	60,000	80,000

Interest on Debentures	1,000	2,000
Net Profit	3,800	6,000

Solution :

2013

Net profit before interest = Net profit + Interest

= ₹ 3,800 + ₹ 1,000

= ₹ 4,800

$$\text{Operating Profit Ratio} = \frac{\text{Operating Profit}}{\text{Revenue from Operations (Net Sales)}} \times 100$$

$$\text{Operating Profit Ratio} = \frac{₹\ 4{,}800}{₹\ 60{,}000} \times 100 = 8\%$$

2014

Net Profit before Interest = ₹ 6,000 + ₹ 2,000

= ₹ 8000

$$\text{Operating Profit Ratio} = \frac{\text{Operating Profit}}{\text{Revenue from Operations (Net Sales)}} \times 100$$

$$\text{Operating Profit Ratio} = \frac{₹\ 8{,}000}{₹\ 80{,}000} \times 100 = 10\%$$

Some firms take profit before tax but usually companies take profit after tax.

Illustration 10

Calculate operating profit ratio from the following data :

	₹
Revenue from Operation (Sales)	3,00,000
Gross profit	1,20,000
Administration expenses	35,000
Selling and distribution expenses	25,000
Income on investment	15,000
Loss by fire	9,000

Solution :

$$\text{Operating Profit Ratio} = \frac{\text{Operating Profit}}{\text{Revenue from Operations (Net Sales)}} \times 100$$

$$= \frac{₹\ 60{,}000}{₹\ 3{,}00{,}000} \times 100 = 20\%$$

Note : Operating Profit = Gross profit – (Administration expenses + Selling expenses)

= ₹ 1,20,000 – (₹ 35,000 + ₹ 25,000)

= ₹ 1,20,000 – ₹ 60,000

= ₹ 60,000

INTEXT QUESTIONS 32.2

Fill in the blanks with suitable word/words :

(i) Gross profit ratio = ... X 100

(ii) .... = $\frac{\text{Operating Profit}}{\text{Net Sales}} \times 100$

(iii) Name the ratios that relate to the profitability of a business concern ....

33.3 LIMITATIONS OF ACCOUNTING RATIOS

Accounting ratios are very significant in analysing the financial statements. Through accounting ratios, it will be easy to know the true financial position and financial soundness of a business concern. However, despite the advantages of ratio analysis, it suffers from a number of limitations. The following are the main limitations of accounting ratios.

- **Ignorance of Qualitative Aspect :** The ratio analysis is based on quantitative aspect. It totally ignores qualitative aspect which is sometimes more important than quantitative aspect.
- **Ignorance of Price Level Changes :** Price level changes make the comparison of figures difficult over a period of time. Before any comparison is made, proper adjustments for price level changes must be made.
- **No Single Concept :** In order to calculate any ratio, different firms may take different concepts for different purposes. Some firms take profit before charging interest and tax or profit before tax but after interest tax. This may lead to different results.

- **Misleading Results if based on Incorrect Accounting Data :** Ratios are based on accounting data. They can be useful only when they are based on reliable data. If the data are not reliable, the ratio will be unreliable.
- **No Single Standard Ratio for Comparison :** There is no single standard ratio which is universally accepted and against which a comparison can be made. Standards may differ from Industry to industry.
- **Difficulties in Forecasting :** Ratios are worked out on the basis of past results. As such they do not reflect the present and future position. It may not be desirable to use them for forecasting future events.

WHAT YOU HAVE LEARNT

- The term solvency ratio means ability of a concern to meet its long-term obligations. The solvency ratios are :

  Debt-equity ratio

  Proprietary ratio

- The purpose of debt equity ratio is to derive an idea of the amount of capital supplied to the concern by the proprietary.

$$\text{Debt Equity Ratio} = \frac{\text{Outsiders' Fund}}{\text{Shareholders' Fund}} \quad \text{or} \quad \frac{\text{Debt}}{\text{Equity}}$$

- Proprietary ratio establishes relationship between shareholders' funds to total assets of the firm

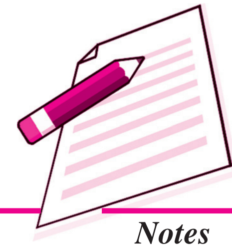
$$\text{Proprietary Ratio} = \frac{\text{Shareholders' Funds}}{\text{Total Assets}}$$

- Profitability ratio assesses the overall efficiency of the business concern.
- Important profitability ratios are :

$$\text{Gross Profit Ratio} = \frac{\text{Gross Profit}}{\text{Revenue from Operations (Net Sales)}} \times 100$$

$$\text{Net Profit Ratio} = \frac{\text{Net Profit}}{\text{Revenue from Operations (Net Sales)}} \times 100$$

$$\text{Operating Profit Ratio} = \frac{\text{Operating Profit}}{\text{Revenue from Operations (Net Sales)}} \times 100$$



Notes

- Limitations of accounting ratios are
  - ignorance of price level changes
  - ignorance of qualitative factors
  - no single concept
  - misleading result if based on incorrect accounting data
  - difficulties in forecasting

TERMINAL EXERCISE

1. Explain solvency ratios in brief.
2. What are profitability ratios? Explain the ratios in brief.
3. What are the limitations of ratio analysis?
4. What is meant by gross profit and net profit ratio?
5. From the following data, calculate (a) Gross profit ratio (b) Net profit ratio.

	₹
Revenue from operations (Sales)	25,20,000
Cost of revenue from operations	19,20,000
Net profit	3,60,000

6. Total assets ₹ 12,50,000, Total debt ₹ 10,00,000 current labilities ₹ 500,000. Calculate debt-equity ratio.
7. Following figures have been obtained from the statement of Profit and Loss of M/s Bunu Ltd. for the year 31st December, 2013.

	₹		₹
Opening Inventory	100000	Revenue from operations	560000
Purchases	350000	Closing Inventory	100000
Wages	9000	Administrative expenses	20000
Salary and administrative expense	89000	Interest on investment	10000
Non-operating expenses	30000	Profit on sale of investment	8000

You are required to calculate (a) Gross profit ratio (b) Net profit ratio (c) Operating profit ratio.

8. Following particulars pertaining to assets and liabilities of XYZ Ltd. are given:

Liabilities	*Amount* (₹)	*Assets*	*Amount* (₹)
Equity share capital	250000	Land and Building	450000
Preference share capital	200000	Plant	400000
Reserves	200000	Inventory	150000
Debentures	300000	Sundry debtors	100000
Current liabilities	200000	Cash	45000
		Prepaid expenses	5000

Calculate (a) debt equity ratio (b) proprietory ratio.

ANSWERS TO INTEXT QUESTIONS

33.1 (i) $\dfrac{\text{Outsiders' Fund}}{\text{Shareholders' Fund}}$ (ii) Solvency

(iii) Proprietary ratio (iv) 2 : 3

33.2 (i) $\dfrac{\text{Gross Profit}}{\text{Net Sales}}$ (ii) Operating profit ratio

(iii) Gross profit ratio, Net profit ratio, Return on investments, operating profit ratio

ANSWERS TO TERMINAL EXERCISE

5. (a) 23.8% (b) 14.29%
6. 2 : 1
7. (a) 35.89%, (b) 14.29% (c) 16.43%
8. (a) 0.46 : 1, (b) 56.52 : 1

ACTIVITY

Visit the office of a stock broker in the nearby market and ask annual report of two joint stock companies. Study the Banace Sheets of the two companies and compute the following ratios :

(a) Debt Equity Ratio (b) Gross Profit Ratio (c) Net Profit Ratio

Compare and comment on the profitability and solvency efficiency of the two companies.

34

CASH FLOW STATEMENT

In the previous lesson, you have learnt various types of analysis of financial statements and its tools such as comparative statements, common size statement and trend analysis, etc. You have also learnt various kinds of accounting ratios such as liquidity, activity, profitability, solvency, etc. You have learnt that accounts are mainly maintained on accrual basis but cash also plays significant role. Cash is mainly generated from operating activities which is buying assets and discharging liabilities. Cash is also raised from the issue of shares and debentures or loans but adequate cash should be made available for use in time and no cash should remain idle. For this another tool of analysis is used which is cash flow statement.. In this lesson, you will learn about cash flow statement and its methods of preparation.

OBJECTIVES

After studying this lesson, you will be able to :

- state the meaning of cash flow statement;
- explain objectives of cash flow statement;
- explain the method of preparing cash flow statement as per format;
- state the limitations of cash flow statement.

34.1 MEANING AND OBJECTIVES

Cash plays a very important role in the economic life of a business. A firm needs cash to make payment to its suppliers, to incur day-to-day expenses and to pay salaries, wages, interest and dividends etc. In fact, what blood is to a human body, cash is to a business enterprise. Thus, it is very essential for a business to maintain an adequate balance of cash. For example, a concern operates profitably but it does not have sufficient cash balance to pay dividends, what message does it convey to the shareholders and public in general. Thus, management of cash is very essential. There should be focus on movement of cash and its equivalents. Cash means, cash in hand and demand deposits with the bank. Cash equivalent consists of bank overdraft, cash credit, short term deposits and marketable securities.

Cash Flow Statement deals with flow of cash which includes cash equivalents as well as cash. This statement is an additional information to the users of Financial Statements. The statement shows the incoming and outgoing of cash. The statement assesses the capability of the enterprise to generate cash and utilize it. *Thus a Cash-Flow statement may be defined as a summary of receipts and disbursements of cash for a particular period of time. It also explains reasons for the changes in cash position of the firm.* Cash flows are cash inflows and outflows. Transactions which increase the cash position of the entity are called as inflows of cash and those which decrease the cash position as outflows of cash. Cash flow Statement traces the various sources which bring in cash such as cash from operating activities, sale of current and fixed assets, issue of share capital and debentures etc. and applications which cause outflow of cash such as loss from operations, purchase of current and fixed assets, redemption of debentures, preference shares and other long-term debt for cash. In short, a cash flow statement shows the cash receipts and disbursements during a certain period. The statement of cash flow serves a number of objectives which are as follows :

- Cash flow statement aims at highlighting the cash generated from operating activities.
- Cash flow statement **helps in planning the schedule for repayment of loan** schedule and replacement of fixed assets, etc.
- Cash is the centre of all financial decisions. It is used as the basis for the projection of future investing and financing plans of the enterprise.
- Cash flow statement helps to ascertain the liquid position of the firm in a better manner. Banks and financial institutions mostly prefer cash flow statement to analyse liquidity of the borrowing firm.
- Cash flow Statement helps in efficient and effective management of cash.
- The management generally looks into cash flow statements to understand the internally generated cash which is best utilised for payment of dividends.
- Cash Flow Statement based on AS-3 (revised) presents separately cash generated and used in operating, investing and financing activities.
- It is very **useful in the evaluation of cash position** of a firm.

Cash and Relevant Terms as per AS-3 (Revised)

As per AS-3 (revised) issued by the Accounting Standards Board

1. (a) Cash fund :

   Cash Fund includes (i) Cash in hand

   (ii) Demand deposits with banks, and

   (iii) cash equivalents.

   (b) Cash equivalents are short-term, highly liquid investments, readily convertible into cash and which are subject to insignificant risk of changes in values.

2. Cash Flows are inflows and outflows of cash and cash equivalents.

   The statement of cash flow shows three main categories of cash inflows and cash outflows, namely : operating, investing and financing activities.

   (a) **Operating activities** are the principal revenue generating activities of the enterprise.

   (b) **Investing activities** include the acquisition and disposal of long-term assets and other investments not included in cash equivalents.

   (c) **Financing activities** are activities that result in change in the size and composition of the owner's capital (including Preference share capital in the case of a company) and borrowings of the enterprise.

As per AS-3 the inflow and outflow of cash are :

Operating Activities

Cash Inflow

- Cash Sale
- Cash Received from Debtors
- Cash Received from Commission and Fees
- Royalty and Other Revenues

Cash Outflow

- Cash Purchases
- Payment to Creditors
- Cash Operating Expenses
- Payment of Wages
- Income Tax

Investing Activities

- ***Cash Inflow***
  - Sale of Fixed Assets
  - Sale of Investment
  - Interest Received
  - Dividend Received
- ***Cash Outflow***
  - Purchase of Fixed Assets
  - Purchase of Investment

Financing Activities

- ***Cash Inflow***
  - Issue of Shares
  - Issue of Debentures in Cash
  - Proceeds from long term / short term borrowing
- ***Cash Outflow***
  - Cash Repayment of amounts borrowed
  - Interest Paid on Loans / Debentures
  - Dividends Paid on Equity and Preference share Capital

INTEXT QUESTIONS 34.1

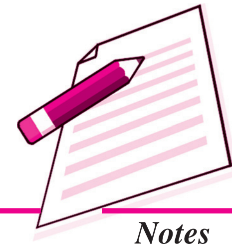
Fill in the blanks with suitable word/words :

(i) Cash flow statement deals with flow of cash which includes cash and ....

(ii) Cash flow statement is a .... statement.

(iii) Cash flow statement shows .... and .... during a particular period.

(iv) As per AS 3 (revised), cash fund includes cash, demand deposit with bank and ....



34.2 METHOD OF PREPARING CASH FLOW STATEMENT

Format of Cash Flow Statement
for the year ended ....
As per Accounting Standard - 3 (Revised)

	Particulars		₹
(i)	Cash flows from operating Activities	xxx	xxx
	Net Profit as per Statement of Profit and Loss or difference between closing balance and opening balance of Statement of Profit and Loss		
	Add : Transfer to reserve	xxx	
	Proposed dividend for current year	xxx	
	Interim dividend paid during the year	xxx	
	Provision for tax made during the current year	xxx	
	Extraordinary items, if any, shown in statement of Profit and Loss	xxx	xxx
		xxx	xxx
	Less : Extraordinary Items, if any, shown in statement of Profit and Loss	xxx	
	Refund of Tax credited to be shown in statement Profit and Loss	xxx	xxx
A.	Net profit before taxation and Extra ordinary items		
	Adjustment for Non-Cash and Non-Operating Items.	xxx	xxx
B.	Add :		
	– Depreciation	xxx	
	– Preliminary expenses written off	xxx	
	– Discount on issue of shares and debentures written off	xxx	
	– Interest on borrowings and debentures	xxx	
	– Loss on sale of fixed assets	xxx	xxx
			xxx
C.	Less :		
	– Interest income/received	xxx	
	– Dividend income received	xxx	
	– Rental income received	xxx	
	– Profit on sale of fixed assets	xxx	xxx
			xxx
D.	Operating profit before working capital changes		
	(A + B – C)	xxx	
			xxx
E.	*Add :* Decrease in current assets and increase in current liabilities		xxx

F.	***Less :*** Increase in current assets and decrease in current liabilities	xxx	
G	Cash generated from operations (D + E – F)		xxx
H.	Less : Income tax paid (Net tax refund received)		xxx
I.	Cash flow from operating activities before extraordinary items		xxx
	Adjusted extraordinary items (+/–)		xxx
J.	Net cash from operating activities		xxx
(ii)	Cash from Investing Activities		
	Add :		
	– Proceeds from sale of fixed assets		xxx
	– Proceeds from sale of investments		xxx
	– Proceeds from sale of intangible assets		xxx
	– Interest and dividend received		xxx
	– Rental Income		xxx
			xxx
	Less :		
	– Purchase of fixed assets	xxx	
	Purchase of investment	xxx	
	– Purchase of intangible assets like goodwill	xxx	xxx
			xxx
	Adjusted extraordinary items (+/–)		xxx
	Net cash from (or used in) investing activities		xxx
			xxx
(iii)	Cash flows from financing activities		
	Add :		
	Proceeds from issue of shares and debentures	xxx	
	Proceeds from other long term borrowings	xxx	
		xxx	
	Less :		
	Final dividend paid	xxx	
	Interim dividend paid	xxx	
	Interest on debentures and loans paid	xxx	
	Repayment of loans	xxx	
	Redemption of debenture and preference shares	xxx	xxx
	Adjusted extraordinary items (+/–)	xxx	xxx
	Net cash from (or used in) financing activities		xxx
			xxx
(iv)	Net increase/Decrease in cash and cash equivalent (i + ii + iii)		xxx

(v)	Add : cash and cash equivalents in the beginning of the year		
–	cash in hand	xxx	
–	cash at bank (Bank overdraft)	xxx	
–	short term deposit	xxx	
–	marketable securities	xxx	
–	cash and cash equivalents in the end of the year		xxx
–	cash in hand	xxx	
–	cash at Bank (by bank overdraft)	xxx	
–	short term deposits	xxx	
–	Marketable Securities	xxx	xxx

Some facts about cash flow statement :

(i) Only listed companies are required to prepare and present Cash flow statement.

(ii) The Accounting period for the Cash Flow Statement is the same for which Profit and Loss Account and Balance Sheet are prepared.

(iii) Cash flow items are as (a) Cash flow from operating activities :(b) Cash flow from investing activities (c) Cash flow from financing activities.

(iv) Operating activities include revenue producing activities which are not investing and financing activities.

(v) There are two methods of calculating cash flow from operating activities namely Direct method and Indirect method. SEBI (Securities Exchange Board of India) Guidelines recommend for only direct method.

(vi) Extra ordinary Items : The Cash flow associated with extra ordinary items should be classified as arising from operating, investing and financing activities. For example, the amount received from Insurance Company on account of Loss of Stock or loss from earthquake should be reported as cash flow from operating activities.

INTEXT QUESTIONS 34.2

Fill in the blanks with appropriate word/words :

(i) Only .... companies prepare cash flow statement.

(ii) Cash flows are classified in to three parts i.e. operating activities, financing activities and .... activities.

34.3 PREPARATION OF CASH FLOW STATEMENT

(i) Operating Activities

Cash flow from operating activities are primarily derived from the principal revenue generating activities of the enterprise. A few items of cash flows from operating activities are :

(i) Cash receipt from the sale of goods and rendering services.

(ii) Cash receipts from royalties, fee, Commissions and other revenue.

(iii) Cash payments to suppliers for goods and services.

(iv) Cash payment to employees

(vi) Cash payment or refund of Income tax.

Determination of cash flow from operating activities

There are two stages for arriving at the cash flow from operating activities

Stage-I

Calculation of operating profit before working capital changes, It can be calculated in the following manner.

Net profit before Tax and extra ordinary Items		xxx	
Add :	Non-cash and non operating Items which have already been debited to profit and Loss Account i.e.		
	Depreciation	xxx	
	Amortisation of intangible assets	xxx	
	Loss on the sale of Fixed assets.	xxx	
	Loss on the sale of Long term Investments	xxx	
	Provision for tax	xxx	
	Dividend paid	xxx	xxx
		xxx	
Less :	Non-cash and Non-operating Items which have already been credited to Profit and Loss Account i.e.		
	Profit on sale of fixed assets	xxx	
	Profit on sale of Long term investment	xxx	xxx
	Operating profit before working Capital changes.		xxx

Stage-II

After getting operating profit before working capital changes as per stage I, adjust increase or decrease in the current assets and current liabilities.

The following general rules may be applied at the time of adjusting current assets and current liabilities.

A. Current Assets

(i) An increase in an item of current assets causes a decrease in cash inflow because cash is blocked in current assets.

(ii) A decrease in an item of current assets causes an increase in cash inflow because cash is released from the sale of current assets.

B. Current Liabilities

(i) An increase in an item of current liability causes a decrease in cash outflow because cash is saved.

(ii) A decrease in an item of current liability causes increase in cash out flow because of payment of liability.

Thus,

Cash from Operations = Operating Profit before Working Capital Changes + Net decrease in Current Assets + Net Increase in Current Liabilities – Net increase in Current Assets – Net decrease in Current Liabilities.

Illustration 1

The net Income reported in the Income Statement for the year was ₹ 110,000 and depreciation on fixed assets for the year was ₹ 44000. The balances of the current assets and current liabilities at the beginning and at the end of the year were as follows. Calculate cash from operating activities.

Current Items	*End of the year Amount (₹)*	*Beginning of the year Amount (₹)*
Cash	130,000	140,000
Debtors	200,000	180,000
Inventories	290,000	300,000
Prepaid expenses	15,000	16,000
Account payables	102,000	1,16,000

Solution :

Step - I

Cash from Operating Activities

Details		***Amount (₹)***
Net Income		1,10,000
Adjustment for non cash and Non-operating items		
Add Depreciation		44,000
Operating Profit before		154,000
working capital changes		
Current Assets :		
Add : (a) Decrease in inventories	10,000	
(b) Decrease in prepaid expenses	1000	11000
		1,65,000
Deduct : (a) Increase in Debtors Current Liabilities	(20,000)	
(b) Decrease in Account payables	(14,000)	34,000
Net Cash flow from operating Activities		1,31,000

Step - II

Investing Activities

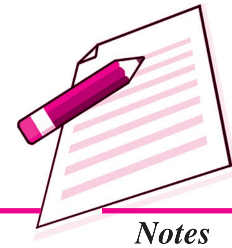
Investing Activities refer to transactions that affect the purchase and sale of fixed or long term assets and investments.

Examples of cash flow arising from Investing activities are

1. Cash payments to acquire fixed Assets
2. Cash receipts from disposal of fixed assets
3. Cash payments to acquire shares, or debenture as investment.
4. Cash receipts from the repayment of advances and loans made to third parties.

Thus, Cash inflow from investing activities are

- Cash sale of plant and machinery, land and Building, furniture, goodwill etc.
- Cash sale of investments made in the shares and debentures of other companies
- Cash receipts from collecting the Principal amount of loans made to outsiders.



Cash outflow from investing activities are

- Purchase of fixed assets i.e. land, Building, furniture, machinery etc.
- Purchase of Intangible assets i.e. goodwill, trade mark etc.
- Purchase of shares and debentures
- Purchase of Government Bonds
- Loan made to outsiders.

Illustration 2

From the following information calculate the cash flow from investing activities

Particulars	*Opening*	*Closing*
Machinery (at cost)	4,00,000	4,20,000
Accumulated Depreciation	1,00,000	1,10,000
Patents	2,80,000	1,60,000

Additional Information :

(i) During the year a machine costing ₹ 40,000 with this accumulated depreciation ₹ 24000 was sold for ₹ 20,000

(ii) Patents were written off to the extent of ₹ 40,000 and some patents were sold at a profit of ₹ 20,000

Solution :

Cash Flow from Investing Activities

Particulars	₹
Inflow from sale of machinery	20,000
Inflow from sale of patent (2)	1,00,000
	1,20,000
Outflow on purchase of machinery (1)	(60,000)
Net cash flow from investing activities	60,000

Working Notes :

Machinery A/c

Balance b/d	4,00,000	Bank (Inflow)	20,000
Statement of Profit and Loss (Profit on sale of machine)	4,000	Accumulated depreciation (Depreciation on machinery sold)	24,000

Bank A/c	60000	Balance c/d	420000
	464000		464000

Patent A/c

Balance b/d	2,80,000	Bank A/c (Inflow) Bal. Fig.	1,00,000
Statement of Profit and Loss	20,000	Statement of Profit and Loss	40,000
(Profit)		Balance c/d	1,60,000
	3,00,000		300000

Step - III

Financing Activities

The third section of the cash flow statement reports the cash paid and received from activities with non-current or long term liabilities and shareholders Capital. Examples of cash flow arising from financing activities are

- Cash proceeds from issue of shares or other similar instruments.
- Cash proceeds from issue of debentures, loans, notes, bonds, and other short-term borrowings
- Cash repayment of amount borrowed

Cash Inflow from financing activities are :

- Issue of Equity and preference share capital for cash only.
- Issue of Debentures, Bonds and long-term notes for cash only

Cash outflow from financing activities are :

- Payment of dividends to shareholders
- Redemption or repayment of loans i.e. debentures and bonds
- Redemption of preference share capital
- Buy back of equity shares.

Illustration 3

From the following information. Calculate the Cash from financing activities:

Particulars	*31.12.2006* ₹	*31.12.2007* ₹
Equity share capital	4,00,000	5,00,000
10% debentures	1,50,000	1,00,000
Securities premium	40,000	50,000

Additional Information : Interest paid on debentures ₹10000.

Solution :

Calculation of Cash from financing activities

Particulars		₹
Cash proceeds from the issue of shares		1,10,000
(Including premium)		
Interest paid on debentures	10,000	
Redemption of debentures	50,000	60,000
		50,000

Illustration 4

Classify the following into cash flows from operating activities, investing activities and financing activities

(a) Cash sale of goods

(b) Cash paid to suppliers of raw material

(c) Cash payments of salaries and wages to employees.

(d) Cash payment to acquire fixed assets

(e) Cash proceeds from issues of shares at premium.

(f) Payment of dividend

(g) Interest received on investments

(h) Interest on debentures

(i) Payment of income tax

(j) Cash payment of long term loans

Solution

A. Cash Flow from operating Activities

(a) **Cash sale of goods :** Normal business activity of selling Inventories or goods (Cash inflow)

(b) **Cash paid to suppliers** of raw materials

Routine payments for purchasing the goods (Cash outflow)

(c) **Cash payment of salaries and wages :**

Cash payments to employees for their services in the office (Cash outflow)

(i) **Payment of Income Tax :** Payment of tax on business Income (Cash outflow)

B. Cash Flow from investing Activities

(a) **Cash payment to acquire fixed assets :** Purchase of long term assets (Cash outflow)

(b) **Interest received on Investments :** It is an Income on Investments (Cash inflow)

C. Cash Flow from financing Activities

(a) Cash proceeds from issuing shares at premium : (Cash inflow)

(b) **Payment of dividends :** It is related to issue of share capital, a (Cash outflow)

(c) **Interest paid on debentures :** Payment associated with loan capital (Cash outflow)

(i) **Cash payment of a long term loan :** Redemption of loan or borrowed capital (Cash outflow)

INTEXT QUESTIONS 34.3

Classify the following items into (i) Operating (ii) Investing and Financing activities.

(i) Refund of income tax

(ii) Payment of dividend to shareholders

(iii) Purchase of land and building

(iv) Purchase of plant

(v) Interest paid on debentures.

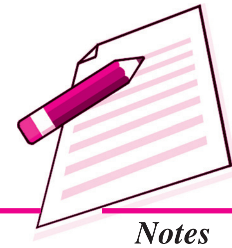
34.4 TREATMENT OF SPECIAL ITEMS

(i) **Payment of Interim Dividend :** The following procedure is followed

(a) The amount of interim dividend paid during the year is shown as outflow of cash in cash flow statement.

(b) It will be added back to the profits for the purpose of calculating cash provided from operating activities.

(c) No adjustment is necessary if the cash provided from operating activities is calculated on the basis of revised figure of net profit.



Notes

(ii) Proposed Dividend : The dividend is always declared in the general meeting after the preparation of Balance Sheet. It is therefore, a non-operating item which should not be permitted to affect the calculation of cash generated by operating activities. Thus, the amount of proposed dividends would be added back to current years profit and payments made during the year in respect of dividends would be shown as an outflow of cash.

(iii) Share Capital : The increase in share capital is regarded as inflow of cash only when there is an increase in share capital. For example, if a company issues 10000 equity shares of ₹ 10 each for cash only, ₹ 100,000 would be shown as inflow of cash from financing activities. Similarly, the redemption of preference shares is an outflow of cash. But where the share capital is issued to finance the purchase of fixed assets or the debentures are converted into equity shares there is no cash flow. Further, the issue of bonus shares does not cause any cash flows.

(iv) Purchase or sale of fixed Assets : The figures appearing in the comparative balance sheets at two dates in respect of fixed assets might indicate whether a particular fixed asset has been purchased or sold during the year. This would enable to determine the inflows or outflows of cash. For example, If the plant and machinery appears at ₹ 60,000 in the current year and ₹50,000 in the previous year, the only conclusion, in the absence of any other information is that there is a purchase of fixed assets for ₹10000 during the year. Hence, ₹10000 would be shown as outflow of cash.

(v) Provision for Taxation : It is a non-operating expenses or an item of appropriation in the Income statement/Profit and Loss Account and therefore should not be allowed to reduce the cash provided from operating activities. Hence, if the profit is given after tax and the amount of the provision for tax made during the year is given, the same would be added back to the current year profit figure.

In the cash flow statement, the tax paid would be recorded separately as an outflow of cash. The item of provision for taxation, would not be treated as current assets.

Sometimes, the only information available about provision for taxation in the opening balance sheet and closing balance sheet. In such a case the figure in the opening balance sheet is treated as an outflow of cash while the figure in the closing balance sheet is treated as a non-cash and non-operating expense and thus is added back to net Income figure to find out the cash provided from operating activities.

Illustration 5

The comparative balance sheets of Bansal Private Limited at two different dates provide the following information.

Assets	March 31, 2006 Amount (₹)	March 31, 2007 Amount (₹)
Plant and machinery	13,50,000	14,40,000

It is informed that depreciation amounting to ₹ 60,000 has been provided during the year. Find the changes that have taken place in the asset and also state their effect on cash flows.

Solution :

In order to identify the transactions affecting the asset account, the proper procedure is to prepare the plant and machinery account as shown below:

Plant and Machinery Account

Particulars	Amount	Particulars	Amount
Balance b/d	13,50,000	Depreciation (given)	60,000
Bank A/c (New machine purchased)	1,50,000	Balance c/d	14,40,000
	15,00,000		15,00,000

Note

- In the absence of specific information, it may be presumed that the additional machinery was purchased for ₹1,50,000.
- The amount spent on the plant and machinery represents a reduction in the cash and its equivalent. It is, therefore, an example of outflow of cash.

Illustration 6

In the comparative balance sheet of Wilson & Sons Ltd., the position of Building Account is given as under.

Liabilities	March 31, 2013 Amount ₹	March 31, 2014 Amount ₹	Assets	March 31, 2013 Amount ₹	March 31, 2014 Amount ₹
Accumulated depreciation (Building)	7,00,000	7,90,000	Building	3,84,0000	3,91,0000

Additional Information

A part of the building of ₹ 74,000 was sold for ₹ 60,000. The accumulated depreciation on building sold was ₹ 20,000 Analyse the transaction.

Solution

The different transactions affecting the building account are to be identified by preparing the following accounts :

Building Account

Dr | Cr.

Particulars	₹	*Particulars*	₹
Balance b/d	38,40,000	Cash (Inflow)	60,000
Statement of Profit and loss (gain on sale)	6,000	Accumulated Depreciation A/c	20,000
Bank A/c			
Purchase (outflow)	1,44,000	Balance c/d	39,10,000
	39,90,000		39,90,000

Accumulated Depreciation Account

Dr | Cr.

Particulars	₹	*Particulars*	₹
Building A/c	20,000	Balance b/d	7,00,000
Balance c/d	7,90,000	Statement of Profit and Loss	1,10,000
	8,10,000		8,10,000

Note

- The gain on sale of building (i.e. ₹ 6000) would be deducted from the reported Income (or profit)
- Purchase of building for ₹144,000 is identified from the balancing figure in the Building account as an outflow of cash.
- ₹ 110,000 a charge to Profit and Loss Account is non-cash expense and would be added back to the reported net income (profit)

Illustration 7

The following information is given to you about the provision for taxation of M/s Gill India (Pvt) Limited.

Liabilities	*March 31, 2013* ₹	*March 31, 2014* ₹
Provision for taxation	15000	20000

Net Income for the year 2013-14 is ₹ 50,000

How would you deal with this item assuming it as non-current liability?

Solution

Provision for the year 2012-13 is an outflow of cash.

Provision for the 2013-14 shall be dealt with as follows

	₹
Net Income for the 2013-14	50,000
Add provision for Taxation for 2013-14	20000
Cash provided from operating activities	70,000

Illustration 8

The following relevant Information is obtained from the book of Venugopalan Limited.

Liabilities	*March 31, 2013* ₹	*March 31, 2014* ₹
Provision for Taxation	50,000	70,000

The amount of tax paid during 2013-14 amounted to ₹ 40000. How would you deal with this item presuming to be non current? You are also given net profit after taxation was ₹ 80000.

Solution

To solve this problem, one should find out the amount of provision for tax charged to Statement of Profit & Loss for the year 2013-14.

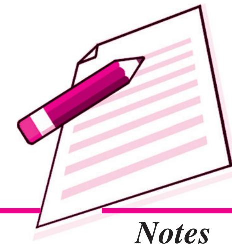
Provision for Taxation Account

Dr Cr

Particulars	*Amount* ₹	*Particulars*	*Amount* ₹
Bank (payment)	40,000	Balance b/d	50,000
Balance c/d	70,000	Statement of Profit and loss (Balances Figure)	60,000
	1,10,000		1,10,000

(i) loss 40000 is an outflow of cash

(ii) Cash provided from operating activities will be calculated as



Notes

Net Income after taxation	80,000
Add: Provision for taxation treated as non-cash expense	60,000
	1,40,000

Illustration 9

The following comparative balance sheets contain the relevant information about provision for taxation.

Liabilities	*March 31, 2013* ₹	*March 31, 2014* ₹
Provision for Taxation	20,000	30,000

You are informed that Provision for Taxation ₹ 50,000 was charged to Statement of profit and Loss for the year 2013-14. Ascertain the cash used.

Solution

Provision for Taxation Account

Dr Cr

Particulars	*Amount* ₹	*Particulars*	*Amount* ₹
Bank (Balancing figure)	40,000	Balance b/d	20,000
Balance c/d	30,000	Statement of Profit and Loss	50,000
	70,000		70,000

Note :

- ₹ 40,000 would be shown as an outflow of cash
- ₹ 50,000 would be treated as non cash expense and added back to net Income figure to compute cash provided from operations.

Illustration 10

From the summarised cash account of ABC Limited prepare cash flow statement for the year ended 31st December 2013 in accordance with AS-3 (Revised) using the direct method and indirect method. The company does not have any cash equivalents:

Summarised Cash A/c

Particulars	*Amount (₹ 000)*	*Particulars*	*Amount (₹ 000)*
Balance on 1.1.2013	50	Payment to Suppliers	2,000

Issue of equity shares	300	Purchase of fixed assets	200
Receipts from customers	2,800	Overhead expenses	200
Sale of fixed assets	100	Wages and salaries	100
		Taxation	250
		Dividend	50
		Repayment of Bank Loan	300
		Balance on 31.12.2013	150
	3,250		3,250

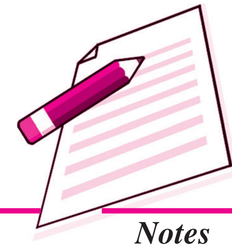
Additional Information : Net profit before tax for the year 2013 was ₹ 500000.

Solution :

Cash Flow Statement of ABC Ltd

for the year ended 31st December 2013 (Indirect method)

	₹ 000	₹ 000
A. Cash flow from operating activities		
Net profit before tax	500	
Income tax paid	(250)	
Net cash from operating activities		250
B. Cash flow from investing activities		
Purchase of fixed assets	(200)	
Sale of fixed assets	100	
Net cash used in investing activities		(100)
C. Cash flow from financing activities :		
Issue of equity shares	300	
Repayment of bank loan	(300)	
Dividend paid	(50)	
Net cash used in financing activities		(50)
Net increase in cash (A+B+C) (Net cash inflow from activities)		100
Add : Opening balance of cash		50
Closing balance of cash		150



Notes

Illustration 11

Following are the Balance Sheets of *X* Ltd. Prepare Cash Flow Statement.

Particulars	*Note No.*	*31st March, 2014 (₹)*	*31st March, 2013 (₹)*
I. EQUITY AND LIABILITIES			
1. Shareholders' Funds			
(a) Share Capital		25,00,000	20,00,000
(b) Reserves and Surplus	1	2,30,000	1,00,000
2. Current Liabilities			
Trade Payables		4,50,000	7,00,000
Total		**31,80,000**	**28,00,000**
II. ASSETS			
1. Non-Current Assets			
Fixed Assets - Tangible Assets (Land)		6,60,000	5,00,000
2. Current Assets			
(a) Inventories		9,00,000	8,00,000
(b) Trade Receivables		11,50,000	12,00,000
(c) Cash and Cash Equivalents		4,70,000	3,00,000
Total		**31,80,000**	**28,00,000**

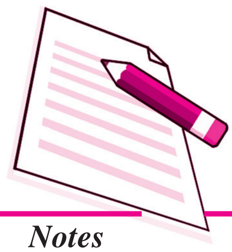
Note to Accounts

Particulars	*31st March, 2014 (₹)*	*31st March, 2014 (₹)*
1. Reserves and Surplus		
Surplus, *i.e.*, Balance in Statement of Profit & Loss	2,30,000	1,00,000

Solution :

_X_ Ltd.
Cash Flow Statement
for the year ended 31st March, 2014

Particulars	₹	₹
Cash Flow from Operating Activities		
Profit for the Year (Difference between Closing and Opening Surplus, *i.e.*, Balance in Statement of Profit and Loss) (₹ 2,30,000 - ₹ 1,00,000)	1,30,000	
Add : Decrease in Current Asset and Increase in Current Liabilities :		
Decrease in Trade Receivables	50,000	
	1,80,000	



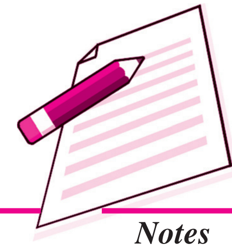
Notes

Less : Increase in Current Asset and Decrease in Current Liabilities :			
Increase in Inventories	(1,00,000)		
Decrease in Trade Payables	(2,50,000)	(3,50,000)	
Cash Used in Operating Activities			(1,70,000)
Cash Flow from Investing Activities			
Cash Payment for Land Purchased		(1,60,000)	
Cash Used in Investing Activities			(1,60,000)
Cash Flow from Financing Activities			
Cash Proceeds from Issue of Shares		5,00,000	
Cash Flow from Financing Activities			5,00,000
Net Increase in Cash and Cash Equivalents			1,70,000
Add: Cash and Cash Equivalents in the Beginning			3,00,000
Cash and Cash Equivalents at the End			4,70,000

Illustration 12

Prepare Cash Flow Statement on the basis of the information given in the Balance Sheet of P.S. Ltd. as at 31st March, 2014 and 31st March, 2013 :

Particulars	*Note No.*	*31st March, 2014 (₹)*	*31st March, 2013 (₹)*
I. EQUITY AND LIABILITIES			
1. Shareholders' Funds			
(a) Share Capital		2,50,000	2,00,000
(b) Reserves and Surplus	1	70,000	50,000
2. Non-Current Liabilities			
Long-term Borrowings (12% Debentures)		80,000	1,00,000
3. Current Liabilities			
(a) Trade Payables	2	1,60,000	60,000
(b) Other Current Liabilities (Outstanding Liabilities)		20,000	25,000
Total		**5,80,000**	**4,35,000**
II. ASSETS			
1. Non-Current Assets			
(a) *Fixed Assets :*			
(i) Tangible Assets :Land and Building		2,80,000	2,00,000
(ii) Intangible Assets : Patents		2,000	10,000



(b) Long-term Loans and Advances		1,30,000	1,00,000
2. Current Assets			
(a) Current Investment		5,000	3,000
(b) Inventories		90,000	70,000
(c) Trade Receivables		60,000	40,000
(d) Cash and Cash Equivalents		13,000	12,000
Total		**5,80,000**	**4,35,000**

Note to Accounts

Particulars	*31st March, 2014 (₹)*	*31st March, 2014 (₹)*
1. Reserves and Surplus		
Surplus, *i.e.,* Balance in Statement of Profit & Loss	70,000	50,000
2. Trade Payables		
Creditors	60,000	40,000
Bills Payable	1,00,000	20,000
	1,60,000	60,000

Solution :

P.S. Ltd.

Cash Flow Statement

for the year ended 31st March, 2014

Particulars		₹
I. Cash Flow from Operating Activities		
Closing Balance of Surplus, *i.e.,* Balance in Statement of Profit and Loss		70,000
Less: Opening Balance of Surplus, *i.e.,* Balance in Statement of Profit and Loss		(50,000)
Net Profit before Tax and Extraordinary Items		20,000
Add : Non-cash Expenses : Patents Amortised	8,000	
Non-operating Expenses : Interest on Long'term Loans*	12,000	20,000
Operating Profit before Working Capital Changes		40,000
Add : *Increase in Current Liabilities :*		
Increase in Creditors	20,000	
Increase in Bills Payable	80,000	1,00,000
		1,40,000

Less : *Increase in Current Asset and Decrease in Current Liabilities :*		
Decrease in Outstanding Expenses	(5,000)	
Increase in Trade Receivables	(20,000)	
Increase in Inventories	(20,000)	(45,000)
Cash Flow from Operating Activities (I)		95,000
II. Cash-Flow from Investing Activities		
Purchase of Land and Building		(80,000)
Loans and Advances		(30,000)
Cash Used in Investing Activities (II)		(1,10,000)
III. Cash Flow from Financing Activities		
Proceeds from Issue of Equity Shares		50,000
Repayment of Long-term Borrowings		(20,000)
Interest on Long-term Loans		(12,000)
Cash Inflow from Financing Activities (III)		18,000
IV. Net Increase in Cash and Cash Equivalents (I + II + III)		**3,000**
V. Cash and Cash Equivalents in the beginning of the year (₹.3,000 + ₹ 12,000)		**15,000**
VI. Cash and Cash Equivalents at the end of the year (IV + V) (₹ 5,000 + ₹ 13,000)		**18,000**

* Debenture interest @ 12% on ₹ 1,00,000.

Limitations of cash flow statement

Though it is true that cash flow statement is very useful now-a-days and serves many purposes. But it is necessary to take certain precautions while making use of this important tool. The reason is that misleading conclusions might be found by not properly relating net income figure to the cash flow. Some of the significant limitations of Cash Flow Statement are given below:

- It is very difficult to precisely define the term 'cash'
- There are controversies over a number of items like cheques, stamps, postal orders etc. to be included in cash or not.
- As the present business moves from the cash basis to accrual basis, the prepaid and credit transactions might be represented an increase in working capital and it would be misleading to equate net income to cash flow because a number of non cash items would affect the net income.

INTEXT QUESTIONS 34.4

Fill in the blanks with suitable word/words :

(i) Provision for taxation is .... expenses.

(ii) Increase in share capital is ....

(iii) purchase of fixed assets is ....

(iv) Redemption of debentures is ....

(v) Sale of fixed assets is ....

(vi) Issue of debentures is ....

WHAT YOU HAVE LEARNT

- Cash flow statement deals with flow of cash which includes cash equivalent as well as cash.
- Cash flow statement is a summary of cash receipts and disbursements during a certain period.
- Cash flow statement is prepared as per AS-3 (Revised).
- Cash flow statement shows three categories of cash inflows and outflows i.e. (i) Operating activities (ii) Investing activities (iii) Financing activities
- Operating activities are the revenue generating activities of the enterprise.
- Investing activities constitute the acquisition and disposal of long term assets and other investments not included in cash and equivalents.
- Financing activities are activities that result in change in the size and composition of the share capital and borrowings of the enterprise.
- The cash flows from extraordinary items are to be stated separately as arising from operating, investing and financing activities.

TERMINAL EXERCISE

1. What do you mean by Cash Flow Statement? State main objectives of cash flow statement.

2. Define cash as per AS-3 (revised). How the various activities are classified as per AS-3 revised while preparing cash flow statement.

Notes

3. Give three examples of operating activities.

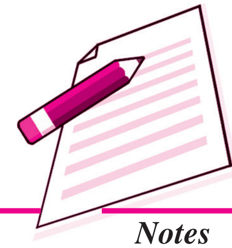
4. Give two examples of investing activities.

5. From the following Balance Sheets of *X* Ltd., prepare Cash Flow Statement:

Particulars	*Note No.*	*31st March, 2014 (₹)*	*31st March, 2013 (₹)*
I. EQUITY AND LIABILITIES			
1. Shareholders' Funds			
(a) Share Capital	1	2,00,000	1,80,000
(b) Reserves and Surplus	2	6,400	6,000
2. Non-Current Liabilities			
Long-term Borrowings :			
10% Debentures		14,000	12,000
3. Current Liabilities			
(a) Short-term Borrowing			
(Bank Overdraft)		13,600	25,000
(b) Trade Payables (Creditors)		22,000	24,000
(c) Short-term Provisions	3	20,000	16,000
Total		**2,76,000**	**2,63,000**
II. ASSETS			
1. Non-Current Assets			
Fixed Assets	4	1,50,000	1,60,000
2. Current Assets			
(a) Trade Receivables		48,000	40,000
(b) Inventories		71,000	60,600
(c) Cash and Cash Equivalents		7,000	2,400
Total		**2,76,000**	**2,63,000**

Notes to Accounts

Particulars	*31 March, 2014 (₹)*	*31 March, 2013 (₹)*
1. Share Capital		
Share Capital	1,80,000	1,55,000
10% Preference Share Capital	20,000	25,000
	2,00,000	1,80,000



Notes

2. Reserves and Surplus		
General Reserve	4,000	4,000
Surplus *i.e.,* Balance in Statement of Profit & Loss	2,400	2,000
	6,400	6,000
3. Short-term Provisions		
Provision for tax	8,000	5,000
Proposed Dividend	12,000	11,000
	20,000	16,000
4. Fixed Assets		
Cost	1,80,000	1,82,000
Less : Accumulated Depreciation	30,000	22,000
	1,50,000	1,60,000

6. From the following Balance Sheets of Human Kind Pharamacticuals Ltd.

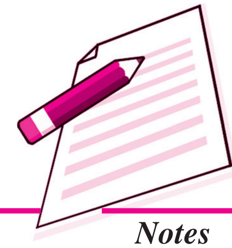
Particulars	*Note No.*	*31st March, 2014 (₹)*	*31st March, 2013 (₹)*
I. EQUITY AND LIABILITIES			
1. Shareholders' Funds			
(a) Share Capital	1	2,90,000	2,50,000
(b) Reserves and Surplus	2	72,000	50,000
2. Current Liabilities			
Trade Payables		5,000	23,000
Total		**3,67,000**	**3,23,000**
II. ASSETS			
1. Non-Current Assets			
Fixed Assets :			
(a) Tangible	3	1,50,000	1,40,000
(b) Intangible (Goodwill)		20,000	30,000
2. Current Assets			
(a) Trade Receivables		1,60,000	1,20,000
(b) Inventories		20,000	18,000
(c) Cash		17,000	15,000
Total		3,67,000	3,23,000

Notes to Accounts

Particulars	**31st March, 2014 (₹)**	**31st March, 2013 (₹)**
1. Share Capital		
Equity Share Capital	2,40,000	2,00,000
12% Preference Share Capital	50,000	50,000
	2,90,000	2,50,000
2. Reserves and Surplus		
General Reserve	50,000	35,000
Surplus, *i.e.,* Balance in Statement of Profit & Loss	22,000	15,000
3. Fixed Assets (Tangible)		
Building	80,000	1,00,000
Plant	70,000	40,000
	1,50,000	1,40,000

7. From the following Balance Sheets Kamni Medical College & research Centre Ltd. as at 31st March, 2014 and 31st March, 2013, prepare Cash Flow Statement :

Particulars	***Note No.***	***31st March, 2014 (₹)***	***31st March, 2013 (₹)***
I. EQUITY AND LIABILITIES			
1. Shareholders' Funds			
(a) Share Capital	1	16,00,000	10,40,000
(b) Reserves and Surplus	2	5,50,000	2,60,000
2. Non-Current Liabilities			
Long-term Borrowings:			
9% Debentures		4,00,000	6,00,000
3. Current Liabilities			
Trade Payables		4,50,000	1,00,000
Total		**30,00,000**	**20,00,000**
II. ASSETS			
1. Non-Current Assets			
Fixed Assets		20,00,000	15,00,000
2. Current Assets			
(a) Inventories		3,00,000	2,00,000
(b) Trade Receivables		2,00,000	1,00,000
(c) Cash and Cash Equivalents		5,00,000	2,00,000



Notes

Notes to Accounts

Particulars	***31st March, 2014 (₹)***	***31st March, 2013 (₹)***
1. Share Capital		
Equity Share Capital	15,00,000	10,00,000
7% Preference Share Capital	1,00,000	40,000
	16,00,000	10,40,000
2. Reserves and Surplus		
Surplus, *i.e.*, Balance in Statement of P & L	1,50,000	2,00,000
General Reserve	4,00,000	60,000
	5,50,000	2,60,000

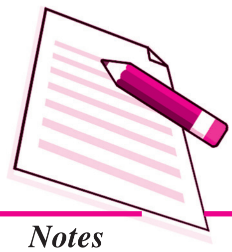
Additional Information :

i. During the year a machinery costing ₹20,000

ii. Dividend paid ₹ 50,000.

8. From the following Balance Sheets of *X* Ltd., prepare Cash Flow Statement:

Particulars	***Note No.***	***31st March, 2014 (₹)***	***31st March, 2013 (₹)***
I. EQUITY AND LIABILITIES			
1. Shareholders' Funds			
(a) Share Capital		4,00,000	3,00,000
(b) *Reserves and Surplus :* Surplus, *i.e.*, Balance in Statement of Profit & Loss		1,10,000	85,000
2. Non-Current Liabilities			
Long-term Borrowing : Bank Loan		75,000	1,00,000
3. Current Liabilities			
(a) Trade Payables (Creditors)		2,95,000	3,10,000
(b) Short-term Provisions	1	60,000	45,000
Total		9,40,000	8,40,000
II. ASSETS			
1. Non-Current Assets			
Fixed Assets (Net)	2	4,15,000	3,20,000
2. Current Assets			
(a) Inventories (Stock)		2,25,000	2,00,000
(b) Trade Receivables	3	3,00,000	2,90,000
(c) Cash and Cash Equivalents			30,000
Total		**9,40,000**	**8,40,000**



Notes

Notes to Accounts

Particulars	31st March, 2014 (₹)	31st March 2013 (₹)
1. Short-term Provisions		
Proposed Dividend	60,000	45,000
2. Fixed Assets		
Less : Accumulated Depreciation	5,50,000	4,00,000
3. Trade Receivables		
Debtors	1,90,000	2,10,000
Bills Receivable	1,10,000	80,000
	3,00,000	2,90,000

Additional Information :

A piece of machinery costing ₹ 60,000 on which accumulated depreciation was ₹ 15,000 was sold for ₹ 30,000.

9. The Balance Sheets of Virendra Paper Ltd. as at 31st March, 2014 and 2013 are given below :

Particulars	*Note No.*	*31st March, 2014 (₹)*	*31st March 2013 (₹)*
I. EQUITY AND LIABILITIES			
1. Shareholders' Funds			
(a) Share Capital		7,20,000	6,00,000
(b) *Reserves and Surplus :* Surpluse, *i.e.,* Balance in Statement of Profit & Loss		4,80,000	3,75,000
2. Non-Current Liabilities			
Long-term Borrowing :			
10% Debentures		2,70,000	4,50,000
3. Current Liabilities			
Trade Payables		1,20,000	90,000
Total		**15,90,000**	**15,15,000**
II. ASSETS			
1. Non-Current Assets			
Fixed Assets	1	7,50,000	7,20,000
2. Current Assets			
(a) Trade Receivables		3,00,000	2,25,000
(b) Inventories		3,60,000	4,20,000
(c) Cash and Cash Equivalents		1,80,000	1,50,000
Total		**15,90,000**	**15,15,000**

Notes to Accounts

Particulars			31st March, 2014 (₹)	31st March 2013 (₹)
1. Fixed Assets				
Land			2,40,000	3,00,000
	2014 (₹)	*2013 (₹)*		
Plant and Machinery	7,50,000	6,00,000		
Less: Accumulated Depreciation	2,40,000	1,80,000		
	5,10,000	4,20,000	5,10,000	4,20,000
			7,50,000	7,20,000

Additional Information :

i. Interim Dividend of ₹ 75,000 has been paid during the year.

ii. Debenture Interest paid during the year ₹ 27,000.

You are required to prepare Cash Flow Statement.

ANSWERS TO INTEXT QUESTIONS

34.1 (i) Cash equivalents (ii) financial
(iii) Cash inflow, cash outflow (iv) Cash equivalent

34.2 (i) listed (ii) investing

34.3 (i) Operating activities (ii) Financing activities
(iii) Investing activities (iv) Investing activities
(v) Financing activities

34.4 (i) Non operating (ii) Cash inflow (iii) Cash outflow
(iv) Cash outflow (v) Cash inflow (vi) Cash inflow

ACTIVITY

Visit the office of a joint stock company and study the cash flow statement prepared by the company. Prepare a list of already possible items (two each) that may increase and decrease the fund from

(a) Operating activities (b) Investing activities (c) Financing activities

Module - VII

Application of Computers in Financial Accounting

Marks 20 **Hours 50**

In the modern world of machines, computers are the part and parcel of Human being. We cannot imagine any organisation working without the use of computers. The same is the case with business, Due to various advantages, computers are very widely used in Business Organisation. This module of Application of Computers in Financial Accounting is designed to explain as how the computers can be effectively used in accounting of business transactions. Computerised Accounting System refers to the processing of accounting transactions, the use of hardware and software in order to produce accounting records and reports.

In modern business accounting transactions are processed through computers. Usage of Computers and Information Technology (IT) enables a business to quickly, accurately and timely access the information that helps in decision making. This sharpens the competitive edge and enhances profitability. The computer systems work with the data which is processed by the hardware commanded by the uses through software. This module explains the use of Electronic Spread Sheet & its applications in Business, together with how to prepare Graphs & Charts for Business and as how to use Data Base Management System for Accounting.

14

ELECTRONIC SPREAD SHEET

Now a days accounting transactions are processed through computers. Usage of computers enables a business to quickly, accurately and timely access the information that helps in decision-making. This sharpens the competitive edge and enhances profitability of the business. The computer systems work with the data which is processed by the hardware commanded by the user through software. The Computerised Accounting System (CAS) has the following components:

Procedure : A logical sequence of actions to perform a task.

Data : The raw fact (as input) for any business application.

People : Users.

Hardware : Computer, associated peripherals, and their network.

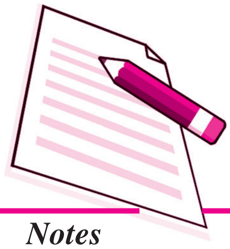
Software : System software and Application software.

These are the five pillars on which Computerised Accounting System rests. This Lesson discusses about the Electronic Spread Sheet, which is used in computers as special software for processing and generating the various types of data. Electronic Spread Sheet is also known as Worksheet. In this Lesson, we will discuss the meaning, features and other related terms and procedures related to Electronic Spread Sheet.

OBJECTIVES

After studying this Lesson, you will be able to:

- State the meaning of Electronic Spread Sheet.
- Explain the features of Electronic Spread Sheet
- Explain the procedure of Data entry, Text Management and Cell formatting in Excel.



Notes

- Explain the procedure of calculations in Excel.
- Explain the procedure of preparation of Various Reports through Excel.

35.1 MEANING OF ELECTRONIC SPREADSHEET

Electronic Spreadsheet is a combination of rows and columns. Visually, the spreadsheet looks like any other matrix with rows and columns. It is also known as a worksheet. This worksheet is so large that the human eye cannot view all its rows and columns at a point of time. Therefore, user focuses on few rows and columns and keeps changing the focus to the required part of the worksheet, as and when required. It is normally used for calculations and comparison of numerical or financial data for arriving at the desired information for reporting. An electronic spreadsheet is a computer program that allows the user to add and process data. The concept of electronic spreadsheet can well be understood with the help of MS Excel, which is one of the MS office software.

35.2 BASICS AND FEATURES OF SPREADSHEET

A spreadsheet is characterized by certain features, given as under:

1. **Grid :** By definition, a spreadsheet is seen as grid structured by number of rows and columns. Each row is sequentially assigned number such as 1,2,3…. And every column is assigned an alphabet for identification. First 26 columns are assigned alphabets beginning A to Z and thereafter, the columns begins with AA followed by AB till the last column is assigned alphabets.

2. **Element :** Each element of spreadsheet is defined by a point of intersection between a particular row and column. It is therefore, addressed by referring to the relevant row and column. For example, the element A1 means the first row of column A. The element is capable of storing data and formulae for calculations.

3. **Lens View :** Spreadsheet allows the user to view and concentrate on a limited number of rows and columns to work with.

4. **Functions :** Spreadsheet is supported by a large number of functions capable of performing difficult and lengthy calculations in fractions of seconds.

5. **Formatting :** Spreadsheet has text formatting capabilities. This enables the generated report to be saved, printed and exported to other applications for use.

6. **Save, Print and Export :** Spreadsheet is saved as a file so that it can be opened for additions and alterations as per the need arisen. It can also be printed by selecting a part of the entire sheet. It can also be sent to mail recipient as an attachment.

INTEXT QUESTIONS 35.1

Fill in the blanks with suitable word/words:

i. A spreadsheet is seen as ___________ structured by number of rows and columns.

ii. Each element of spreadsheet is a point of ___________ between a particular row and column.

iii. Spreadsheet allows the user to view and concentrate on a limited number of ___________ and ___________ to work with.

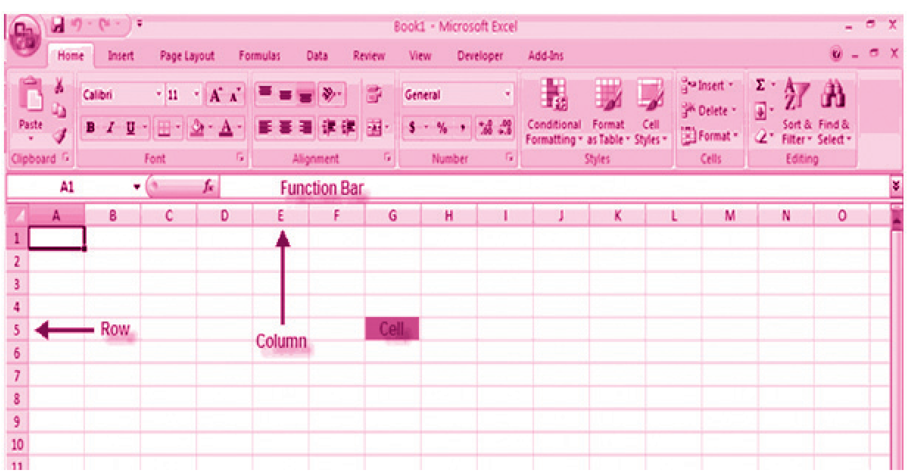
iv. Spreadsheet is supported by a large number of ___________ for difficulty and lengthy calculations in fraction of seconds.

v. A saved spreadsheet can be opened for additions and ___________.

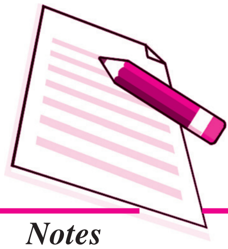
35.3 DATA ENTRY, TEXT MANAGEMENT AND CELL FORMATTING

Excel is one of the software that is bundled with MS office to implement the spreadsheet described above. Here under, we are exhibiting the visuals using MS Excel 2007. Basic features offered by MS Excel are:

1. **Workbook and Worksheet in Excel :** Spreadsheet is referred to as a worksheet in Excel. This worksheet is a single page of a workbook which is a multipage document. At a time, only one worksheet is available to a user for carrying out operations. When an excel program is executed, a new excel workbook is opened along with Excel application window shown below:



As already stated a spreadsheet is an electronic document that stores various types of data. There are vertical columns and horizontal rows. A cell is where the column and row intersect. A cell can contain data and can be used in calculations of data



Notes

within the spreadsheet. An Excel spreadsheet can contain workbooks and worksheets. The workbook is the holder for related worksheets.

2. **Worksheet Operations :** The following worksheet operations are associated with the spread sheet:

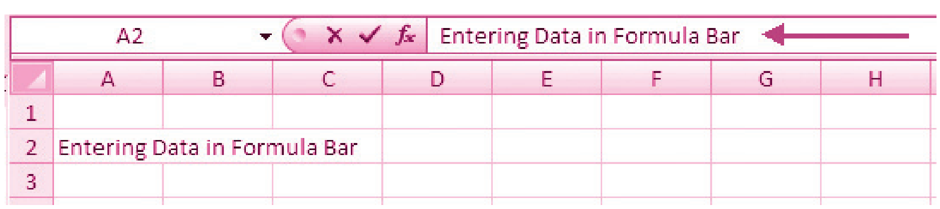
   i. ***Movement of Cell Pointer :*** To activate a cell pointer, click at the cell. The cell pointer is moved from its current location to another by using arrow keys: left, right, up and down. By keeping the **ctrl key** pressed, the use of arrow keys moves the cell pointer to the edge of current data region that is defined as an area of worksheet with data entered in cells and bounded by the edges of the worksheet and its empty rows and columns.

   ii. ***Short-Cut Menu :*** It is called by a **right click** action of the mouse on selected cells so as to perform various operations. The short-cut menu is handy tool because it includes list of those operations that are commonly performed on selected cells.

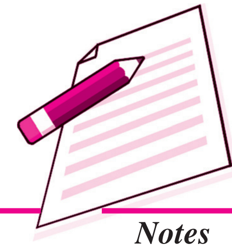
   iii. ***Entering Data into Cells :*** There are different ways to enter data in Excel: in an active cell or in the formula bar. To enter data in an active cell:

- Click in the **cell** where you want the data
- Begin typing

To enter data into the **formula bar**



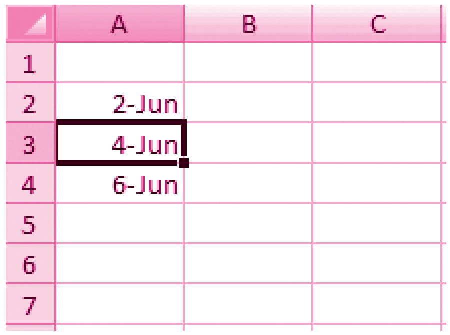
- Click the cell where you would like the data
- Place the cursor in the **Formula Bar**
- Type in the data



Notes

iv. ***Selecting Multiple Cells:*** Excel allows you to move, copy, and paste cells and cell content through cutting & pasting and copying & pasting.

- To select a cell or data to be copied or cut: Click the **cell**



- Click and drag the cursor to select many cells in a range

Select a Row or Column

To select a row or column click on the **row** or **column header**.

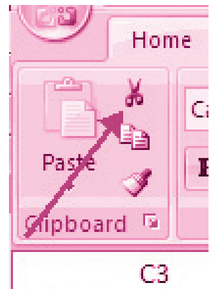
Copy and Paste

To copy and paste data:

- Select the cell(s) that you wish to copy
- On the **Clipboard** group of the **Home** tab, click **Copy**
- Select the cell(s) where you would like to copy the data
- On the **Clipboard** group of the **Home** tab, click **Paste**

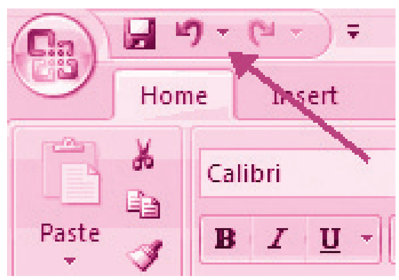
Cut and Paste

To cut and paste data:



- Select the cell(s) that you wish to copy
- On the **Clipboard** group of the **Home** tab, click **Cut**
- Select the cell(s) where you would like to copy the data
- On the **Clipboard** group of the **Home** tab, click **Paste**

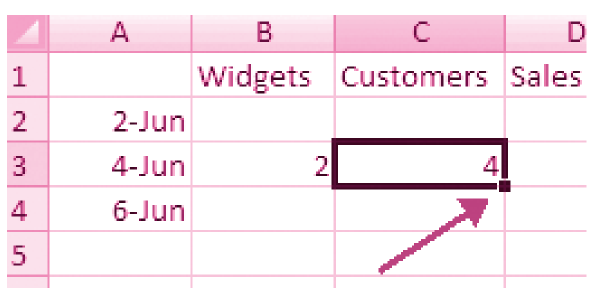
Undo and Redo



To undo or redo you're most recent actions:

- On the **Quick Access Toolbar**
- Click **Undo** or **Redo**

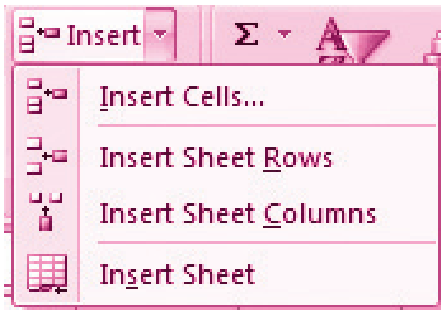
Auto Fill : The Auto Fill feature fills cell data or series of data in a worksheet into a selected range of cells. If you want the same data copied into the other cells, you only need to complete one cell. If you want to have a series of data (for example, days of the week) fill in the first two cells in the series and then use the auto fill feature. To use the Auto Fill feature:



- Click the **Fill Handle**
- **Drag** the **Fill Handle** to complete the cells

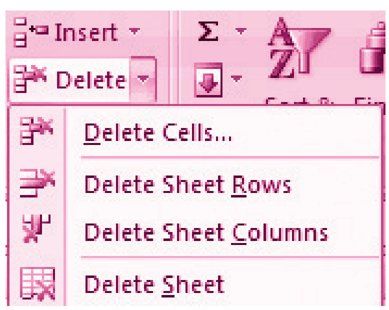
Insert Cells, Rows, and Columns

To insert cells, rows, and columns in Excel:



- Place the cursor in the row below where you want the new row, or in the column to the left of where you want the new column.
- Click the **Insert** button on the **Cells** group of the **Home** tab
- Click the appropriate choice: **Cell, Row, or Column**

Delete Cells, Rows and Columns



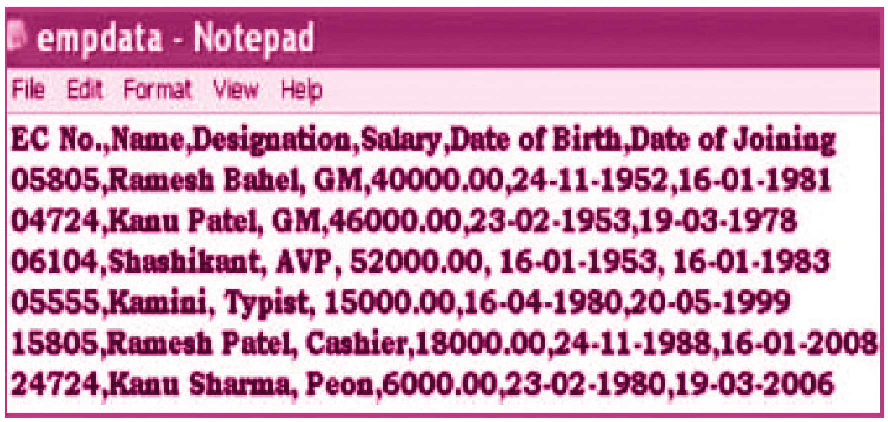
To delete cells, rows, and columns:

- Place the cursor in the cell, row, or column that you want to delete
- Click the **Delete** button on the **Cells** group of the **Home** tab
- Click the appropriate choice: **Cell, Row, or Column**

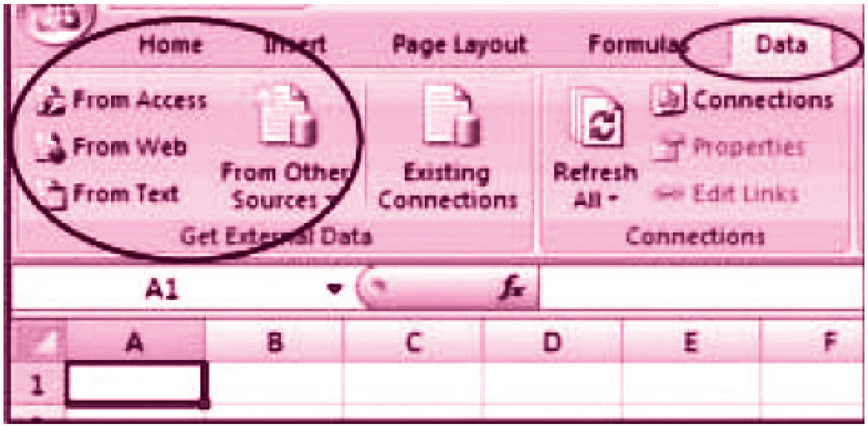
v. ***Managing Text in Excel :*** For any business organization using electronic spread sheet the basic requirement is to input data. The data can be input via fresh data entry as explained above or it can be transferred from other applications. **Importing Data from other sources** is easier to import data or transfer files to Excel worksheet. These data files may in other text files or non text files format.

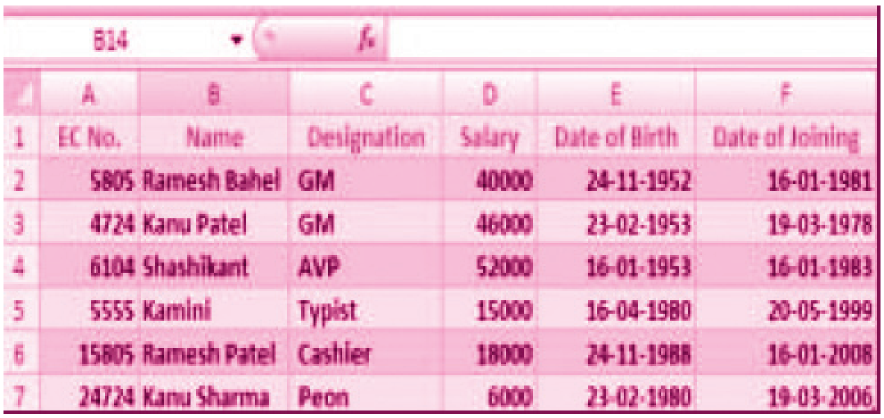
Text files can be directly read using a text editor such as Note Pad in MS Windows. These files often have extension *.txt* but can have other extensions (such as .csv known as **C**oma **S**eparated **V**alues text file). In order to import data from a text file, following steps are considered:

1. Create data file using Note pad program of MS Windows (to get Note pad screen on desktop on Start button->All Programs->Accessories -> Notepad)
2. A comma-separated data values in one line of this text file is a row in a spread sheet and each entry separated by a comma, is column entry for that row as shown below:


empdata - Notepad
File Edit Format View Help
EC No.,Name,Designation,Salary,Date of Birth,Date of Joining
05805,Ramesh Bahel, GM,40000.00,24-11-1952,16-01-1981
04724,Kanu Patel, GM,46000.00,23-02-1953,19-03-1978
06104,Shashikant, AVP, 52000.00, 16-01-1953, 16-01-1983
05555,Kamini, Typist, 15000.00,16-04-1980,20-05-1999
15805,Ramesh Patel, Cashier,18000.00,24-11-1988,16-01-2008
24724,Kanu Sharma, Peon,6000.00,23-02-1980,19-03-2006

3. In the first line provide names for the columns of the spread sheet.
4. In the next line onward start entering the data separate by comma as per the names given in first line.
5. It may be possible that every data may not be of similar length but each data (even a blank data) should be separated by comma as per the names of the column.
6. Open a new Excel worksheet from the office button.
7. Select Data Tab on the Ribbon.
8. On the Data Tab; an option Get External Data having From Text option.
9. Click on ‘ From Text’ which will allow selecting a Note pad file saved as .cvm into Excel format directly and data copied into respective columns and rows as shown below:





	A	B	C	D	E	F
1	EC No.	Name	Designation	Salary	Date of Birth	Date of Joining
2	5805	Ramesh Bahel	GM	40000	24-11-1952	16-01-1981
3	4724	Kanu Patel	GM	46000	23-02-1953	19-03-1978
4	6104	Shashikant	AVP	52000	16-01-1953	16-01-1983
5	5555	Kamini	Typist	15000	16-04-1980	20-05-1999
6	15805	Ramesh Patel	Cashier	18000	24-11-1988	16-01-2008
7	24724	Kanu Sharma	Peon	6000	23-02-1980	19-03-2006

INTEXT QUESTIONS 35.2

Fill in the blanks with suitable word/words:

i. A cell is where the row and column ___________.

ii. The cell pointer is moved from its current location to another by using __________ keys.

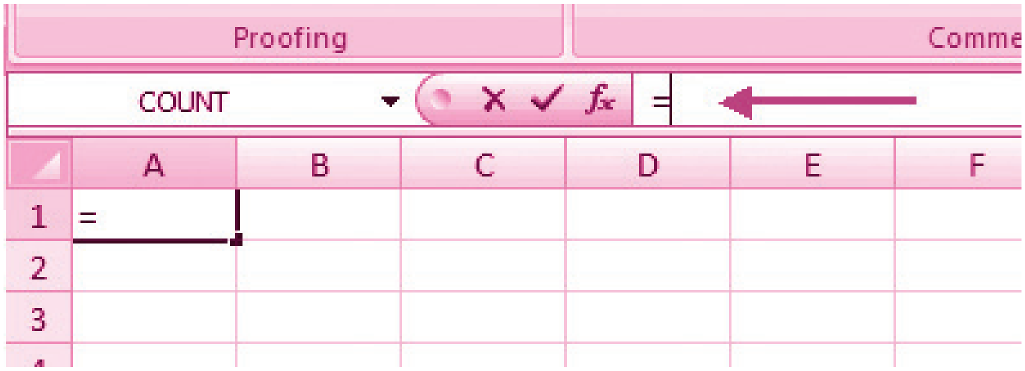
iii. The short-cut-menu is __________ tool for the operations that are __________ performed on selected cells.

iv. To enter data in an active __________, click in the __________ where you want the data and start typing.

v. Click and __________ the cursor to select many cells in a range.

35.4 PERFORMING CALCULATIONS IN EXCEL

A formula is a set of mathematical instructions that can be used in Excel to perform calculations. Formulas start in the formula box with an = sign.



There are many elements to excel formula.

References : The cell or range of cells that you want to use in your calculation.

Operators : Symbols (+, -, *, /, etc.) that specify the calculation to be performed

Constants : Numbers or text values that do not change.

Functions : Predefined formulas in Excel.

To create a basic formula in Excel :

- Select the **cell** for the formula
- Type = (the equal sign) and the **formula**
- Click **Enter**

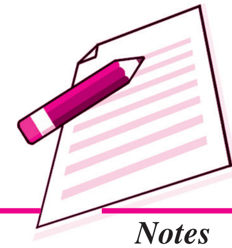
35.4.1 Calculate with Functions

A function is a built in formula in Excel. A function has a name and arguments (the mathematical function) in parentheses. Common functions in Excel:

Sum : Adds all cells in the argument

Average : Calculates the average of the cells in the argument

Min : Finds the minimum value

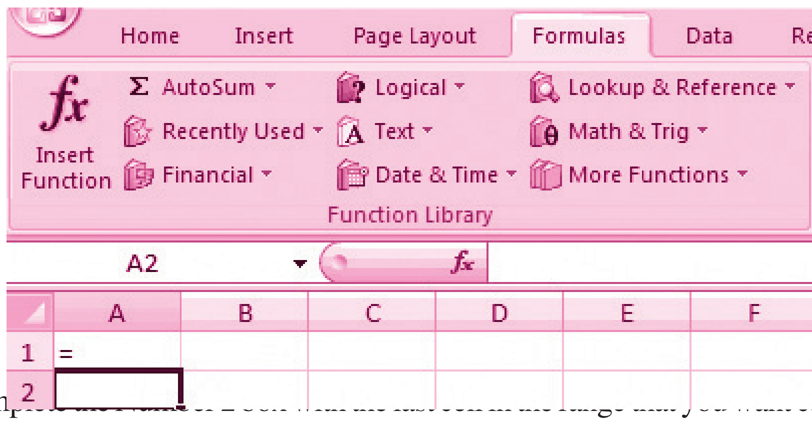


Max : Finds the maximum value

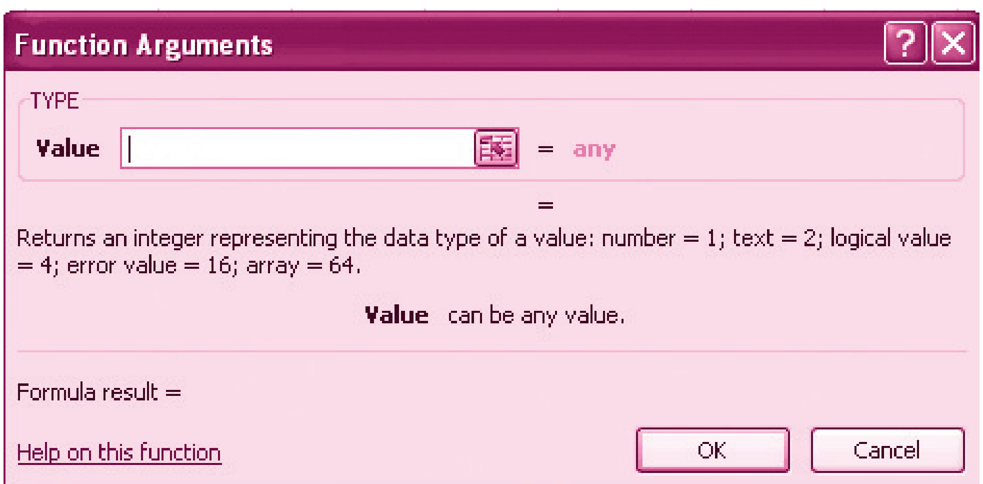
Count : Finds the number of cells that contain a numerical value within a range of the argument

To calculate a function:

- Click the **cell** where you want the function applied
- Click the **Insert Function** button
- Choose the function
- Click **OK**
- Complete the Number 1 box with the first cell in the range that you want to calculate



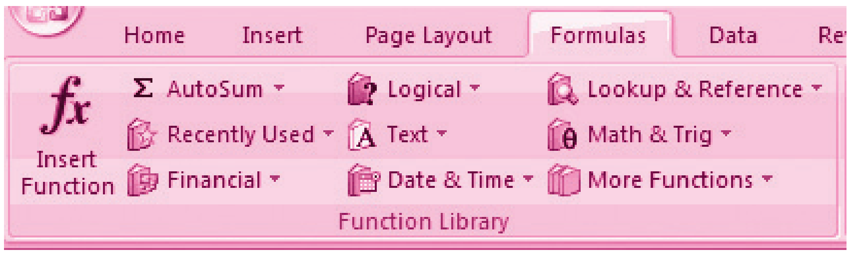
- Complete the Number 2 box with the last cell in the range that you want calculated



35.4.2 Function Library

The function library is a large group of functions on the Formula Tab of the Ribbon. These functions include:

AutoSum	:	Easily calculates the sum of a range
Recently Used	:	All recently used functions
Financial	:	Accrued interest, cash flow return rates and additional financial functions
Logical	:	And, If, True, False, etc.
Text	:	Text based functions
Date & Time	:	Functions calculated on date and time
Math & Trig	:	Mathematical Functions



35.4.3 Relative, Absolute and Mixed References

Calling cells by just their column and row labels (such as "A1") is called **relative referencing**.

When a formula contains relative referencing and it is copied from one cell to another, Excel does not create an exact copy of the formula. It will change cell addresses relative to the row and column they are moved to. For example, if a simple addition formula in cell C1 "=(A1+B1)" is copied to cell C2, the formula would change to "=(A2+B2)" to reflect the new row.

To prevent this change, cells must be called by **absolute referencing** and this is accomplished by placing dollar signs "$" within the cell addresses in the formula. Continuing the previous example, the formula in cell C1 would read "=($A$1+$B$1)" if the value of cell C2 should be the sum of cells A1 and B1. Both the column and row of both cells are absolute and will not change when copied.

Mixed referencing can also be used where only the row OR column fixed. For example, in the formula "=(A$1+$B2)", the row of cell A1 is fixed and the column of cell B2 is fixed.

Linking Worksheets

You may want to use the value from a cell in another worksheet within the same workbook in a formula. For example, the value of cell A1 in the current worksheet and cell A2 in the second worksheet can be added using the format "sheetname!celladdress". The formula for this example would be "=A1+Sheet2!A2" where the value of cell A1 in the current worksheet is added to the value of cell A2 in the worksheet named "Sheet2".

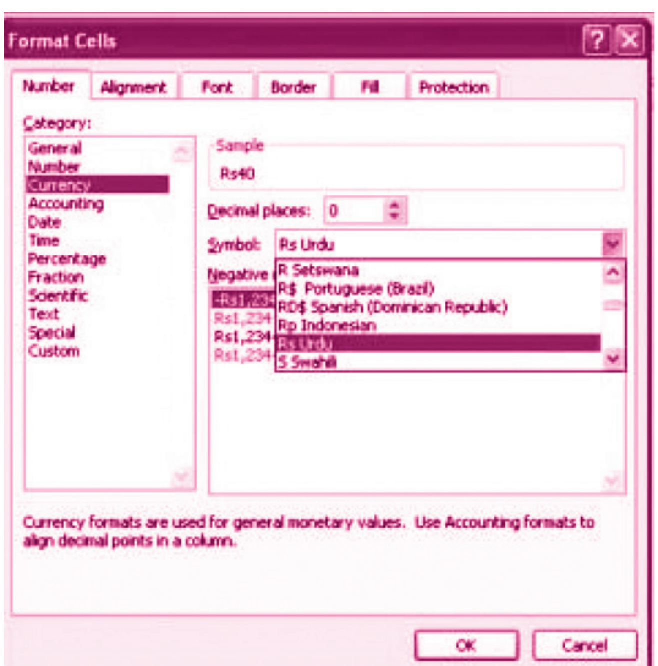
35.4.4 Data Formatting

Formatting of spread sheet makes easier to read and understand the important information. This is chiefly categorized as follows:

1. ***Number formatting :*** Number formatting includes adding per cent (%), Comma (,), decimal (.), currency (Rs., $), date, time, scientific values etc. Refer figure 1 given below which depicts the unformatted worksheet:

	A	B	C	D	E	F	G	H
1	Sales for Home AppliancesYear 2008_09							
2	(Figures in 000's)							
3		Q1	Q2	Q3	Q4	Actual	Target	In %
4	ALOK	40	57	52	65	214	250	0.856
5	PRANAV	50	69	69	90	278	220	1.2636
6	PRABODH	53	75	71	82	281	250	1.124
7	RAJENDRA	44	59	38	70	211	200	1.055
8	Total					984	920	1.0696
9	Reported on							
10	16.04.2009							

2. From the Ribbon select, Home Tab with Number option. Click on **Format Cells** dialog box and choose **Number** tab.



3. The **Category** list shows all the preset formulas available in Excel, grouped into categories.

4. If we select **Currency**, the right hand side shows the different symbols of currencies.

5. Change the number of decimal spaces to zero (0).

6. Click OK to accept this format. The final output is shown below:

	A	B	C	D	E	F	G	H
1	Sales for Home AppliancesYear 2008_09							
2	(Figures in 000's)							
3		Q1	Q2	Q3	Q4	Actual :	Target	In %
4	ALOK	Rs.40	Rs.57	Rs.52	Rs.65	214	250	0.856
5	PRANAV	Rs.50	Rs.69	Rs.69	Rs.90	278	220	1.2636
6	PRABODH	Rs.53	Rs.75	Rs.71	Rs.82	281	250	1.124
7	RAJENDRA	Rs.44	Rs.59	Rs.38	Rs.70	211	200	1.055
8	Total					984	920	1.0696
9	Reported on							
10	16-04-2009							

	A	B	C	D	E	F	G	H
1	Sales for Home Appliances Year 2008_09							
2	(Figures in 000's)							
3		Q1	Q2	Q3	Q4	Actual :	Target	In %
4	ALOK	Rs.40	Rs.57	Rs.52	Rs.65	214	250	85.60%
5	PRANAV	Rs.50	Rs.69	Rs.69	Rs.90	278	220	126.36%
6	PRABODH	Rs.53	Rs.75	Rs.71	Rs.82	281	250	112.40%
7	RAJENDRA	Rs.44	Rs.59	Rs.38	Rs.70	211	200	105.50%
8	Total					984	920	106.96%
9	Reported on							
10	16-04-2009							

INTEXT QUESTIONS 35.3

I. Name the following functions available in Excel Sheet:

i. Adds all cells in the argument.

ii. Finds the number of cells that contain a numerical value within a range of the argument.

iii. Calculates the average of the cells in the argument.

iv. Finds the maximum value.

v. Finds the minimum value.

II. Fill in the blanks with suitable word/words :

i. Calling cells by just their column and row labels is called __________.

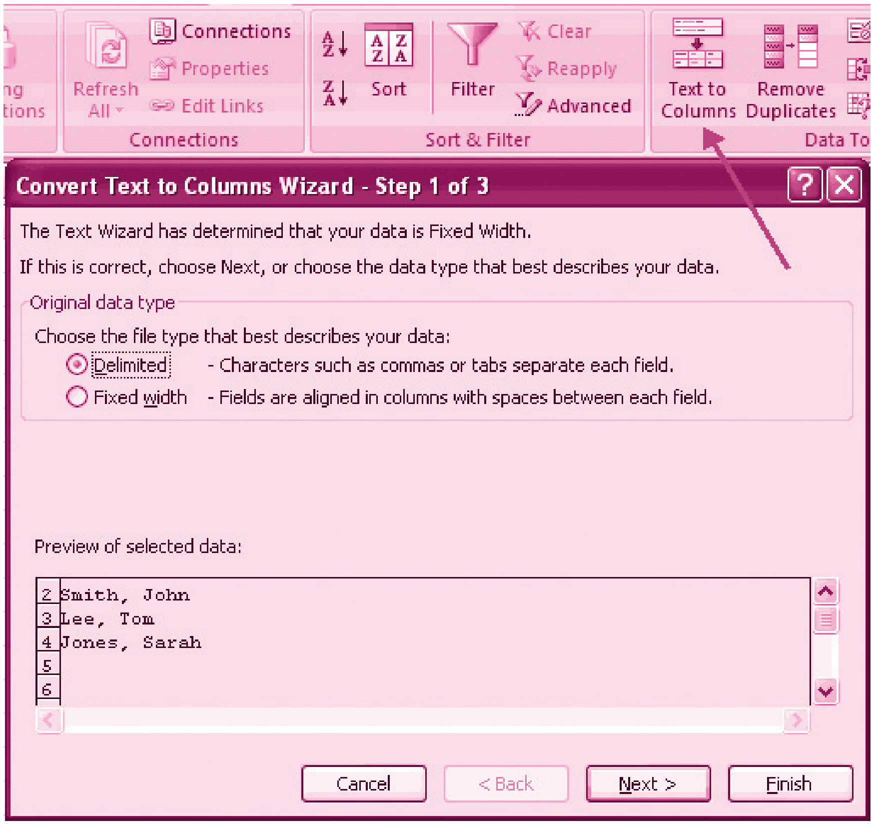
ii. ___________ formatting includes adding, percent, comma, decimal, currency, date, time, scientific values etc.

35.4.5 Text and General Formatting

Sometimes you will want to split data in one cell into two or more cells. You can do this easily by utilizing the Convert Text to Columns Wizard.

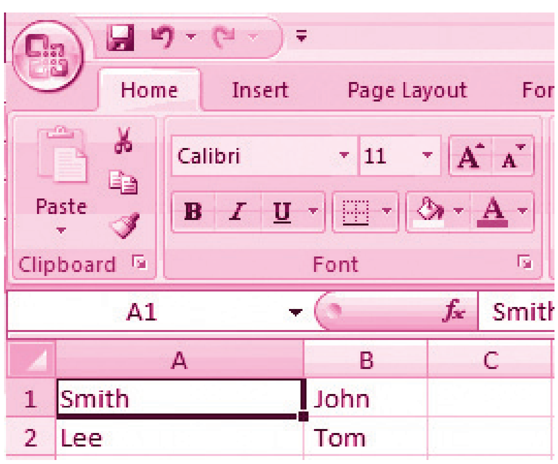
- Highlight the column in which you wish to split the data
- Click the **Text to Columns** button on the **Data** tab

- Click **Delimited** if you have a comma or tab separating the data, or click fixed widths to set the data separation at a specific size.



35.4.6 Modify Fonts

Modifying fonts in Excel will allow you to emphasize titles and headings. To modify a font:

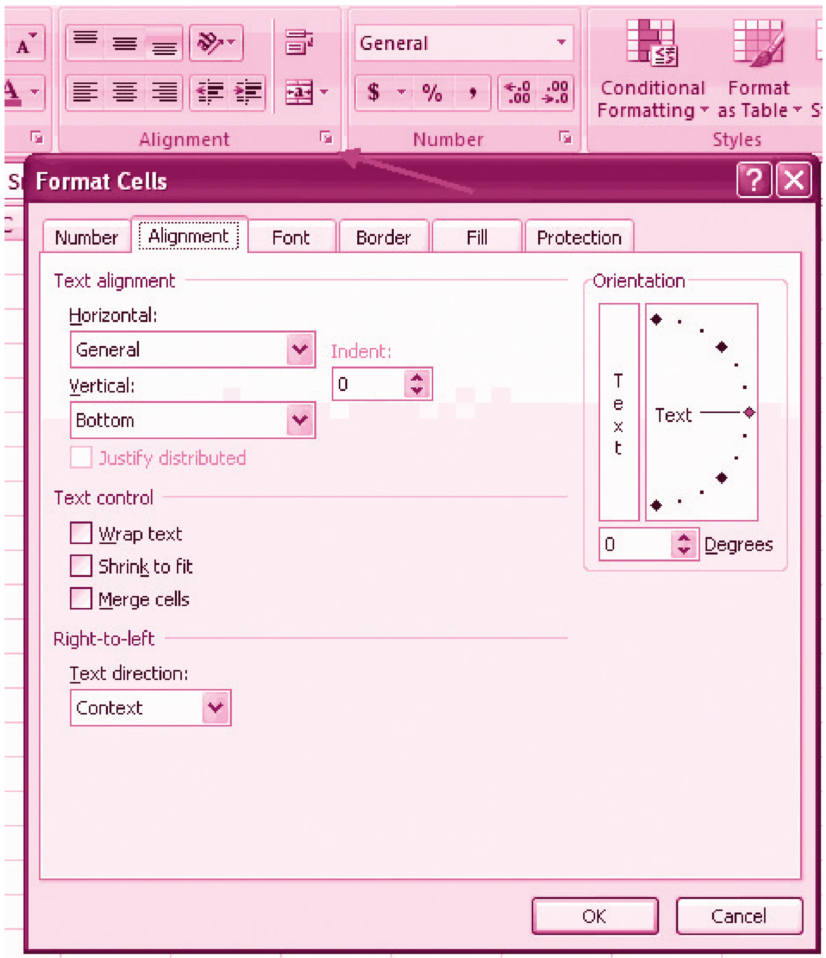


- Select the cell or cells that you would like the font applied
- On the **Font** group on the **Home** tab, choose the font type, size, bold, italics, underline, or color

Format Cells Dialog Box

In Excel, you can also apply specific formatting to a cell. To apply formatting to a cell or group of cells:

- Select the cell or cells that will have the formatting
- Click the **Dialog Box** arrow on the **Alignment** group of the **Home** tab



There are several tabs on this dialog box; that allow you to modify properties of the cell or cells.

Number : Allows for the display of different number types and decimal places

Alignment : Allows for the horizontal and vertical alignment of text, wrap text, shrink text, merge cells and the direction of the text.

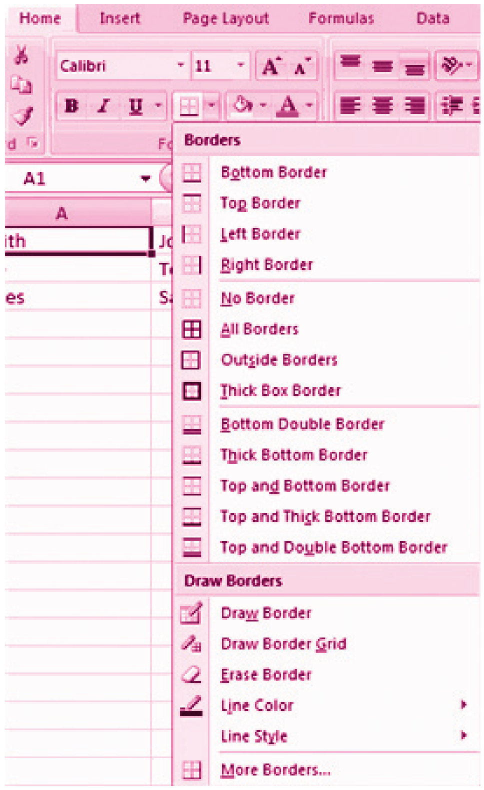
Font : Allows for control of font, font style, size, color, and additional features

Border : Border styles and colors

Fill : Cell fill colors and styles

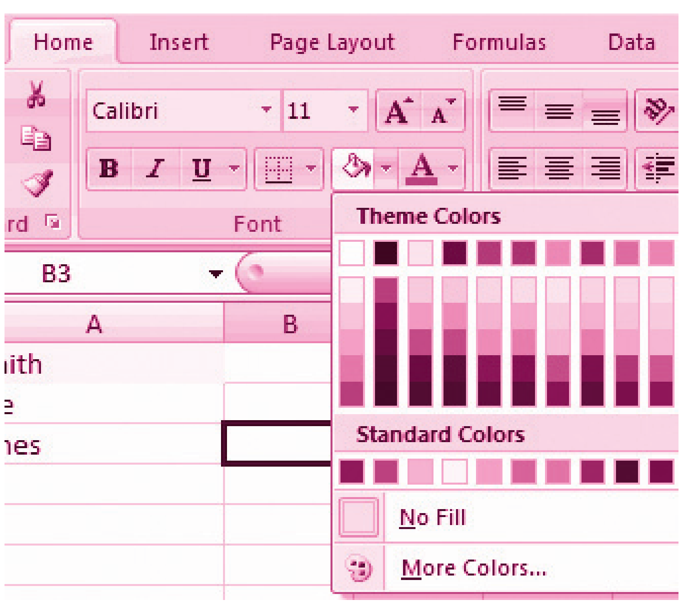
Add Borders and Colors to Cells

Borders and colors can be added to cells manually or through the use of styles. To add borders manually:



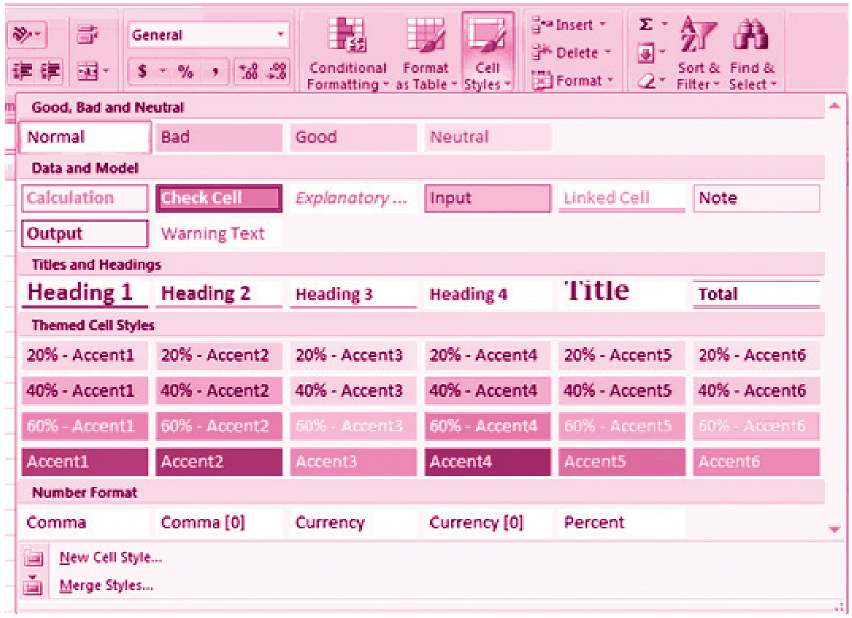
- Click the **Borders** drop down menu on the **Font** group of the **Home** tab
- Choose the appropriate border

To apply colors manually:



Notes

- Click the **Fill** drop down menu on the **Font** group of the **Home** tab
- Choose the appropriate color



To apply borders and colors using styles:

- Click **Cell** Styles on the **Home** tab
- Choose a style or click **New Cell Style**

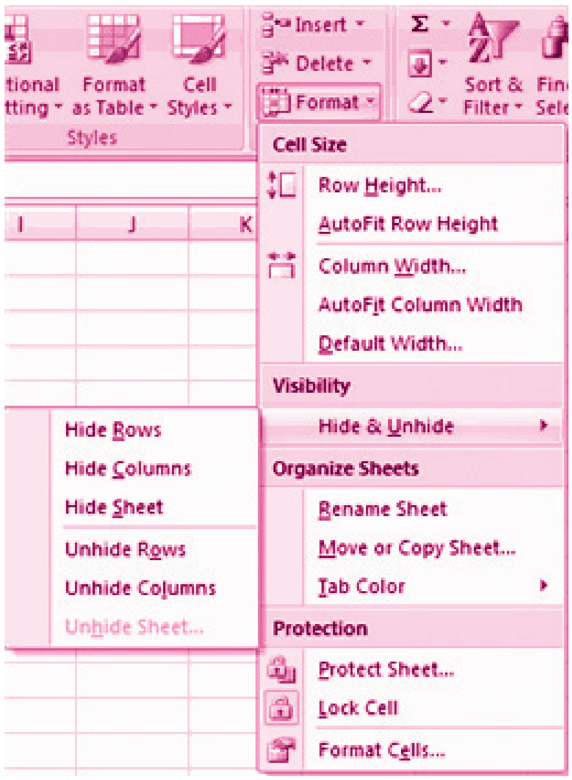
35.4.7 Change Column Width and Row Height

To change the width of a column or the height of a row:

- Click the **Format** button on the **Cells** group of the **Home** tab
- Manually adjust the height and width by clicking **Row Height** or **Column Width**
- To use **AutoFit** click **AutoFit Row Height** or **AutoFit Column Width**

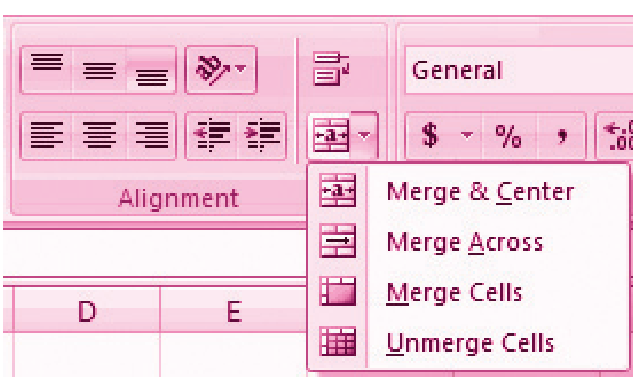
35.4.8 Hide or Unhide Rows or Columns

To hide or unhide rows or columns:



- Select the row or column you wish to hide or unhide
- Click the **Format** button on the **Cells** group of the **Home** tab
- Click **Hide & Unhide**

Merge Cells



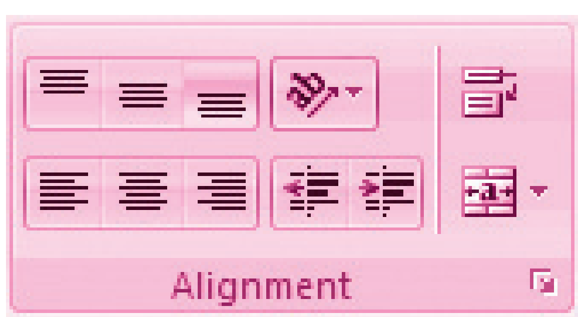
To merge cells select the cells you want to merge and click the **Merge & Center** button on the **Alignment** group of the **Home** tab. The four choices for merging cells are:

Merge & Center	:	Combines the cells and centers the contents in the new, larger cell
Merge Across	:	Combines the cells across columns without centering data
Merge Cells	:	Combines the cells in a range without centering
Unmerge Cells	:	Splits the cell that has been merged

35.4.9 Align Cell Contents

To align cell contents, click the cell or cells you want to align and click on the options within the **Alignment** group on the **Home** tab. There are several options for alignment of cell contents:

Top Align	:	Aligns text to the top of the cell
Middle Align	:	Aligns text between the top and bottom of the cell
Bottom Align	:	Aligns text to the bottom of the cell
Align Text Left	:	Aligns text to the left of the cell
Center	:	Centers the text from left to right in the cell
Align Text Right	:	Aligns text to the right of the cell
Decrease Indent	:	Decreases the indent between the left border and the text
Increase Indent	:	Increase the indent between the left border and the text
Orientation	:	Rotate the text diagonally or vertically



INTEXT QUESTIONS 35.4

Fill in the blanks with suitable word/words:

i. We can split data of one cell into two or more cells by utilizing the convert Text to __________.

ii. ___________ fonts in Excel will allow you to emphasize titles and headings.

iii. To merge cells, select the cells you want to merge and click the _________ button on Alignment group of the tab.

35.5 CONDITIONAL FORMATTING

Conditional formatting helps the user to highlight interesting cells or range of cells, emphasize unusual values and visualize data by using data bars, colour scales and icon values. The conditional format changes the appearance of a cell range based on given criteria. This implies, if the condition is met/or stands true, the cell range is formatted on that condition; if the condition is false, the cell range is not formatted based on that condition. We will study about this in the subsequent section on 'Output Reports'.

35.6 OUTPUT REPORTS

The entire or partial worksheet(s) can be printed at a time or as and when needed as per the requirement. MS Excel provides an opportunity:

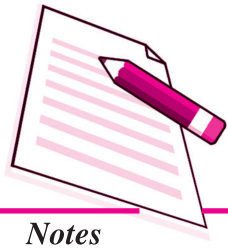
1. Print a partial or entire workbook
2. Print several worksheets at once
3. Print an Excel table
4. Print workbook to file
5. Print graphic charts and Pivot tables.

The procedure to generate a report is given below:

Set Print Titles

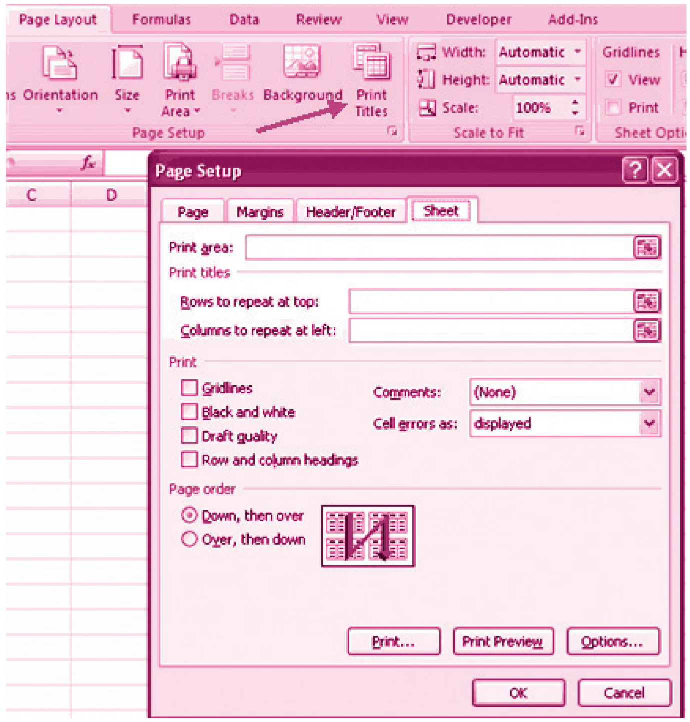
The print titles function allows you to repeat the column and row headings at the beginning of each new page to make reading a multiple page sheet easier to read when printed. To Print Titles:

- Click the **Page Layout** tab on the Ribbon
- Click the **Print Titles** button
- In the **Print Titles** section, click the box to select the rows/columns to be repeated



Notes

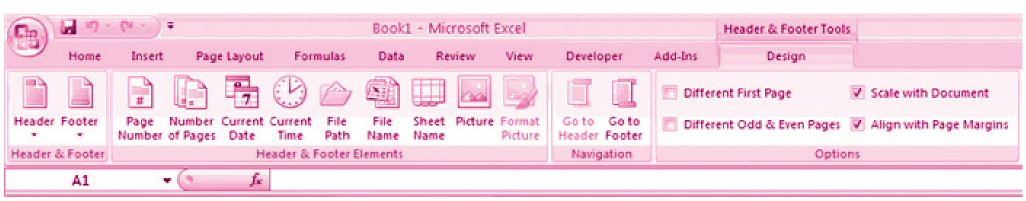
- Select the row or column
- Click the **Select Row/Column Button**
- Click OK



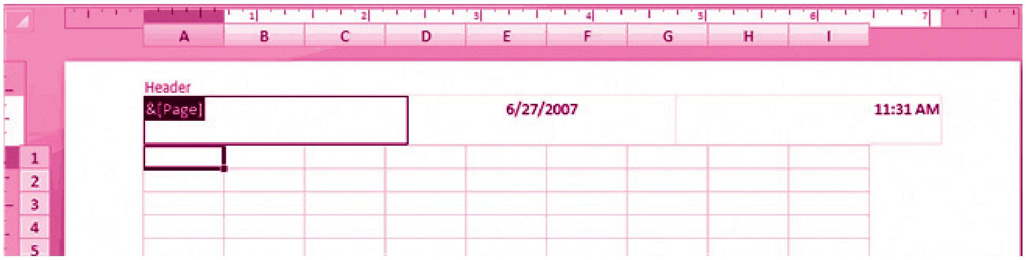
35.6.1 Create a Header or Footer

To create a header or footer:

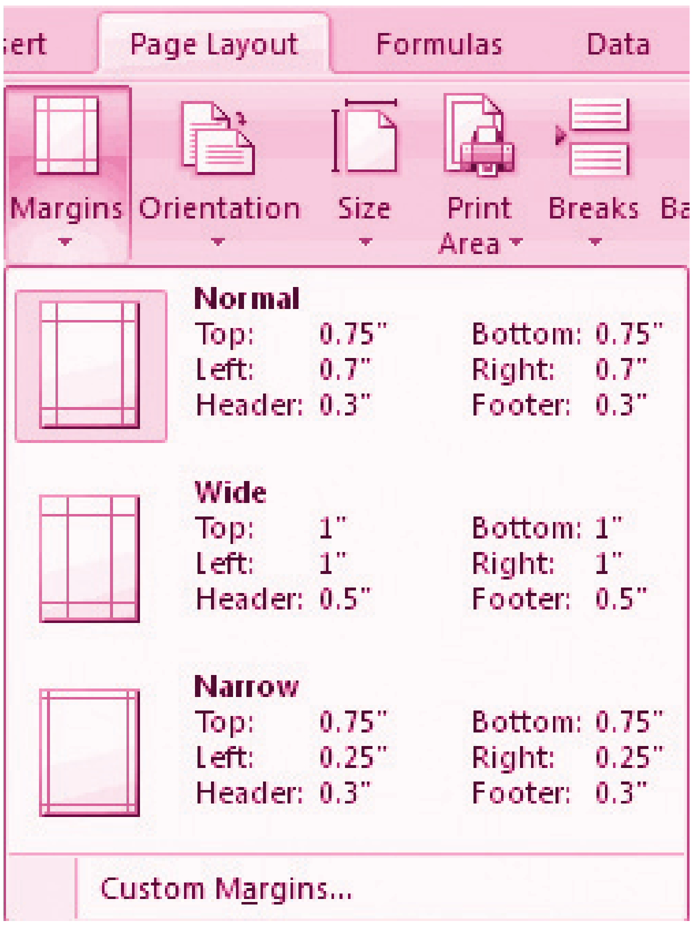
- Click the **Header & Footer** button on the **Insert** tab
- This will display the **Header & Footer Design Tools Tab**
- To switch between the Header and Footer, click the **Go to Header** or **Go to Footer** button



- To insert text, enter the text in the header or footer
- To enter preprogrammed data such as page numbers, date, time, file name or sheet name, click the appropriate button
- To change the location of data, click the desired cell

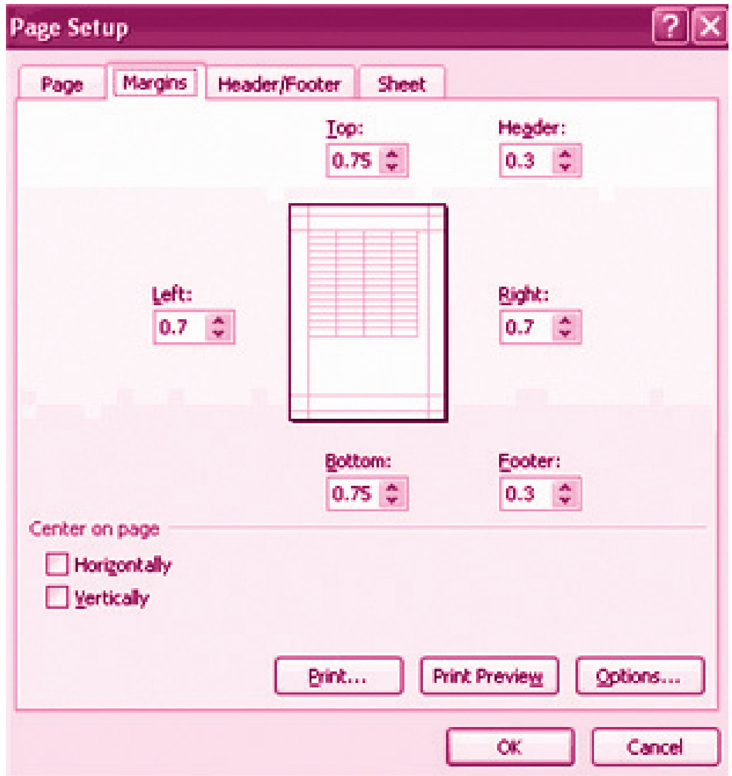


35.6.2 Set Page Margins



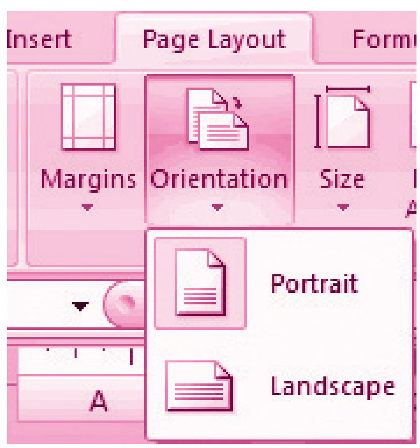
To set the page margins:

- Click the **Margins** button on the **Page Layout** tab
- Select one of the given choices, or
- Click **Custom Margins**
- Complete the boxes to set margins
- Click **Ok**



Change Page Orientation

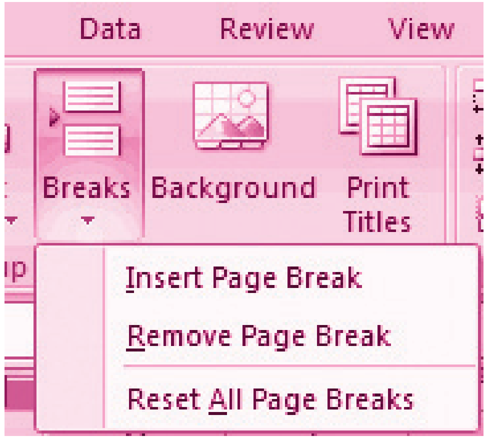
To change the page orientation from portrait to landscape:



- Click the **Orientation** button on the **Page Layout** tab
- Choose **Portrait** or **Landscape**

35.6.3 Set Page Breaks

You can manually set up page breaks in a worksheet for ease of reading when the sheet is printed. To set a page break:

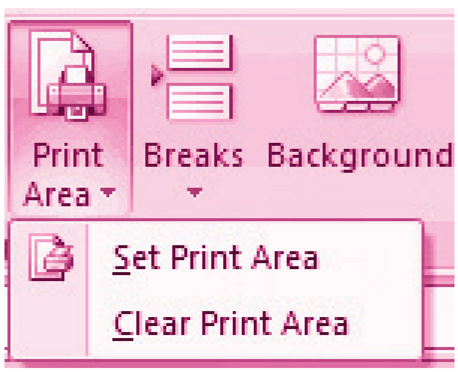


- Click the **Breaks** button on the **Page Layout** tab
- Click **Insert Page Break**

Print a Range

There may be times when you only want to print a portion of a worksheet. This is easily done through the Print Range function.

To print a range:

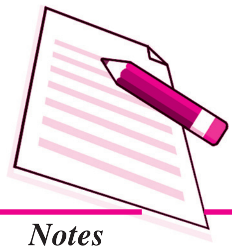


- Select the area to be printed
- Click the **Print Area** button on the **Page Layout** tab
- Click **Select Print Area**

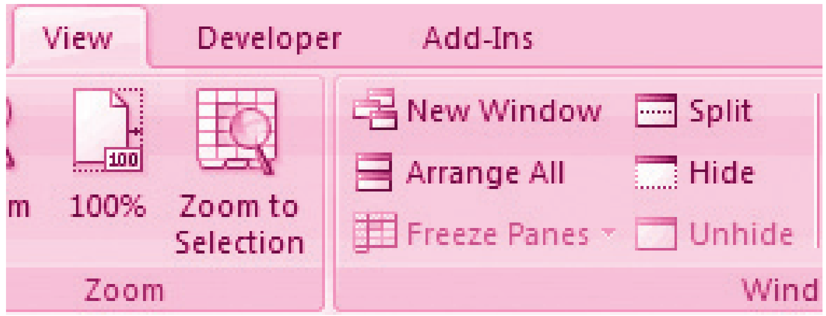
Split a Worksheet

You can split a worksheet into multiple resizable panes for easier viewing of parts of a worksheet. To split a worksheet:

- Select any cell in center of the worksheet you want to split
- Click the **Split** button on the **View** tab
- Notice the split in the screen, you can manipulate each part separately



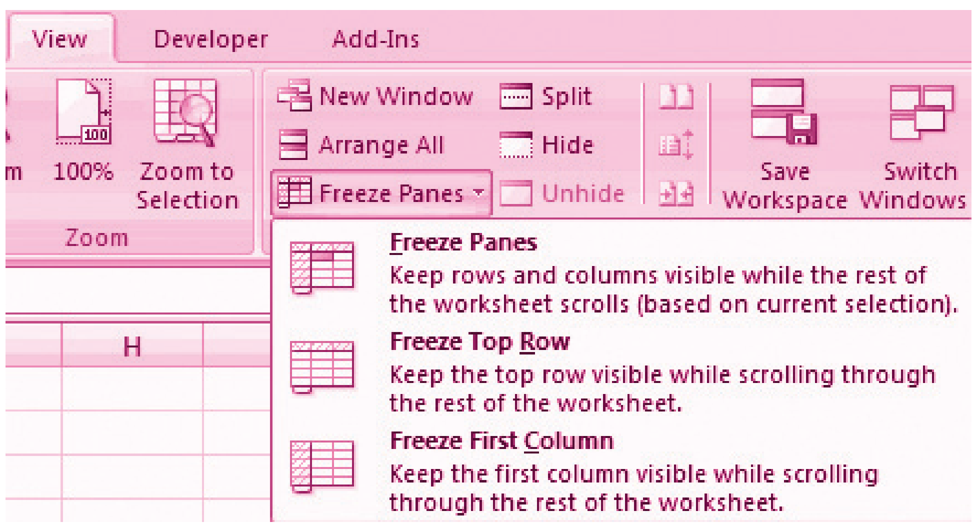
Notes



35.6.4 Freeze Rows and Columns

You can select a particular portion of a worksheet to stay static while you work on other parts of the sheet. This is accomplished through the Freeze Rows and Columns Function. To Freeze a row or column:

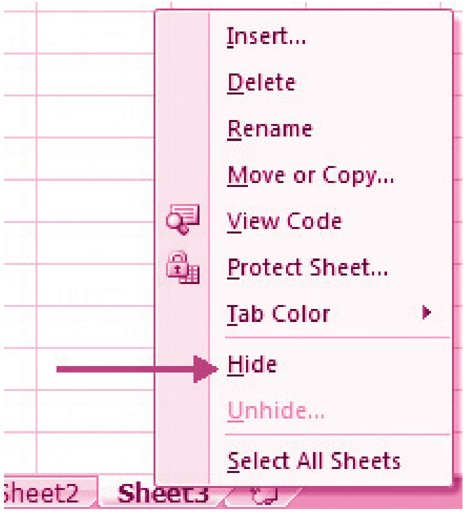
- Click the **Freeze Panes** button on the **View** tab
- Either select a section to be frozen or click the defaults of top row or left column
- To unfreeze, click the **Freeze Panes** button
- Click **Unfreeze**



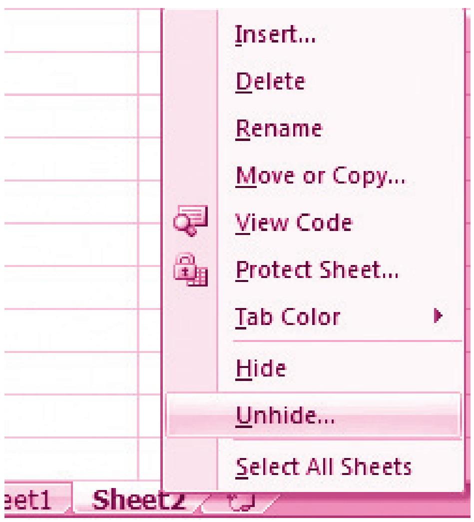
35.6.5 Hide Worksheets

To hide a worksheet:

- Select the tab of the sheet you wish to hide
- **Right-click** on the tab
- Click **Hide**



To unhide a worksheet:



- **Right-click** on any worksheet tab
- Click **Unhide**
- Choose the worksheet to unhide

35.7 PREPARATION OF REPORTS USING PIVOT TABLE

A Pivot table is a way to present information in a report format. **A** Pivot Table report provides enhanced layout, attractive and formatted report with increased readability. It is an interactive way of summarizing large amounts of data. These features lead to the following advantages for the benefit of users:

- Querying large amounts of data in user friendly ways.
- Expanding and collapsing levels of data to focus on results.

Notes

- Moving rows to column (s) to look for different summaries of the source data.
- Filtering, sorting, grouping and conditionally formatting the required information of interest of user.
- Pivot table report helps in analyzing related totals, when there are long list of figures to sum and to compare several facts about each figure.

Pivot Table Toolbar

The Pivot Table uses a List Data table. A data table is a range of cells that shows the results of substituting different values in one or more formulas. There are two types of data tables: One variable and two variable table. Formula used in a one-variable data table must refer to an input cell. The input cell is a cell used by Excel in which each input value from a data is substituted. Two variable data table uses only one formula with two lists of input values. The data must refer to two different input cells.

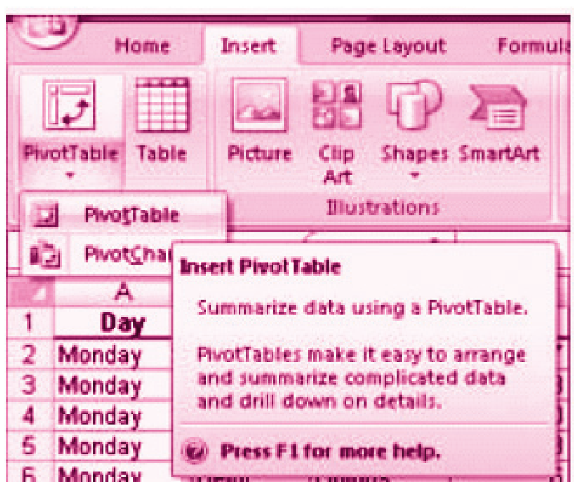
Designing a Pivot table Report of 3 vegetable consumption of four Metro cities

1. Enter the vegetable consumption data in the worksheet

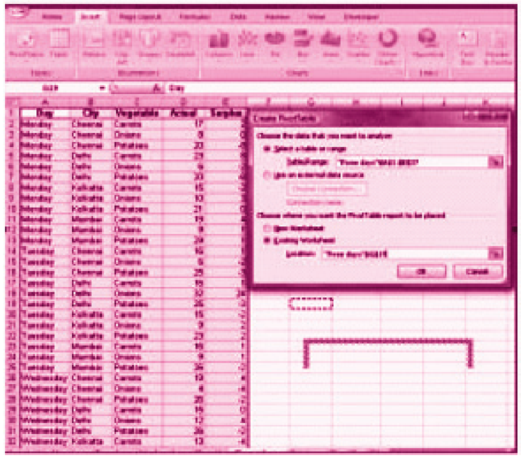
G18

	A	B	C	D	E	F	G	H	I
1	Day	City	Vegetable	Actual	Surplus		City	Vegetable	Quota
2	Monday	Chennai	Carrots	17	2		Mumbai	Carrots	15
3	Monday	Chennai	Onions	8	0		Mumbai	Onions	8
4	Monday	Chennai	Potatoes	20	-8		Mumbai	Potatoes	28
5	Monday	Delhi	Carrots	23	8		Chennai	Carrots	17
6	Monday	Delhi	Onions	6	-2		Chennai	Onions	7
7	Monday	Delhi	Potatoes	20	-8		Chennai	Potatoes	21
8	Monday	Kolkatta	Carrots	15	-2		Delhi	Carrots	15
9	Monday	Kolkatta	Onions	10	3		Delhi	Onions	8
10	Monday	Kolkatta	Potatoes	21	0		Delhi	Potatoes	28
11	Monday	Mumbai	Carrots	19	4		Kolkatta	Carrots	18
12	Monday	Mumbai	Onions	9	1		Kolkatta	Onions	9
13	Monday	Mumbai	Potatoes	29	1		Kolkatta	Potatoes	22

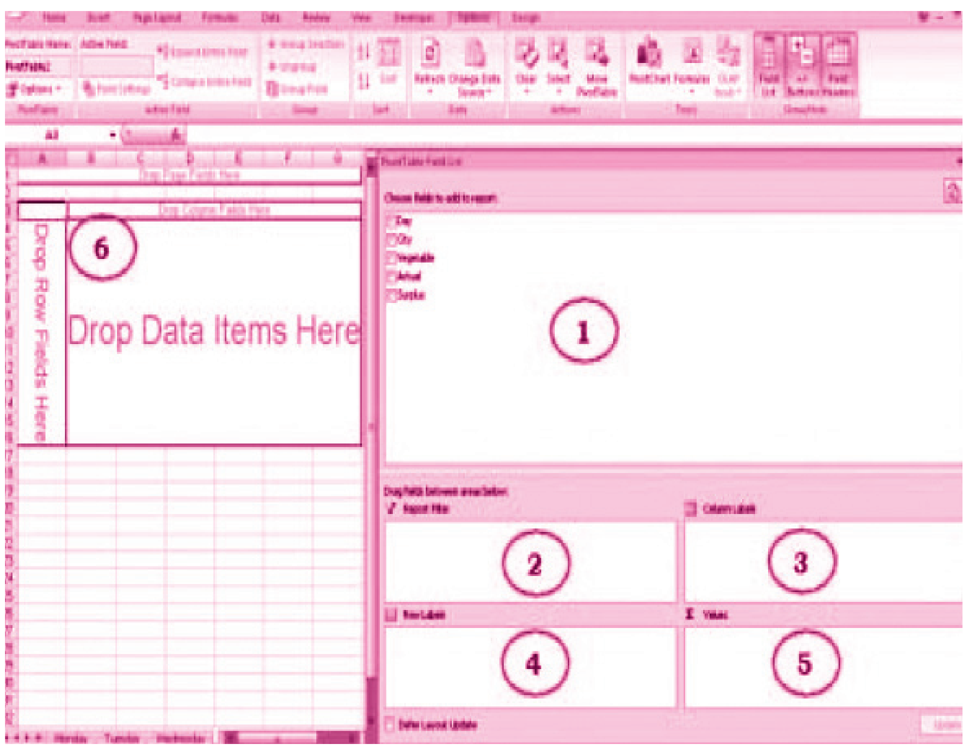
2. On the Insert tab in the Tables group, click Pivot table. Report interactive options as Create Pivot Report



3. Enter the data location and choose to place Pivot table on the existing worksheet.



4. Click OK to display a blank Pivot table and filed list and Excel displays a Pivot table tool bar.



5. Drag the Field Names to the required positions in the Pivot Table

	A	B	C	D	E
1	Day	(All)			
2					
3	Sum of Actual	Vegetable			
4	City	Carrots	Onions	Potatoes	Grand Total
5	Chennai	52	18	71	141
6	Delhi	54	50	71	175
7	Kolkatta	43	25	66	134
8	Mumbai	50	30	81	161
9	Grand Total	199	123	289	611

6. Pivot Table will be generated

	A	B	C
1	Day	(All)	
2			
3	Sum of Actual		
4	City	Vegetable	Total
5	Chennai	Carrots	52
6		Onions	18
7		Potatoes	71
8	Chennai Total		141
9	Delhi	Carrots	54
10		Onions	50
11		Potatoes	71
12	Delhi Total		175
13	Kolkatta	Carrots	43
14		Onions	25
15		Potatoes	66
16	Kolkatta Total		134
17	Mumbai	Carrots	50
18		Onions	30
19		Potatoes	81
20	Mumbai Total		161
21	Grand Total		611

Common Errors in spread sheet.

INTEXT QUESTIONS 35.5

Fill in the blanks with suitable word/words:

i. The ___________ format changes the appearance of a cell range based on given criteria.

ii. A __________ table is a way to present information in a report format.

iii. A ___________ table is a range of cells that shows the results of substituting different values in one or more formulas.

iv. Two variable data table uses only one formula with two lists of __________ values.

WHAT YOU HAVE LEARNT

- **Electronic Spreadsheet :** Electronic Spreadsheet is a combination of rows and columns. It is also known as a worksheet. This worksheet is so large that the human eye can not view all its rows and columns at a point of time.

- **Basics and Features of Spreadsheet :** (1) Grid; (2) Element; (3) Lens View; (4) Functions; (5) Formatting; (6) Save Print and Export

- **Data Entry, Text Management and Cell Formatting :** Excel is one of the software that is bundled with MS office to implement the spreadsheet described above. Here under, we will be exhibiting the visuals using MS Excel 2007.

- **Basic features offered by MS Excel are:**

  Workbook and Worksheet in Excel : Spreadsheet referred to as a worksheet in Excel. This worksheet is a single page of a workbook, which is a multipage document.

  Worksheet Operations : The following worksheet operations are associated with the spread sheet : (i) Movement of Cell Pointer; (ii) Short-Cut Menu; (iii) Entering Data into Cells; (iv) Selecting Multiple Cells; (v) Managing Text in Excel

- **Performing Calculations in Excel :** A formula is a set of mathematical instructions that can use in Excel to perform calculations. Formulas are started in the formula box with an = sign.

  There are many elements to and excel formula.

  References ***Operators*** ***Constants*** ***Functions***

- **Calculate with Functions :** A function is a built in formula in Excel. A function has a name and arguments (the mathematical function) in parentheses. Common functions in Excel:

  Sum ***Average*** ***Min*** ***Max*** ***Count***

- **Function Library :** The function library is a large group of functions on the Formula Tab of the Ribbon. These functions include:

  AutoSum ***Recently Used*** ***Financial*** ***Logical***

  Text ***Date & Time*** ***Math & Trig***

- **Relative, Absolute and Mixed References :** Calling cells by just their column and row labels (such as "A1") is called **relative referencing**.

- **Mixed referencing** can also be used where only the row or column is fixed.

- **Data Formatting :** Formatting of spreadsheet makes easier to read and understand the important information. This is chiefly categorized as follows:

  Number formatting : Number formatting includes adding per cent (%), Comma (,), decimal (.), currency (Rs., $), date, time, scientific values etc. Refer figure 1 given below which depicts the unformatted worksheet:

  From the Ribbon select, Home Tab with Number option. Click on **Format Cells** dialog box and choose **Number** tab.

  The **Category** list shows all the preset formulas available in Excel, grouped into categories.

  If we select **Currency**, the right hand side shows the different symbols of currencies.

  Change the number of decimal spaces to zero (0).

  Click OK to accept this format. The final output is shown below:

- **Text and General Formatting :** We can do this easily by utilizing the Convert Text to Columns Wizard.

- **Modify Fonts :** Modifying fonts in Excel will allow you to emphasize titles and headings.

- **Format Cells Dialog Box :** In Excel, you can also apply specific formatting to a cell.

  Number : Allows for the display of different number types and decimal places

  Alignment : Allows for the horizontal and vertical alignment of text, wrap text, shrink text, merge cells and the direction of the text.

  Font : Allows for control of font, font style, size, color, and additional features

  Border : Border styles and colors

  Fill : Cell fill colors and styles

- **Add Borders and Colors to Cells :** Borders and colors can be added to cells manually or through the use of styles.

- **Merge Cells :** To merge cells select the cells you want to merge and click the **Merge & Center** button on the **Alignment** group of the **Home** tab. The four choices for merging cells are:

Merge & Center	Merge Across	Merge Cells
Unmerge Cells	Align Cell Contents	

- To align cell contents, click the cell or cells you want to align and click on the options within the **Alignment** group on the **Home** tab. There are several options for alignment of cell contents:

Top Align	Middle Align	Bottom Align
Align Text Left	Center	Align Text Right
Decrease Indent	Increase Indent	Orientation

- **Conditional Formatting :** Conditional formatting helps the user to highlight interesting cells or range of cells, emphasize unusual values and visualize data by using data bars, colour scales and icon values.
- **Output Reports :** The entire or partial worksheet(s) can be printed at a time or as and when needed as per the requirement.
- **Set Print Titles :** The print titles function allows you to repeat the column and row headings at the beginning of each new page to make reading a multiple page sheet easier to read when printed.
- **Set Page Breaks :** You can manually set up page breaks in a worksheet for ease of reading when the sheet is printed.
- **Print a Range :** There may be times when you only want to print a portion of a worksheet. This is easily done through the Print Range function.
- **Split a Worksheet :** You can split a worksheet into multiple resizable panes for easier viewing of parts of a worksheet.
- **Freeze Rows and Columns :** You can select a particular portion of a worksheet to stay static while you work on other parts of the sheet.
- **Preparation of Reports Using Pivot Table :** A Pivot table is a way to present information in a report format.
- **Pivot Table Toolbar :** The Pivot Table uses a List Data table. A data table is a range of cells that shows the results of substituting different values in one or more formulas.

TERMINAL EXERCISE

1. What is Electronic Spread Sheet?
2. What is the basic requirement for any business enterprise for using electronic spread sheet?
3. Name the functions included in 'Function Library'.

4. What is conditional formatting?
5. Give the meanings of workbook & worksheet.
6. Explain the features of Spreadsheet.
7. Explain the worksheet operations in excel sheet.
8. Define workbook & worksheet. What is the difference between them?
9. What do you mean by active worksheet?
10. Explain the procedure of managing Text in excel.
11. Explain worksheet operations available in Excel Sheet.
12. Give Categories of Data formatting and explain them.
13. What benefits are available with the help of conditional formatting.
14. Explain the procedure of preparation of Reports using Pivot Table.

ANSWERS TO INTEXT QUESTIONS

35.1. i. grid ii. intersection iii. rows, columns iv. functions v. alterations

35.2. i. intersect ii. arrow iii. handy, commonly iv. cell, cell v. drag

35.3. i. sum ii. count iii. average iv. max v. min

35.4. i. columns wizard ii. modifying iii. merge & center

35.5. i. conditional ii. pivot iii. data iv. input

36

USE OF SPREADSHEET IN BUSINESS APPLICATIONS

We have learnt about the spreadsheet and its features that can use in business applications. The spreadsheet lends support to a number of areas of accounting. This section describes its applications in two areas: Pay roll and Depreciation accounting to illustrate the capability of spreadsheet to enable computer based accounting.

In this lesson, we shall discuss the applications of spreadsheet (using Excel) to Payroll Accounting and Asset Management Accounting.

OBJECTIVES

After studying this lesson you will be able to :

- state the meaning of Payroll Accounting;
- explain the components of Payroll;
- state the meaning of Depreciation;
- explain the methods of Depreciation;
- compute the amount of annual depreciation with the help of computer and
- maintain the accounts of assets on computers.

36.1 PAYROLL

Every employee in an organization is paid remuneration to compensate for (or in consideration of) services rendered during a particular period. This compensation is called Salary or more popularly, Pay to the people in employment. Salary is payable with reference to a pre determined period of time (usually a month). That is why the salary is normally specified on a monthly basis. In order to avoid subjectivity in determining the salary payable to various employees, almost every modern organization follows a definite set of rules to decide the salary payable to their employees. Use of Computers for maintaining the records Salary of employees is known as Payroll accounting.

36.1.1 Payroll Components

Every employee, when appointed by the organization enters into a contract of service in which these pay rules are incorporated as terms and conditions of employment.

Current Payroll Period (Month And Year)

Earnings

- **Basic Pay (BP) :** It is the pay in the pay scale plus Grade Pay, but does not include Special Pay.
- **Grade Pay (GP) :** It is the pay to be added to the Basic Pay according to the designation of the employee and applicable pay band or scale of pay.
- **Dearness Pay (DP) :** It is that portion of Dearness Allowance, which has been declared and deemed to have been merged with the Basic Pay.
- **Dearness Allowance (DA) :** It is a compensation for erosion in the purchasing power of wage earner due to price rise. It is granted by the employer periodically as a percentage of (Basic Pay + Dearness Pay, if applicable).
- **House Rent Allowance (HRA) :** It is an amount paid to facilitate employee in acquiring on lease of residential accommodation.
- **Transport Allowance (TRA) :** It is an amount to facilitate commuting to the place of work.
- **Any Other Earning :** It may include any other allowance not included above but declared from time to time, such as Children Education Allowance, Medical Allowance, Washing Allowance, etc.

Deductions

- **Professional Tax (Applicable in some states) (PT) :** It is a statutory deduction according to the legislature of the State Government.
- **Provident Fund (PF) :** It is a statutory deduction, as part of social security. It is decided by the Government under the Provident Fund Act and is computed as a percentage of (Basic Pay + Dearness Pay, if applicable).
- **Tax Deduction at Source (TDS) :** It is a statutory deduction, which is deducted monthly towards Income Tax liability of an employee. It is essentially an apportionment of yearly Income Tax liability over 12 months.
- **Recovery of Loan Instalment (LOAN) :** Any amount signified by the employee for deduction on account of any loan taken up by him/her.

- **Any Other Deduction :** It may include any other deduction not included above such as Recovery of Advance against Salary, deductions on account of Food Grain Advance., .Festival Advance., etc.

  i. ***Gross :*** The Gross amount of salary is the salary due to each employee, which normally consists of Basic Pay and various Allowances. The most common allowances are Dearness Allowance, House Rent Allowance, City Compensation Allowance, Transport Allowance etc. The gross salary payable to each employee is computed as an aggregate of basic pay and the applicable allowances as per the terms and conditions of employment.

  ii. ***Deductions :*** Every employee is required to contribute from the monthly salary a certain percentage of basic salary towards provident fund. Accordingly, the amount of contribution is deducted from the salary due. Further, the organization as employer is required to deduct subject to provisions of Income Tax Act, a certain amount as Tax Deduction at Source (TDS) from salary of each employee. In addition to this, there may be many other voluntary and compulsory deductions from the salary due to employees.

  iii. ***Net Salary :*** The net amount of salary is the difference between gross salary and deductions. Net amount of salary is to be paid to each employee at the end of a month.

Payroll is an accounting statement that is meant to show the salary payable to each employee by providing details of the gross salary, various amounts of deductions and finally net amount payable to such employee.

INTEXT QUESTIONS 36.1

Fill in the blanks :

i. Salary is normally specified on a ______________ basis.

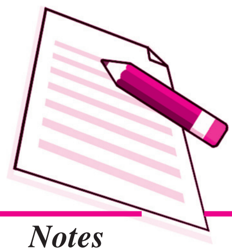
ii. Contract of employment & Pay rules are known as ________________.

iii. ______________ Allowance paid to facilitate employee in acquiring residential accommodation on lease/rent.

36.2 ELEMENTS USED IN PAYROLL CALCULATION

Basic Pay Earned (BPE) . Basic Pay Earned of an employee is the Basic Pay calculated with reference to Number of Effective Days present (NOEDP) during the month.

$$BPE = BP * NOEDP/NODM$$



Notes

Dearness Allowance (DA)

*DA = BPE * (Applicable Rate of DA for the Month)*

House Rent Allowance (HRA)

*HRA = BPE * (Applicable Rate of HRA for the Month)*

Transport Allowance (TRA)

TRA = (Fixed Amount) or (On Percentage Basis)

Total Earnings (TE). It is the aggregate of all the above earning elements. Thus,

$$TE = BPE + DA + HRA + TRA$$

Provident Fund (PF) : This can be calculated as ***PF = BPE * PF Rate Press Enter***

Tax Deduction at Source (TDS) : It is usually a fixed amount deducted every month on account of TDS. In the last quarter of a year, the investment details, which are permissible for tax deduction, are received from employees to compute the quarterly and yearly income tax liability more accurately.

Recovery of Loan Instalments (LOAN) : It is a fixed amount to be deducted on account of Loan Installment as part of loan recovery.

Total Deductions (TD) : It is the total of all the above deductions. Thus,

$$\text{TD} = \text{PF} + \text{TDS} + \text{LOAN}$$

Number of Effective Days Present (NOEDP) *is the Number of Days in a Month Minus Leave without Pay minus Unauthorised Absence, i.e.* ***NOEDP = (Number of Days in a Month)****-(Leave without Pay)-(Unauthorised Absence) ; where 'Number of Days in a Month' may be denoted by NODM.* The Net Salary (NS) is the amount payable to an employee. It is obtained by deducting Total Deductions (TD) from Total Earnings (TE) as given below :

Net Salary (NS) = Total Earnings (TE) - Total Deductions (TD)

The basic elements used in payroll calculations are shown in following table:

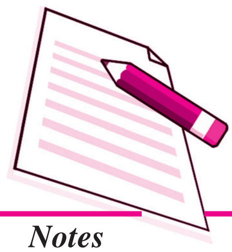
Basic Pay Earned (BPE)	$BP \times \frac{NOEDP}{NODM}$ Where, NOEDP is Number of Effective Days Present (Total number of days in a month - Leave without pay and Unauthorized absence) NODM is Number of Days in a Month

DA and HRA	BPE x Rate of DA BPE x Rate of HRA
Transport Allowance (TRA)	Fixed Amount or on Percentage Basis
Total Earnings (TE)	BPE + HRA + TRA
Provident Fund	BPE x PF rate
Other Deductions : Tax Deduction at Source Recovery of Loan Installments	These are calculated and deducted for employee.
Total Deductions (TD)	PF + TDS + Loan Repayment
Net Salary (NS)	Total Earning (TE) - Total Deduction (TD)

36.3 PAYROLL DESIGN USING MS EXCEL

Column	*Column Heading*	*Abbrev Ref*	*First line shows Required Formula Second line refers the cell content*
A	Employee No	Emp No	Value entered directly
B	Employee Name	Emp Name	Value entered directly
C	Employee Type	Emp Type	Value entered directly
D	Deduction Days	Ded Days	Value entered directly
E	Basic Pay	BP	Value entered directly
F	No. of Effective Days Present	NOEP	= NODM – (Ded Days) = $I$3-D12
G	Basic Pay Earned	BPE	= BP * NOEP/NODM = E12*F12/$I$3
H	Dearness Allowance	DA	= BPE * DA Rate (in %) = G12*$I$4
I	House Rent Allowance	HRA	= If (Emp Typ = "Sup" then 40% of BPE else if (Emp Typ = "Nsup" then 30% of BPE else 0)) = IF(C12="Sup", G12*$I$5, IF(C12 ="Nsup", G12*$I$6,0))
J	Transport Allowance	TRA	= If (Emp Typ = "Sup" then 1000 else if (Emp Typ = "Nsup" then 500 else 0)) = IF(C12="Sup",$I$7,IF(C12 ="Nsup",$I$8,0))
K	Gross Salary	TE	= BPE + DA + HRA + TRA = G12+H12+I12+J12
N	Provident Fund	PF	= BPE * PF Rate (in %) = G12*$I$9
O	Tax Deduction at Source	TDS	Value entered directly
P	Loan Repayment Inst.	LOAN	Value entered directly
Q	Total Deductions	TD	= PF + TDS + LOAN= N12+O12+P12
R	Net Salary	NS	= TE – TD= K12-Q12

Figure 36.1 : Spreadsheet Columns and the Cells Content in Spreadsheet



Notes

Variable/Type of Employee	*Value in % or Fix Value*	*Remark*
Dearness Allowance (DA)	35% of Basic Pay	I4
House Rent Allowance (HRA) –:		
Supervisory Employee (Sup)	40% of Basic Pay	I5
Non-supervisory Employee (Nsup)	30% of Basic Pay	I6
Consultant or Contract Employee	Nil	
Provident Fund (PF)	12% of BP +DA	I9

Figure 36.2 : Rules for Computing Some of Payroll Elements

Generating the Monthly Statement

	A	B	C	D	E	F	G	H	I	J	K
1	M/S X Y Z Enterprises										
2	Payroll for the Month of February, 2009										
3			No. of Days in a Month (NOMD) For February, 2009:						28		
4			DA Rate Applicable for February, 2009:						35%		
5			HRA Rate for Supervisory Staff:						40%		
6			HRA Rate for Non-supervisory Staff:						30%		
7			Transport Allowance for Supervisory Staff						1000		
8			Transport Allowance for Non-supervisory Staff						500		
9			PF Rate:						12%		
10	Emp. No.	Emp Name	Emp Type	Ded Days	Basic Pay	No. of Eff. Days	Basic Pay Earned	DA	HRA	TRA	Total Earnings
11	101	Sanjay	Sup	1.5	16500	26.5	15616.07	5465.63	6246.43	1000	28328.13
12	341	Nimita	Sup	0.0	34000	28.0	34000.00	11900.00	13600.00	1000	60500.00
13	461	Rohanlal	Sup	0.0	19000	28.0	19000.00	6650.00	7600.00	1000	34250.00
14	561	Aishwarya	Sup	3.0	23000	25.0	20535.71	7187.50	8214.29	1000	36937.50
15	701	Rohitkumar	Sup	1.0	15000	27.0	14464.29	5062.50	5785.71	1000	26312.50
16	941	Kapildev	Sup	0.0	40000	28.0	40000.00	14000.00	16000.00	1000	71000.00
17	1061	Anshuman	Sup	4.0	36000	24.0	30857.14	10800.00	12342.86	1000	55000.00
18	1181	Sachin	Nsup	0.0	9500	28.0	9500.00	3325.00	2850.00	500	16175.00
19	1421	Priyanka	Sup	0.0	23000	28.0	23000.00	8050.00	9200.00	1000	41250.00
20	1541	Nargis	Nsup	0.0	8000	28.0	8000.00	2800.00	2400.00	500	13700.00
21	1661	Ashok	Nsup	0.0	8500	28.0	8500.00	2975.00	2550.00	500	14525.00
22	1781	Rajesh	Nsup	0.5	9000	27.5	8839.29	3093.75	2651.79	500	15084.82
23	2021	Motilal	Cont	0.5	20000	27.5	19642.86	6875.00	0.00	0	26517.86
24	2141	Balraj	Cnst	2.0	25000	26.0	23214.29	8125.00	0.00	0	31339.29
25		Total					275169.64	96309.38	89441.07	10000	470920.09

Figure 36.3 (a) : Partial Spreadsheet Showing Payroll List upto Gross Salary

	A	B	N	O	P	Q	R
2							
3							
10	Emp. No.	Emp Name	PF	TDS	Loan Instalment	Total Deduction	Net Salary
11	101	Sanjay	1873.93	3300	0	5173.93	23154.20
12	341	Nimita	4080.00	6800	2400	13280.00	47220.00
13	461	Rohanla	2280.00	3800	1200	7280.00	26970.00
14	561	Aishwa	2464.29	4600	0	7064.29	29873.21
15	701	Rohitku	1735.71	3000	0	4735.71	21576.79
16	941	Kapilde	4800.00	8000	3000	15800.00	55200.00
17	1061	Anshun	3702.86	7200	2600	13502.86	41497.14
18	1181	Sachin	1140.00	1900	0	3040.00	13135.00
19	1421	Priyank	2760.00	4600	0	7360.00	33890.00
20	1541	Nargis	960.00	1600	0	2560.00	11140.00
21	1661	Ashok	1020.00	1700	1100	3820.00	10705.00
22	1781	Rajesh	1060.71	1800	0	2860.71	12224.11
23	2021	Motilal	2357.14	4000	0	6357.14	20160.71
24	2141	Balraj	2785.71	5000	0	7785.71	23553.57
25		Total	33020.36	57300	10300	100620.36	370299.73

Figure 36.3 (b) : Partial Spreadsheet for calculation of Deductions & Net Salary

INTEXT QUESTIONS 36.2

Write the full form of the following :

i.	BPE	ii.	DA	iii.	TRA
iv.	HRA	v.	PF	vi.	TDS

36.4 DEPRECIATION

Depreciation is calculated according to the policy of the organisation. There are basically two methods, namely the Straight Line Method (SLM) and the Written Down Value Method (WDV). We will recall that asset accounting requires maintenance of asset.

Computation of depreciation and preparation of schedule of fixed assets for reporting in the balance sheet as part of the annual accounts. In order to prepare this report the depreciation calculation sheet is also to be prepared.

Depreciation is an allocation of the depreciable cost of a non-current (fixed) asset over its useful life. It is a way of matching the amount of a fixed cost consumed in an accounting period with the revenue it generates. Depreciation is a process of cost allocation. This is based on factors such as useful life, scrap value and cost of asset put to use. Depreciation expense is the amount of cost allocation within an accounting period. Only items that lose useful value over time can be depreciated except freehold land whose value generally does not decrease.

Depreciation is calculated according to the policy of the organization. The Companies Act 1956 in Schedule XIV lists the rate of depreciation to be used for different types of assets under Straight line and Written down Value method.

Excel worksheet supports the functions of SLN (Straight line), DB (Diminishing Balance, DDB (Double Declining Balance), SYD (Sum of Years Digit) to compute depreciation on Assets.

In this section, are concentrating only on Straight line and Written down Value method of depreciation.

INTEXT QUESTIONS 36.3

Fill in the blanks :

i. ______________ is an allocation of the depreciable cost of a non-current asset over its useful life.

ii. Depreciation is a process of cost ____________.

iii. Excel worksheet supports the functions of Straight Line Method, Diminishing Balance Method and ______________ Method.

Notes

36.5 COMPUTERISED ASSET ACCOUNTING

Assets are classified into the following categories:

- Goodwill
- Land: Free-hold land and Lease-hold land
- Building: Factory building, Office building, and Residential building. Plant and Machinery
- Furniture and Fixtures
- Vehicles
- Capital work in progress
- Others

The Companies Act, 1956 in Schedule-14 lists the rate of depreciation to be used for different class of assets under Straight Line Method (SLM) and Written Down Value Method (WDV). The prescribed rates are different under two methods. For reporting purposes, corporate enterprises may use either of the method and applicable rates. Let us now understand the computation of depreciation using the two methods.

36.5.1 Straight Line Method of Depreciation

According to this method, the acquisition cost of asset and the net value is allocated over its useful life span by charging a constant amount of depreciation. This is computed as follows:

i. Acquisition cost = Purchase value + other expenses such as transportation expenses, installation expenses and pre operating expenses.

ii. Total Depreciable amount = Acquisition cost – Salvage value

Hence, Straight line depreciation is calculated as : $\dfrac{\text{Total Depreciable Amount}}{\text{Expected Useful Life}}$

$$\text{Rate of Depreciation} = \frac{\text{Straightline Depreciation}}{\text{Total Depreciable Amount}} \times 100$$

Hereunder, we will now compute the depreciation by straight line method using the inbuilt function SLN. The depreciation is being computed on two assets: CNC machine and Packing machine. For this, enter the values in the worksheet as shown in the table:

Column	*Column Heading*	*Abbrev Ref*	*First line shows Required Formula* *Second line refers the cell content*
A	Asset Name	Asset Name	Value entered directly
B	Date of Purchase	Pur. Date	Value entered directly
C	Date of Installation	Inst. Date	Value entered directly
D	Cost of Purchase	Pur. Cost	Value entered directly
E	Installation Expenses	Inst. Exp.	Value entered directly
F	Pre-operating Expenses	Pre-op Exp	Value entered directly
G	Cost to Use	Cost to Use	= (Cost of Purchase) + (Installation Expenses) + (Pre-operating Expenses) = D5+E5+F5
H	Salvage Value	Salvage Val	Value entered directly
I	Life of Asset in Years	Life in Yrs	Value entered directly
K	Depreciation Amount	Depr.	=SLN(G5.H11.I11)

2	**Calculation of Depreciation for the Financial Year 2008-09 (SLM Method)**						
3		**Year-Beg-Dt**	**01-Apr-08**		**Year-End Dt**	**31-Mar-09**	
4	**Asset Name**	**Purchase Date**	**Installation Date**	**Purchase Cost**	**Installation Expenses**	**Pre-Operation Expenses**	**Cost to Use**
5	CNC Machine	11-Jul-08	17-Jul-08	877000	11000	3000	891000
6	Packing Machine	03-May-06	07-May-06	123000	8000	2500	133500

8	**Calculation of Depreciation for the Financial Year 2008-09 (SLM Method)**				
9		**Total No of Days**	**365**		
10	**Asset Name**	**Salvage Value**	**Life in Years**	**Allowed Depreciation**	**Depreciation**
11	CNC Machine	45000	7	100%	120857.14
12	Packing Machine	17000	7	100%	16642.86

Excerpts of the Spread sheet showing the depreciable amount

36.5.2 Written down Value method of Depreciation

According to this method, the amount of depreciation is calculated at a fixed rate on the cost of assets as reduced by the amount of depreciation charged upto date. Function DB computes and returns the depreciation of an asset for a specified period using written down value method. The parameters for its computation are:

Cost : refers to the initial cost of the asset.

Life : also called useful life of the asset is the number of periods over which the asset is being depreciated.

Salvage : also called salvage value of the asset, is a value at the end of life of asset.

Period : is the period for which the depreciation is calculated. The unit of period is the same as that of life.

Notes

Month : is the number of months in the initial year. If the month is omitted, it is assumed to be 12.

Hereunder, we will now compute the depreciation by Diminishing Balance method using the inbuilt function DB. The depreciation is being computed on two assets: CNC machine and Packing machine. For this, enter the values in the worksheet as shown in the table: The following table presents the column items and contents used in the spreadsheet.

Column	*Column Heading*	*Abbre. Ref*	*First line shows Required Formula Second line refers the cell content*
I	Life of Asset in Years	Life in Yrs	Value entered directly
J	Period (in Years) for which Depr. is to be computed	Period	If (Instalation of asset was done after March) then take (Current Year) – (Year of Instalation) else take one addl. Year. = IF (MONTH(C5) > 3.(YEAR($F$3)-YEAR(C5)).(YEAR($F$3)-YEAR(C5))+1)
K	Months in 1st Year (i.e. the year of installation)	Months in 1st Yr	No. of months between (Yr-End-Dt in 1st Yr) & (Inst.Date) = ROUND((L5-C5)/30.0)
L	Year-end Date in 1st Year (Reqd. to compute column-K)	Yr-End-Dt in 1st Yr	If (Inst. Date) was Between Jan and Mar. Take it as 31st Mar of (Year of Inst. Date) Else Take it as Next Year. = IF(AND(MONTH(C5)>0.MONTH(C5) <4). DATE(YEAR(C5).3.31). DATE(YEAR(C5)+1.3.31))
M	Depreciation	Depr.	Parameters of DB function as explained above = DB(G5.H5.I5.J5.K5)

2	Calculation of Depreciation for the Financial Year 2008-09 (WDV Method)						
3		Year-Beg-Dt	01-Apr-08		Year-End	31-Mar-09	
4	Asset Name	Purchase Date	Installation Date	Purchase Cost	Installation Expenses	Pre-Operation Expenses	Cost to Use
5	CNC Machine	11-Jul-08	17-Jul-08	877000	11000	3000	891000
6	Packing Machine	03-May-06	07-May-06	123000	8000	2500	133500

2	Calculation of Depreciation for the Financial Year 2008-09 (WDV Method)						
10	Asset Name	Salvage Value	Life in Years	Period	Months in 1st Yr	Yr-End-Dt in 1st Yr	Depreciation
11	CNC Machine	45000	7	1	9	31-Mar-09	231882.75
12	Packing Machine	17000	7	3	11	31-Mar-07	19433.37

Excerpts of the Spread sheet showing the depreciable amount

INTEXT QUESTIONS 36.4

State True or False :

i. In Straight Line Method, the amount of depreciation remain constant in all the years.

ii. In Diminishing Balance Method, the amount of depreciation is calculated at a fixed rate on the reducing book value of an asset.

iii. Rates of depreciation prescribed in the Companies Act, 1956 are same for all the methods of depreciation.

WHAT YOU HAVE LEARNT

- Use of computers for maintaining the records salary of employees is known as Payroll Accounting.
- Components of Pay Roll :
  - Basic Pay
  - Grade Pay
  - Dearness Allowance
  - House Rent Allowance
  - Transport Allowance
- Deductions from Pay
  - Professional Tax
  - Provident Fund
  - Tax Deduction at Source
  - Recovery of Loan Installment
- Pay of employees can be easily calculated and shown with the help of Payroll accounting.
- Depreciation is an allocation of the depreciable cost of a non-current (fixed) asset over its useful life.
- Excel worksheet supports the function of SLN (Straight Line), DB (Diminishing Balance), DDB (Double Declining Balance), SYD (Sum of Years Digit) to Compute Depreciation on Assets.

TERMINAL EXERCISE

1. What is Payroll Accounting?
2. Enumerate the components of Payroll Accounting.

3. Explain the various Earnings included in Payroll Accounting.
4. Explain the various items of deductions used in Payroll Accounting.
5. What is Depreciation?
6. Give the classification of Assets.
7. Which schedule of Companies Act, 1956 shows the rates of depreciation for different classes of assets?
8. Give the names of methods of depreciation supported by Excel worksheet.

ANSWERS TO INTEXT QUESTIONS

36.1 i. Monthly ii. Terms & Conditions of Employment
iii. House Rent

36.2 i. Basic Pay Earned ii. Dearness Allowance
iii. Transport Allowance iv. House Rent Allowance
v. Provident Fund vi. Tax Deducted at Source

36.3 i. Depreciation ii. Allocation iii. Sum of years digits

36.4 i. True ii. True iii. False

37

GRAPHS AND CHARTS

In the previous lesson, you have learnt about the basic features of spreadsheet and use of spreadsheet in accounting. Quite often, we have to present the data for communication of the accounting information. If mass of data is presented in the raw form, it may not be easily understandable. It can be said, .A picture is worth more than thousand words. In this lesson, we are discussing the methods of preparing graphs, charts and diagrams showing the data through the use of Excel as a tool.

OBJECTIVES

After Studying this lesson, you will be able to:

- State the meaning of Graphs and Charts.
- Create a Chart on excel sheet.
- Modify a chart on Excel sheet.
- Understand the Chart Tools and their uses on Excel Sheet.
- Explain the advantages of using Charts and Graphs.

37.1 GRAPHS AND CHARTS

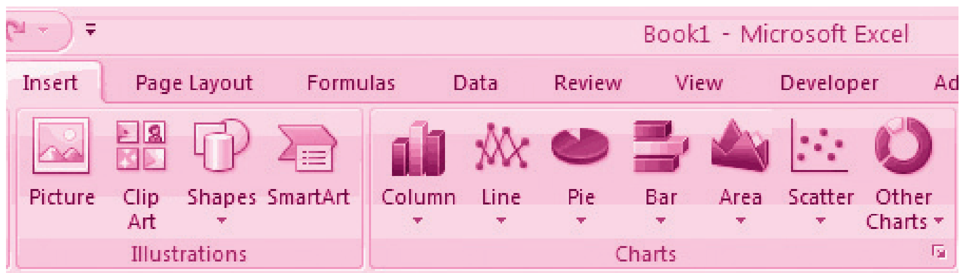
Graphs and Charts are pictorial representation of data, which has at least two dimensional relationship. Graphs, has two axes X and Y. X axis is usually horizontal while Y axis is vertical. Graphs/ Charts allow you to present information contained in the worksheet in a graphic format. Excel offers many types of charts including: Column, Line, Pie, Bar, Area, Scatter and more. To view the charts available click the Insert Tab on the Ribbon.

37.1.1 Using Charts/Graphs tools in Excel

Create a Chart

To create a chart:

- Select the **cells** that contain the data you want to use in the chart
- Click the **Insert** tab on the Ribbon
- Click the type of **Chart** you want to create

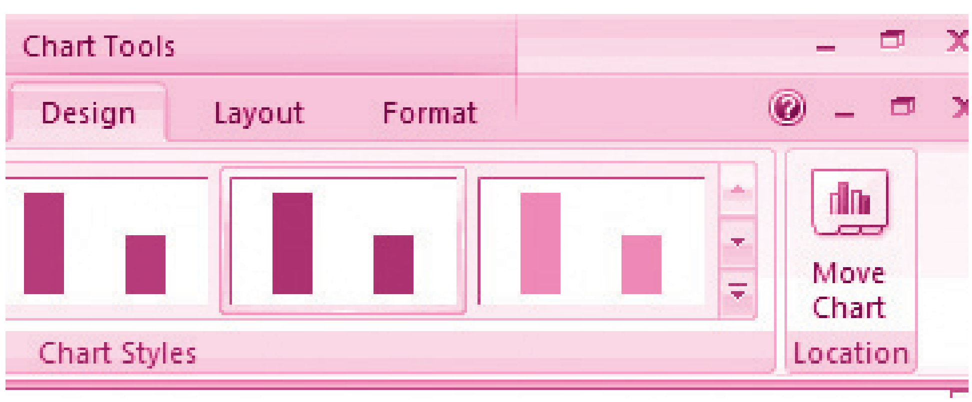


37.1.2 Modify a Chart

Once you have created a chart you can do several things to modify the chart.

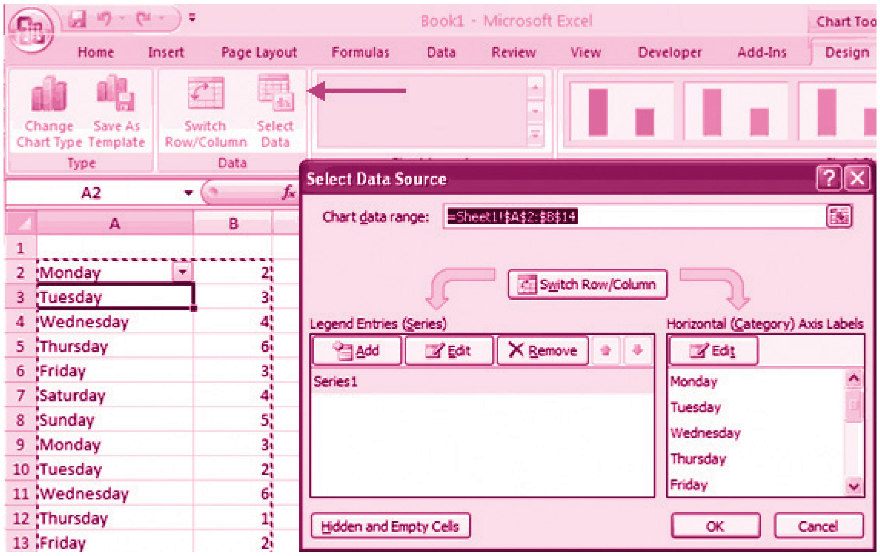
To move the chart:

- Click the **Chart** and **Drag** it to another location on the same worksheet, or
- Click the **Move Chart** button on the **Design** tab
- Choose the desired location (either a new sheet or a current sheet in the workbook)



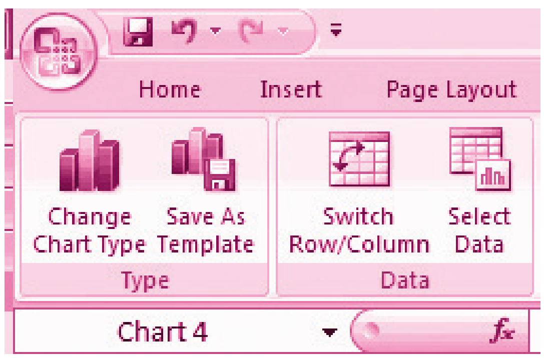
To change the data included in the chart:

- Click the **Chart**
- Click the **Select Data** button on the **Design** tab



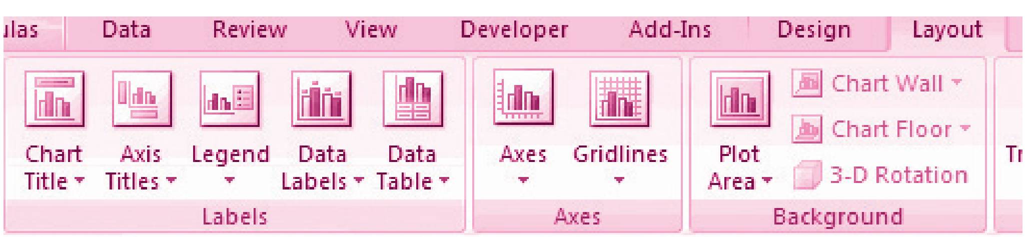
To reverse which data are displayed in the rows and columns

- Click the **Chart**
- Click the **Switch Row/Column** button on the **Design** tab



To modify the labels and titles:

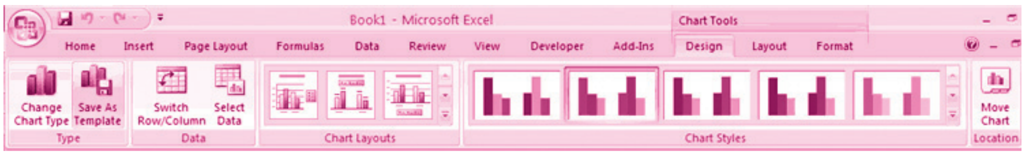
- Click the **Chart**
- On the **Layout** tab, click the **Chart Title** or the **Data Labels** button
- Change the **Title** and click **Enter**



37.1.3 Chart Tools

The Chart Tools appear on the Ribbon when you click on the chart. The tools are located on three tabs: Design, Layout, and Format.

Within the **Design** tab you can control the chart type, layout, styles, and location.



Within the **Layout** tab you can control inserting pictures, shapes and text boxes, labels, axes, background, and analysis.

Within the **Format** tab you can modify shape styles, word styles and size of the chart.

37.1.4 Copy a Chart to Word

- Select the **chart**
- Click **Copy** on the **Home** tab
- Go to the **Word** document where you want the chart located
- Click **Paste** on the **Home** tab

INTEXT QUESTIONS 37.1

Fill in the blanks :

i. Graphs and Charts are _______________ representation of data.

ii. Graphs and charts have atleast _______________ dimensional relationship.

iii. X axis is usually _______________ while Y axis is _______________.

iv. To view the charts available, we have to click the _______________ tab on the ribbon.

37.2 ELEMENTS OF A CHART/GRAPH

A Chart/graph is a pictorial presentation of data. To understand and explain the chart/ graph we will learn all basic elements of the chart.

1. **The chart area :** The entire chart including all elements.
2. **The plot area:** In a 2-D chart, the area is bounded by the X and Y axis. In a 3-D chart, the area is bounded by the three (X, Y and Z) axis.
3. **The data points:** Individual values plotted in a chart and represented by bars, columns, lines, pie or various other shapes are called **data markers**. Data markers of the same colour constitute a **data series**. The data series are related **data points** that are plotted in the chart/ graph. Each data series in a chart is shown in a unique colour or pattern or both. Its identification is given by the legend. There may be more than one data series in a chart/graph.
4. **The horizontal (category) and vertical (value) axis :** The x-axis is usually the horizontal line which contains categories (independent values or categories) and y-axis is usually the verticals which contains data (dependent values).
5. **The legend :** It is an identifier of a piece of information shown in the chart/graph. The legends are assigned to the data series or different categories in a chart
6. **A chart and axes titles :** Descriptive text for chart title and axis title.
7. **A data label :** This provides additional information about a data marker to identify the details of data point in a data series. Some of the elements are displayed by default when we prepare the chart/graph; others can be added as needed. It is also possible to change the format or display of the chart/graph as desired.

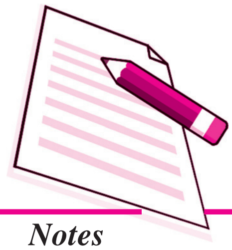
37.3 FORMATTING OF CHART

Formatting the Chart (using design option)

Now, we will learn how the elements of a chart such as plot area, X-axis, Y-axis, data, titles, labels, legends and gridline can be formatted and edited as per the requirement. Click anywhere in the chart. This will display the **Chart Tools**, adding the **Design**, **Layout**, and **Format** tabs.Using **Design** option we can change the look of a chart. In the **Design** dialog box, we can click to change chart type, chart layouts and chart styles. One of the options provide for 2-d chart to swap the column data to row data and row data to column data.

The steps are as follows:

In a chart click the chart element to change, or do the following to select the chart element from a list of chart elements:



1. Click anywhere in the chart. This will display the **Chart Tools**, adding the **Design**, **Layout**, and **Format** tabs.

2. On the **Design** tab, in the **Data** group, click the arrow the **Switch Row/Column** box.

37.4 CHANGING THE FORMAT OF A SELECTED CHART ELEMENT

In the same chart, click the chart element to change, or do the following to select the chart element from a list of chart elements:

1. Click anywhere in the chart. This will display the **Chart Tools**, adding the **Design**, **Layout**, and **Format** tabs

2. On the **Format** tab, in the **Current Selection** group, click the arrow next to the **Chart Elements** box, and then select the chart element which requires to format.

3. On the **Format** tab, in the **Current Selecti1on** group, click the **Format Selection.**

e **Format <Chart Element>** dialog box, click a category, and then select the formatting options.

37.4.1 Changing the Shape Style

On the **Format** tab, in the **Shape Styles** group, do one of the following:

- To see all available shape styles, click the **More** button.
- To apply a pre- defined shape style, in the shape style box, click the style that we want.
- To apply a different shape fill, click **Shape Fill**, and then do one of the following:
  - To use a different fill Colour, under **Theme Colours** or **Standard Colours**, left click the select Colour.
  - To remove the Colour from the selected chart element, click **No Fill**.
  - To use a fill Colour that is not available under **Theme Colours** or **Standard colours** click **More Fill Colours**. In the **Colours** dialog box, specify the Colour that we want to use on the **Standard** or **Custom** tab, and then click **OK**. Custom fill Colours are added under **Recent Colours** can also be used.

- To fill the shape with a picture, click **Picture**. In the **Insert Picture** dialog box, click the picture to use, and then click **Insert**.
- To use a gradient effect for the selected fill Colour, click **Gradient**, and then under **Variations**, click the gradient style to be used. For additional gradient styles, click **More Gradients**, and then in the **Fill** category, click the gradient options that to use.
- To use a texture fill, click **Texture**, and then click the texture to use.

37.4.2 Changing the Shape Outline

To apply a different shape outline, click **Shape Outline**, and then do one of the following :

- To use a different outline Colour, under **Theme Colours** or **Standard Colours**, click the Colour to use.
- To remove the outline Colour from the selected chart element, click **No Outline**. If the selected element is a line, the line will no longer be visible on the chart.
- To use an outline Colour that is not available under **Theme Colours** or **Standard Colours** click **More Outline Colours**. In the **Colours** dialog box, specify the Colour that to use on the **Standard** or **Custom** tab, and then click **OK**. Custom outline colours are added under **Recent Colours** can be used again.
- To change the **weight** (thickness) of a line or border, click **Weight** option, and then select the line that we wish to use. For additional line style or border style options, click on **More Lines**, and then click the line style or border style options.
- To use broken line (dash. dash) or border, click **Dashes**, and then click the dash type to use. For additional dash-type options, click on **More Lines**, and then click the selected dash.
- To add arrows to lines, click **Arrows**, and then click the arrow style for borders cannot be used. For additional arrow style or border style options, click **More Arrows**, and then click the arrow setting.
- To apply a different shape effect, click **Shape Effects**, click a chosen effect, and then select the type of effect. The **shape effects** depend on the chart element that we select such as **Pre-set, reflection, and level.** The **shape effects** are not available for all chart elements.

37.4.3 Changing the Text Format

To format the text in chart elements, we can use regular text formatting options, or we can apply a **WordArt format**.

1. Click the chart element that contains the text to format.
2. Right-click the text or select the text to format, and then do one of the following:
   - Click the formatting options that we want on the **Mini toolbar**.
   - On the **Home** tab, in the **Font** group, click the formatting buttons that we want to use.

To use **WordArt styles** to **format text** use chart elements in the following steps:

1. In a chart, click the chart element that contains the text to be changed, or do the following to select the chart element from a list of chart elements:
2. Click anywhere in the chart.
3. This displays the **Chart Tools**, adding the **Design**, **Layout**, and **Format** tabs.
4. On the **Format** tab, in the **Current Selection** group, click the arrow next to the **Chart Elements** box, and then select the chart element that is to be formated.
5. On the **Format** tab, in the **WordArt Styles** group, do one of the following:

To see all available WordArt styles, click the **More** button. We get options for Text related formatting

- Text Fill
- Text Outline
- Shadow
- 3-D Format
- 3-D Rotation
- Text Box

37.4.4 Changing the Layout of the Chart Element

In the same chart, click the chart element to change, or do the following to select the chart element from a list of chart elements:

1. On the **Layout** tab, we can insert different Clip Arts, Picture, data labels, grids etc.
2. In the **Format <Chart Element>** dialog box, click a category, and then select the formatting options.

37.4.5 Change the Chart Type

A chart can be changed to another type of chart to get different look and purpose.

This is the easiest method to change from column chart or bar chart to Pie chart because

:

Only one data series is used to plot.:

- The plotted data values are positive.
- The data values are not equal to zero also.

Note that in Excel software Pie chart cannot plot more than seven catgories. The categories represent the parts of whole Pie.

Steps for creating a Pie Chart

1. Enter the data in a worksheet.
2. Select the data from two (consecutive) columns only.
3. Select the chart type Pie from the ribbon.
4. Under Pie types select 3-D Pie option
5. Click the plot of Pie chart. This displays the **Chart Tools**, adding the **Design, Layout**, and **Format** tabs.
6. On the **Design** tab, in the **Chart Layouts** group, select the layout to use.
7. On the **Design** tab, in the **Chart Styles** group, click the chart style.
8. On the **Format** tab, in the **Shape Styles** group, click **Shape Effects**, and then click **Bevel**.
9. Click **3-D Options**, and then under **Bevel**, click the **Top** and **Bottom** bevel options.
10. In the **Width** and **Height** boxes for **Top** and **Bottom** bevel options, type the point size.
11. Under **Surface**, click **Material**, and then click the material option.
12. Click **Close**.
13. On the **Format** tab, in the **Shape Styles** group, click **Shape Effects**, and then click **Shadow**.
14. Under **Outer**, **Inner**, or **Perspective**, click the shadow option.
15. To rotate the chart for a better perspective, select the plot area, and then on the **Format** tab in the **Current Selection** group, click **Format Selection**.
16. Under **Angle of first slice**, drag the slider to the degree of rotation that you want, or type a value between 0 (zero) and 360 to specify the angle of the first slice to

Notes

appear, and then click **Close**.

17. Click the chart area of the chart.
18. On the **Format** tab, in the **Shape Styles** group, click **Shape Effects**, and then click **Bevel**.
19. Under **Bevel**, select the bevel option.
20. To use theme colors that are different from the default theme that is applied the workbook, do the following:
    a. On the **Page Layout** tab, in the **Themes** group, **click Themes.**
    b. Under **Built-in**, click the theme to use.

37.4.6 Resizing of Chart/Graph

Resizing of the chart means changing size of the chart as desired. This option can be used independently for the **fonts, title, legends** easily. The first step is to select the chart by clicking the left button of the mouse. Move the cursor on the corners or middle of the borders of the chart/graph which will provide the figure (the cursor will take the shape of a two headed arrow). By pressing the left button, and drag/ pull as desired to resize the chart.

37.5 ADVANTAGES IN USING GRAPHs/CHARTs

1. **Help to Explore :** Many times we would like to see if there is a relationship between variables. Suppose that we wanted to determine if there is a relationship between: a country's GNP and the infant mortality rate, between age and between genders. It may be quicker and easier to create a chart immediately to see the possible relationship of variables to one another, rather than paging through raw data.
2. **Help to Present :** We want to provide information in as little time as possible. Graphing plays a key role. It seems that there is no longer any time to sit and read a newspaper in order to find out what is going on. However, newspapers, such as The Economics Times and India Today magazines (which were early users of charting techniques), seem to understand this phenomena and provide graphs to convey and sum up ideas that they are making in their articles.
3. **Help to Convince :** The same way that a graph can be used to present and explore different characteristics of data, it can also be used to convince. Graphs have the ability to take large amounts of information and make them into exhibitions that are easily used to persuade.

INTEXT QUESTIONS 37.2

Fill in the blanks with suitable word/words:

i. Plot area, X-axis, Y-axis, data, titles, labels, legends and gridlines are known as _______________ of a chart.

ii. To use a texture fill, we have to click _______________.

iii. A chart can be changed to another type of chart to get different look and _______________.

iv. In Excel software, Pie chart cannot plot more than _______________ categories.

WHAT YOU HAVE LEARNT

- A **graph** is a pictorial representation of data. Graphs are usually 2-dimensional. Sometimes 3-dimensional graphs are also used.
- A graph may be either a **singleline graph or a multi-line graph**. Multi-line in a graph are distinguished either by using different shapes of line or different shapes and colors.
- Other popular pictorial representations include **Pie Chart** and **Bar Chart**. Pie charts depict relative share of different elements. Bar charts are used to depict the comparison of absolute values of data (e.g. sales, production, etc.) at discrete points (e.g. time intervals, products, etc.).
- MS-Excel 2007 (or simply Excel) provides a convenient facility to draw graphs and charts. The nomenclature used in Excel for charts (charts include graphs) is as follows:

  a. The Chart Area,

  b. The Plot Area covering the plot of values in the selected type of chart,

  c. The Data Points,

  d. The Horizontal (Base Values, e.g. category) and Vertical (Derived Values) Axes,

  e. The Legend to specify distinguishing criteria in case of multiple lines, pies, bars, etc.

  f. Chart and Axis Titles

  g. Data Labels

- Every element of a chart such as plot area, X-axis, Y-axis, **data, titles, labels,**

Notes

legends, and **gridlines** can be formatted using the Design, Layout and Format dialog box in Excel.

- Charts size can also be changed as per requirements.
- For multiple visualisations of the same data through different types of charts, we can change the chart type (say, from line graph to bar chart, or bar chart to pie chart, etc) wherever required for better presentation as per the nature of data.
- Graphs and charts help in easy visualisation of any trends present in data In highly random data such as stock prices, textual description may not be easily possible to explain the price or other fluctuations, but graphs and charts overcome this constraint as they can be comprehended more easily by human beings.

TERMINAL EXERCISE

1. Define charts, graphs and how they are useful in business decisions?
2. Write down the usage and purpose of column chart, pie chart and line chart.
3. Describe about data series, legend, and data labels??
4. Describe use of Excel for preparation of chart.
5. Differentiate between pie charts, line charts and column charts respectively?
6. Described the steps to move, resizing and reposition a chart.
7. What does percentage in chart represent and how it being calculated by the software?
8. What are the differences between
   a. Area, XY chart and doughnut
   b. 2-D Charts and 3-D Charts
9. What is pie chart and what are percentage values means in pie chart?
10. Explain different types of charts which can be prepared using Excel?

Multiple Choice Questions

1. To change the location of a chart, right-click the chart and select:

   a) Chart Type b) Source Data

   c) Chart Options d) Move here

2. The Ribbon allows us to:

   a) Create either an embedded chart or a chart sheet chart

b) Create only an embedded chart

c) Create only a chart sheet chart

d) Change the data values used to create the chart

3. Once we have created a chart we may change _____:

a) the formatting for text like titles and data labels

b) only by going back through the ribbon

c) everything about the chart

d) the data series patterns only

4. In Excel the chart tools provides three different options ______, ________ and _______ for formatting:

a) Layout, Format, Data Marker

b) Design, Layout, Format

c) Chart Layouts, Chart Style, Label

d) Format, Layout, Label

5. Pie chart don't have more than ________ categories:

a) Ten	b) Twenty Five
c) Seven	d) Three

6. Column charts are useful for ____________________:

a) Showing data changes over a period of time

b) Illustrating comparisons among items

c) Both a and b

d) None of the above

7. The 2D graph using _______ , _________ axes and in 3D graph ______ axis is also used.

a) Category, value, vertical	b) Horizontal, vertical, depth
c) Category, value, series	d) b and c both

8. Excel automatically redraws the chart ___________:

a) If any change is made in data	b) If any change is made in the range data
c) a and b both	d) None of the above

9. Legend can be repositioned on the chart:

   a) anywhere b) on right side only

   c) on the bottom of X-axis d) on the corner only

10. Which chart element details the data values and categories below the chart?

    a) Data point b) Data labels

    c) Data marker d) Data table

11. From what command tab is the font size for an axis in a chart changed?

    a) Home b) Insert c) Format d) Design

12. Which of these purposes does not pertain to charts?

    a) Identifying trends b) Selecting values

    c) Recognising patterns d) Making comparisons

13. What do you see if you move over the mouse over a chart object?

    a) KeyTip b) ScreenTip c) ChartTip d) ChartKey

14. Which group on the Chart Tools Format tab shows the name of the selected element?

    a) Arrange Objects b) Chart Objects

    c) Choose Selection d) Current Selection

Skill Review

A. Create a trend chart after filling data in to the worksheet.

(Population of India/State in Millions to be enter)

Year	*Male(1)*		*Female (2)*		*Total(3)*	
	Literate	*Illiterate*	*Literate*	*Illiterate*	*Literate*	*Illiterate*
2001						
2002						
2003						
2004						
2005						
2006						
2007						
2008						

Note: *Total Literate = Values of Male Literate + Values of Female Literate*

Total Illiterate = Values of Male Illiterate + Values of Female Illiterate

B. Create a Pie chart to compare data from above table for Total (column number 3).

C. Draw a Trend charts for each male, female and totals separately.

D. Draw a Column Chart for the above data for each (male, female and total)separately for Literate and Illiterate.

E. Prepare a Pie chart and Column chart for the 10 different plots areas 5, 7, 8, 9, 8, 10, 4, 6, 7 and 3 hectares respectively.

F. Draw a Pie chart for the following data on vehicles registered in the **RTO** department during 2007-08 in your city.

Vehicle Type	Bus	Trucks	Auto Rikshaw	Cars	Two Wheelers	Heavy Vehicles
Number of Vehicles	575	5889	12345	9765	23456	65

G. Draw a Column chart for the following data.

Marks	0-20	21-40	41-60	61-80	81-100	Total
Number of Students	13	180	350	232	125	1000

ANSWERS TO INTEXT QUESTIONS

37.1	i. Pictorial	ii. Two	iii. Horizontal, Vertical	iv. Insert
37.2	i. Elements	ii. Texture	iii. Purpose	iv. Seven

ANSWERS TO MCQ

1. d	2. d	3. a	4. b	5. c
6. c	7. c	8. c	9. a	10. b
11. a	12. b	13. c	14. d	

38

DATABASE MANAGEMENT SYSTEM

So far you have studied in the previous lessons as how Tally can be used as an Accounting software in present scenerio. You also learnt the steps in installation of computerised accounting system, and how a computer software can be used to create company. Together with this, once a company is created and entries are made, one is able to classify accounts in different groups & finally prepare the Trading & Profit and Loss A/c along with Balance Sheet. As you are well aware that the conventionally used paper filing system, text documents, and even spread sheets may not enough for the growing needs of tracking this data and critical information. A simple solution to this situation is available in the form of a Database management System (DBMS).

OBJECTIVES

After studying this lesson you will be able to :

- understand how to structure database as per requirement;
- design and create database tables;
- make use of Microsoft Access for simple database applications involving creation of back-end database and the front end forms for capturing, processing and
- retrieval of data

38.1 DEFINING DATABASE

A database is a collection of data for generating useful and decision worthy information. It consists of an organized collection of interrelated data for one or more users, in a digital form. We find several examples of databases in our daily life like a database for school or a bank, library, bus/railway reservation system etc. Database Management System offers a logical way of storing data in a systematic manner which overcomes the several limitations such as data redundancy and inconsistency, data duplicity, difficulty in accessing data, data isolation, and data security problems. These difficulties, among others, prompted the development of database systems which represents data into the relational tables for the logical view of the database.

In order to understand how data is stored in a database to produce reliable and meaningful information, let us take an hypothetical case of an accounting database for maintaining data relating to accounting transactions of a business firm named Unique Electronics. The process of structuring a database comprises following elements:

38.1.1 Requirement Analysis

Requirements Analysis is the first and most important stage while designing a database. This stage involves assessing the informational needs of an organization, also referred to as Reality. The data requirements are used as a source for database design such as:

1. Data to be stored in the database.
2. Frequency of the data to be modified.
3. Users types of database.
4. Level of hardware and operating system available.
5. Will the database (back end) be used by any other front end application?

In our hypothetical case i.e., Unique Electronics, accounting transactions needs to be represented conceptually with full description i.e., accounting transactions are documented via vouchers. Voucher exhibits the date of transaction, amount of transaction, account name and account code (both for debit and credit entry) and the narration with respect to the transaction happened. Then the support documents are attached to the accounting voucher. The transactions are documented with respect to the category of accounts affected. These accounts are then classified into the categories (account types): Expenditure, Income, Assets, Liabilities and Capital.

38.1.2 Conceptual Design

After collecting and analyzing all requirements of an organization, a Conceptual diagram is developed for the database known as Entity-Relationship (ER) diagram. ER diagram consists of entities, the attributes related to these entities and their relationships. *Entity* is a real-world object, distinguishable from other objects. An entity is described using a set of *attributes*. An attribute is a property that describes an entity. *Relationships* are used to tie together different entities (two or more entities). Relationships can also have their own attributes.

38.1.3 Logical Design

It is representational data model through which ER design is transformed into inter-related data tables. Accordingly, there emerge five tables in our hypothetical case of Unique Electronics:

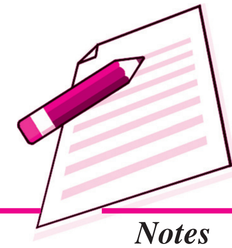
1. Employee Table
2. Vouchers Table
3. Support Table
4. Accounts Table
5. AccountType Table

38.2 IDENTIFICATION OF DATA TO BE STORED IN TABLES

Consider the following accounting transactions. Voucher number is coded sequentially.

1. Recall the journal entries recorded in case of manual system.

Date	*Voucher No*	*Transactions*	*Amount ₹*
April, 2014			
Commenced business with cash:			
01	A1	Sanjana	5,00,000
01	A2	Naveen	4,00,000
01	A3	Cash deposited into Bank	4,00,000
02	A4	Goods purchased from Jain and payment made by Cheque No. : 765421	1,50,000
02	A5	Paid for Carriage to M/s Sonu Transports	200
04	A6	Goods sold to Kripa & Co.	1,75,000
05	A7	Goods purchased from M/s Jyoti Bros.	2,50,000
06	A8	Sold goods for cash to M/s Kansakar & Co.	45,000
08	A9	Paid for advertisement by Cheque No.: 765424 to m/s Cosmo cables	2,500
09	A10	Received Bill of Exchange from Kripa & Co. Payable after 3 months	1,75,000
17	A11	Paid for insurance of godown Cheque No.: 765425	5,500
18	A12	Paid for Fuel, Power and Electricity	1,000



23	A13	Cash withdrawn by Sanjana for household expenses	20,000
27	A14	Goods taken from stock for personal use by Sanjana	5,000
28	A15	Furniture purchased from M/s S.N. Furniture by Cheque No.: 765428	45,000
30	A16	Salary for the month paid by cheque to Ramaiya	9,000
30	A17	Payment of Telephone bill by Cheque No.: 765433	1,500
30	A18	Paid for wages by cash	7,000

2. The individual accounts affected by these transactions are grouped under five categories :

   Capital ……………………….....……... 5

   Liabilities ………………………....….... 4

   Assets…………………………….......... 3

   Revenue …………………………..........2

   Expenditure…………………….............1

3. Based upon these account groups, the transactions are to be analysed. Later, the chart of accounts is subjected to the scheme of codification. In this case, the individual accounts are grouped as follows:

Account Name	*Acc_Type*
Sanjana's Capital Account	5
Naveen's Capital Account	5
Jyoti Bros.	4
Sanjana's Drawings	4
Naveen's Drawings	4
Furniture	3
Office Fittings	3
Plant and Machinery	3
Kripa & Co.	3

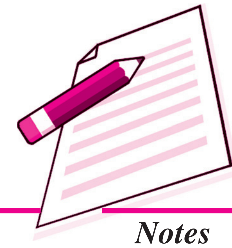
Cash	3
Bank	3
Bills Receivable	3
Sales	2
Purchases	1
Carriage Inwards	1
Fuel, Power and Electricity	1
Wages	1
General Expenses	1
Rent	1
Salaries	1
Discount Allowed	1
Advertisement	1
Insurance	1

4. The coding scheme of accounts, in this case, is as follows.

First Digit of Account_code	
Categories	
05	Capital
04	Liabilities
03	Assets
02	Revenue
01	Expenditure
Second Digit of Account_code	
Under Capital (5)	
01	Sanjana's Capital
02	Naveen's Capital
Under Liabilities (4)	

Second Digit of Account_code	
Long term Liabilities (41)	
Third Digit of Account_code	
01	—
02	—
03	—
Current Liabilities (43)	
Third Digit of Account_code	
01	Jyoti Bros.
10*	Sanjana's Drawings
This gap in code is provided for flexibility, based on the accounting concept that the business will survive and expand for the years to come.	
11	Naveen's Drawings
13	—
15	—
20	—
Under Assets (3)	
Second Digit of Account_code	
Fixed Assets (31)	
Third Digit of Account_code	
01	Furniture
02	Office Fittings
03	Plant and Machinery
04	—
05	—
06	—
Current Assets (32)	

Third Digit of Account_code	
11	Kripa & Co.
15*	Cash
16	Bank
17	Bills Receivable
This gap in code is provided for flexibility, based on the accounting concept that the business will survive and expand for the years to come.	
Under Revenue (2)	
Second Digit of Account_code	
01	Sales
Under Expenses (1)	
Second Digit of Account_code	
Capital Expenditure (11)	
Third Digit of Account_code	
01	=
02	=
03	=
Revenue Expenditure (12)	
Third Digit of Account_code	
01	Purchases
02	Carriage Inwards
03	Fuel, Power and Electricity
04	Wages
10	General Expenses
16	Rent
19	Salaries
24	Discount Allowed
27	Advertisement
29	Insurance



5. The above codification scheme utilizes the hierarchy used in grouping of accounts. Let us, for example, assume that our hypothetical case adopts a code range of 4 digits. In such a case, the codes will be assigned to the account heads in the following manner. (This may also be noted that we are using these 4 digit account codes for our data base design).

Account_code	*Account Name*
5001	Sanjana's Capital Account
5002	Naveen's Capital Account
4301	Jyoti Bros.
4310	Sanjana's Drawings
4311	Naveen's Drawings
3101	Furniture
3102	Office Fittings
3103	Plant and Machinery
3211	Kripa & Co.
3215	Cash
3216	Bank
3217	Bills Receivable
2001	Sales
1201	Purchases
1202	Carriage Inwards
1203	Fuel, Power and Electricity
1204	Wages
1210	General Expenses
1216	Rent
1219	Salaries
1224	Discount Allowed
1227	Advertisement
1229	Insurance

STRUCTURING OF DATA IN DATABASE

Accounts Table

Code	*Account Name*	*Acc_Type*
5001	Sanjana's Capital Account	5
5002	Naveen's Capital Account	5
4301	Jyoti Bros.	4
4310	Sanjana's Drawings	4
4311	Naveen's Drawings	4
3101	Furniture	3
3102	Office Fittings	3
3103	Plant and Machinery	3
3211	Kripa & Co.	3
3215	Cash	3
3216	Bank	3
3217	Bills Receivable	3
2001	Sales	2
1201	Purchases	1
1202	Carriage Inwards	1
1203	Fuel, Power and Electricity	1
1204	Wages	1
1210	General Expenses	1
1216	Rent	1
1219	Salaries	1
1224	Discount Allowed	1
1227	Advertisement	1
1229	Insurance	1

AccounttypeTable

Cat_Id	*Category*
5.	Capital
4.	Liabilities
3.	Assets

2.	Income
1.	Expenses

Vouchers Table

V_no	*Debit*	*Amount*	*Vdate (MM/DD)*	*Credit*	*Narration*
A1	3215	5,00,000	04/01	5001	Sanjana commenced business with cash
A2	3215	4,00,000	04/01	5002	Naveen commenced business with cash
A3	3216	4,00,000	04/01	3215	Deposited into bank
A4	1201	1,50,000	04/02	3216	Purchased goods through bank
A5	1202	200	04/02	3215	Carriage inward paid
A6	3211	1,75,000	04/04	2001	Sold goods to Kripa & Co.
A7	1201	2,50,000	04/05	4301	Purchased goods from Jyoti Bros. On credit
A8	3215	45,000	04/06	2001	Sold goods for cash
A9	1227	2,500	04/08	3216	Advertisement expenses paid through bank
A10	3217	1,75,000	04/09	3211	B/R received
A11	1229	5,500	04/17	3216	Insurance paid through bank
A12	1203	1,000	04/18	3215	Electricity charges paid in cash
A13	4310	20,000	04/23	3215	Sanjana's drawings
A14	4310	5,000	04/27	1201	Goods taken for personal use by Sanjana
A15	3101	45,000	04/28	3216	Furniture purchased through bank
A16	1219	9,000	04/30	3216	Salary paid through bank
A17	1210	1,500	04/30	3216	Telephone bill paid through bank
A18	1204	7,000	04/30	3215	Wages paid in cash

Note : The employees table and support table omitted.

INTEXT QUESTIONS 38.1

Fill in the blanks with appropriate words :

i. ______________ is the first and most inportant stage while designing database.

ii. ______________ are used to be together different entities.

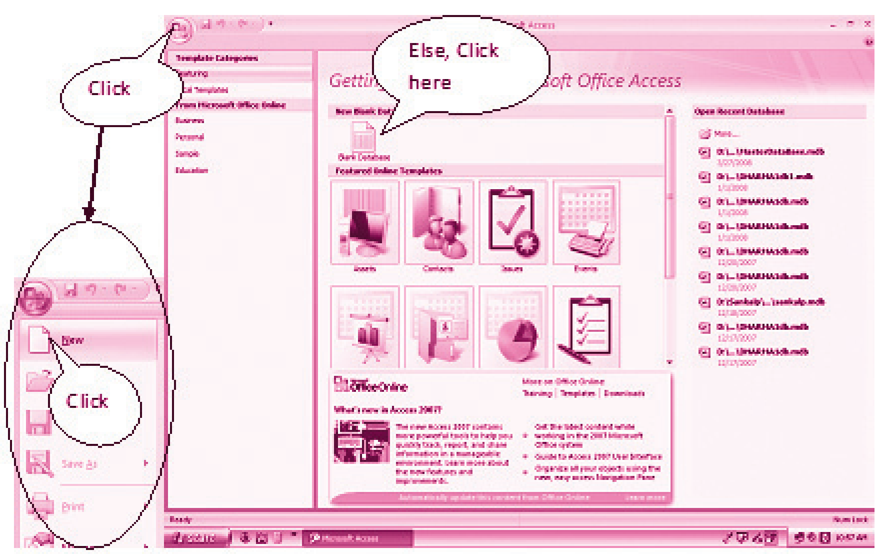
iii. All the accounts can be grouped in __________________ categories.

38.3 MICROSOFT ACCESS - INTRODUCTION

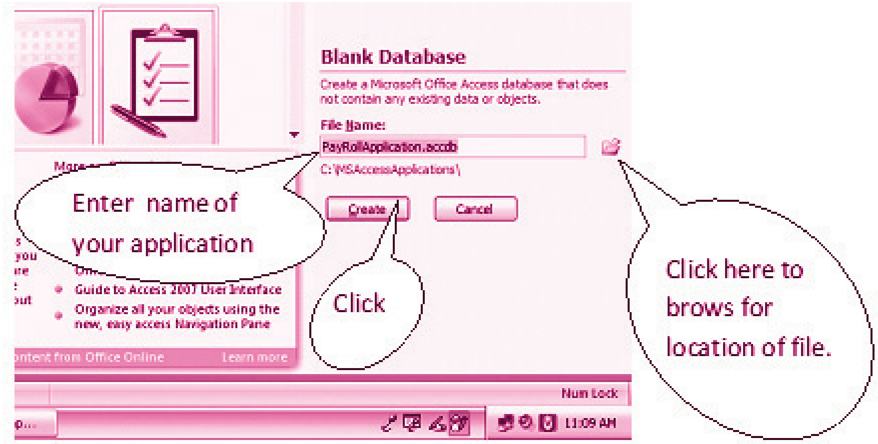
MS Access is one of the popularly used Data Base Management System to create, store and manage database. Access has certain capabilities, which bring it closer to an ideal Data Base Management System (DBMS). Before we take up the task of database design using Access, we will have to first start up the Microsoft Access Application:

Start > All Programs > Microsoft Office > Microsoft Access 2007

Tables, Queries, Forms and Reports are main components of MS Access. Others being Pages, Macros and Modules. The *Table object* enables the designer to create data tables with their respective fieldnames, data types and properties. *Queries* are meant to create the SQL compatible query statement, store data and retrieve both data and information. *Forms object* creates an appropriate user interface to formally interact with the back end database, defined by tables and queries. *Report object* is used to create various reports as per the requirement of the end user. The following pages take you through the graphics on how to start and work on MS Access-2007.



Getting Started with Microsoft Office Access



Dialogue Box for Creating New Database File

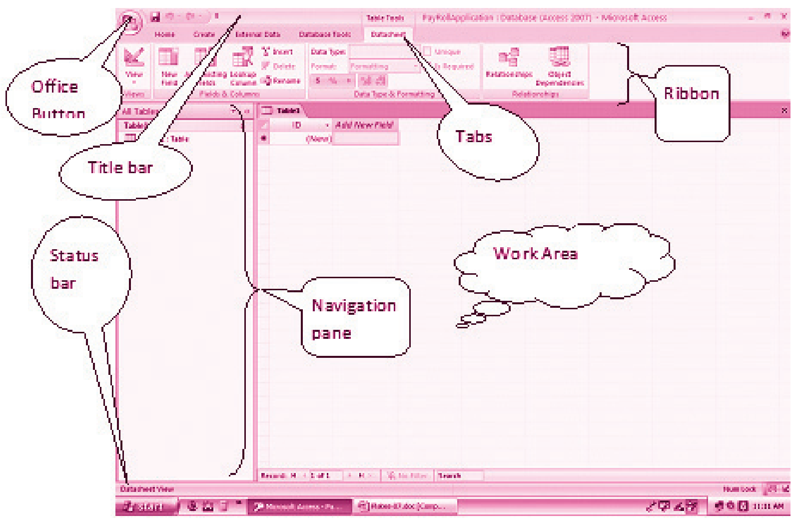
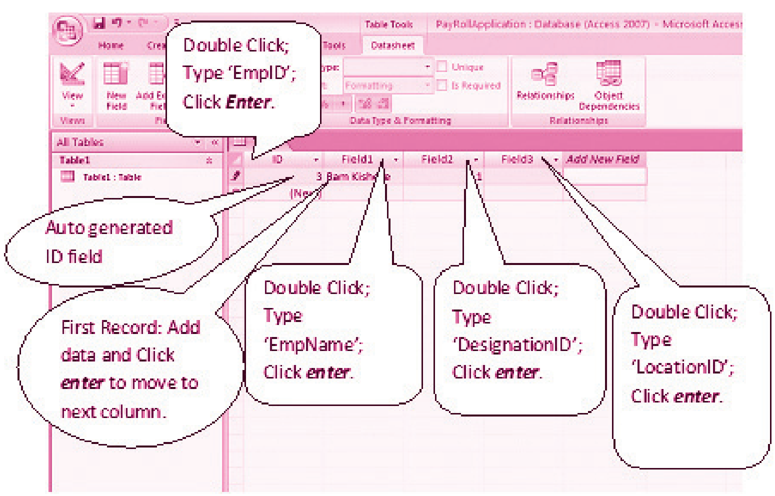
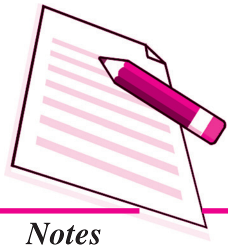


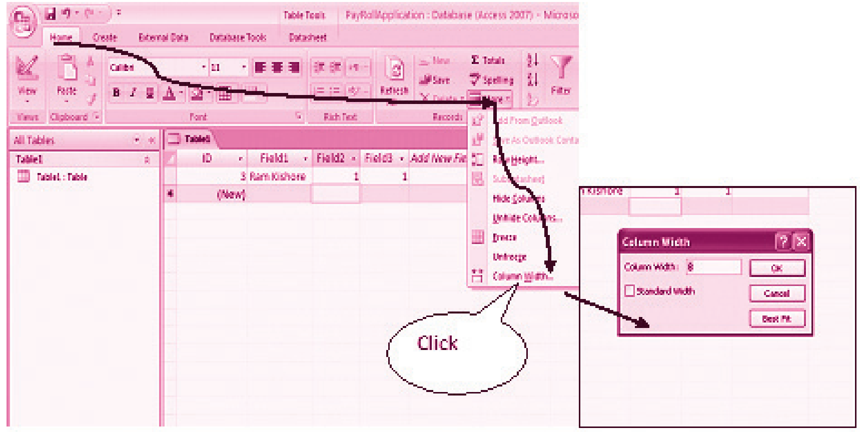
Illustration of the Active Database Window



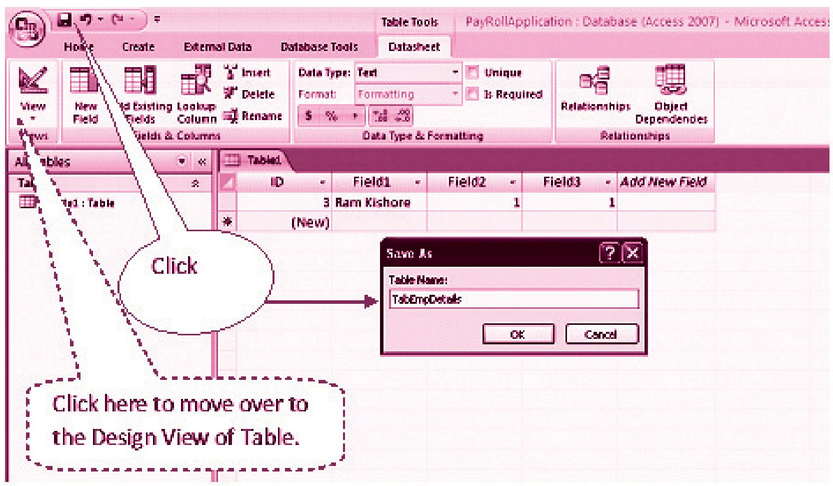
Creating a Table by Adding Records



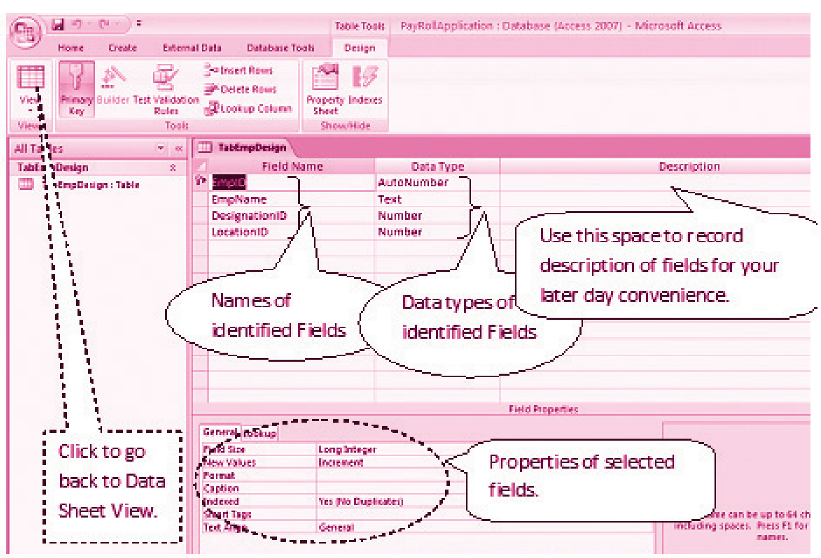
Notes



Column width Adjustment

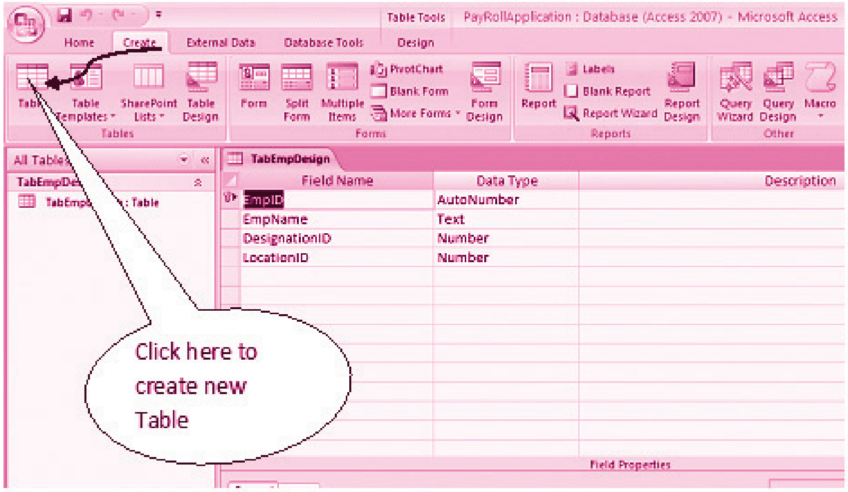


Saving of the Table with intended Name

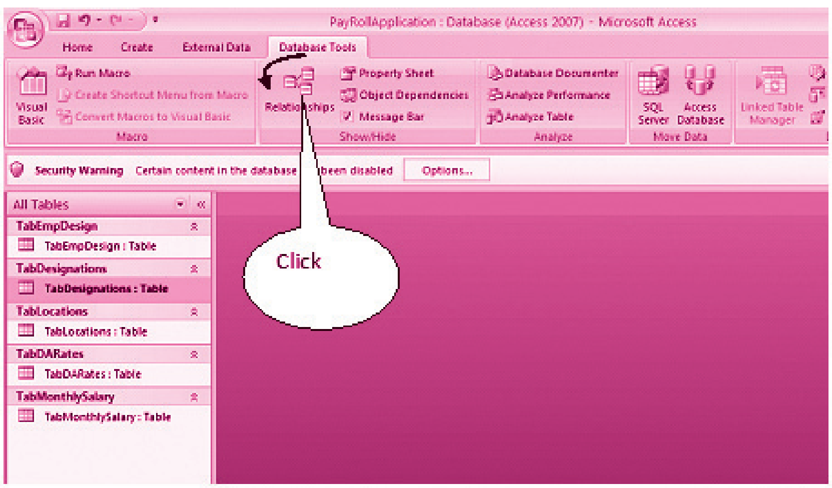


Design View of the Table

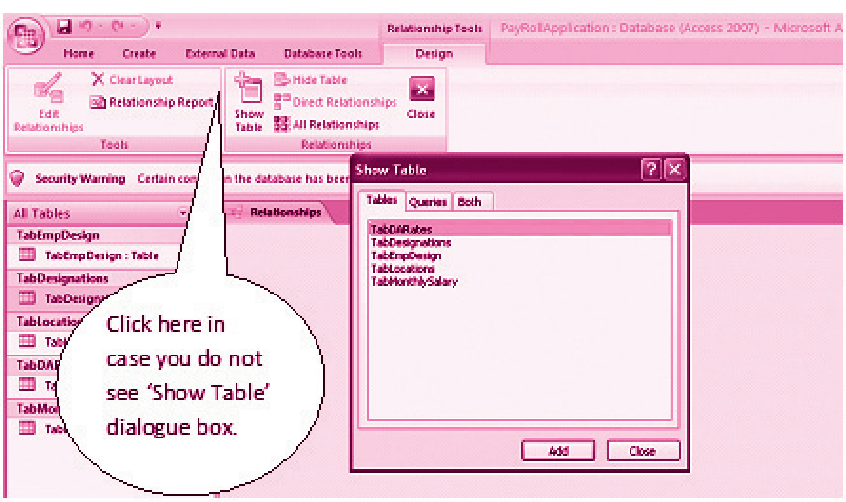
Notes



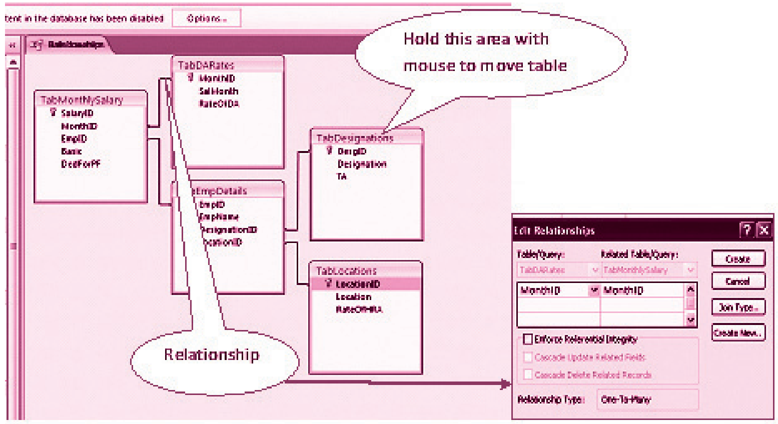
Creating New Table



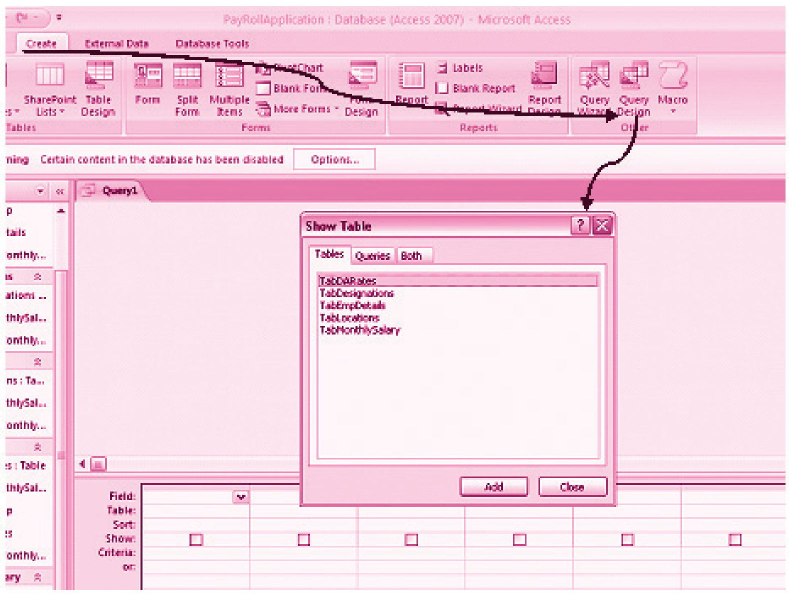
Creating Relationship between Tables



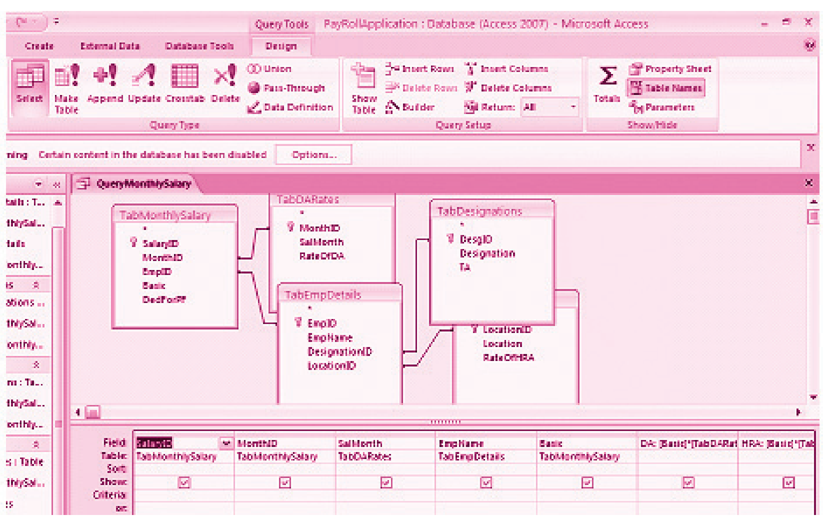
Adding of Tables for establishing relationship between them



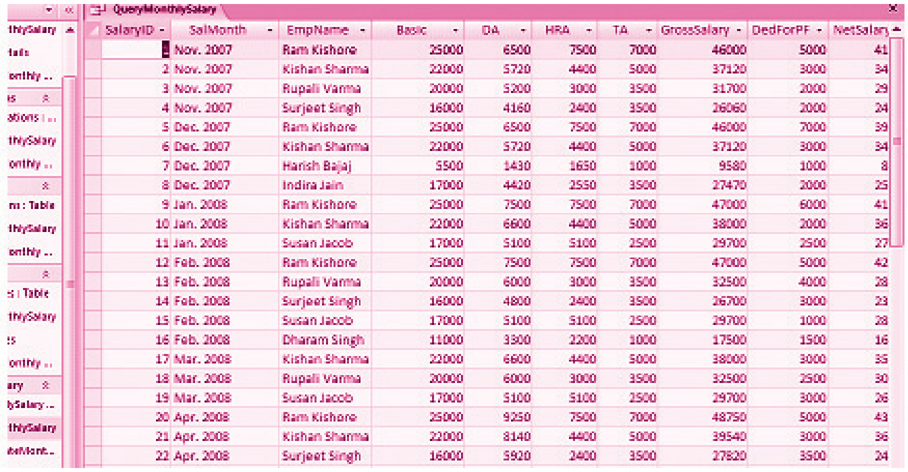
Relationship between different Tables



Creation of Query



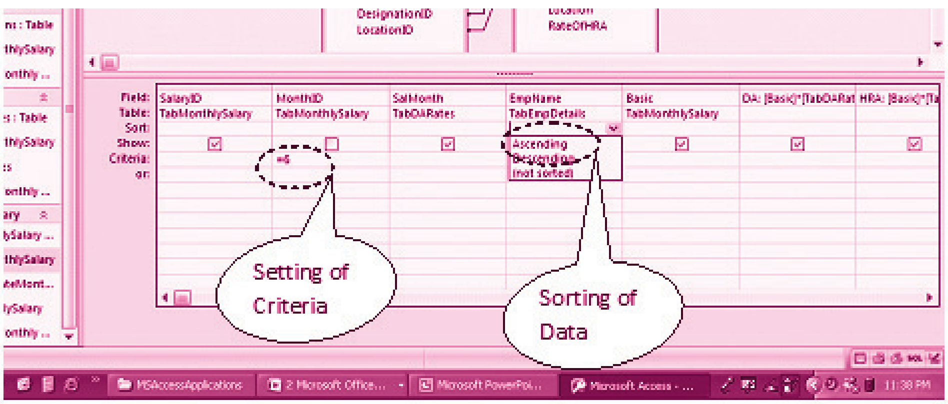
Creation of different Fields in the Query Table



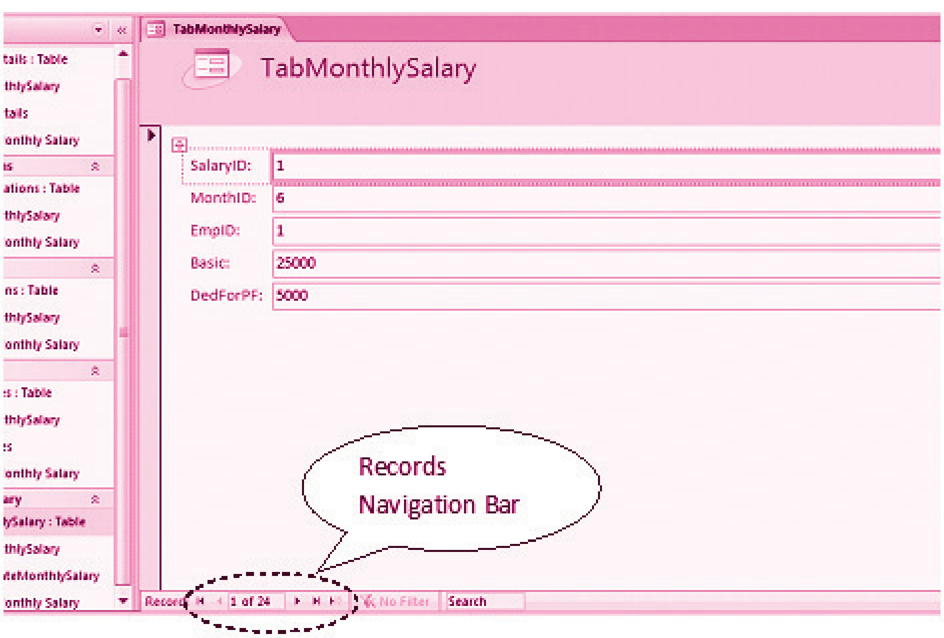
QueryMonthlySalary

SalaryID	SalMonth	EmpName	Basic	DA	HRA	TA	GrossSalary	DedForPF	NetSalary
1	Nov. 2007	Ram Kishore	25000	6500	7500	7000	46000	5000	41
2	Nov. 2007	Kishan Sharma	22000	5720	4400	5000	37120	3000	34
3	Nov. 2007	Rupali Varma	20000	5200	3000	3500	31700	2000	29
4	Nov. 2007	Surjeet Singh	16000	4160	2400	3500	26060	2000	24
5	Dec. 2007	Ram Kishore	25000	6500	7500	7000	46000	7000	39
6	Dec. 2007	Kishan Sharma	22000	5720	4400	5000	37120	3000	34
7	Dec. 2007	Harish Bajaj	5500	1430	1650	1000	9580	1000	8
8	Dec. 2007	Indira Jain	17000	4420	2550	3500	27470	2000	25
9	Jan. 2008	Ram Kishore	25000	7500	7500	7000	47000	6000	41
10	Jan. 2008	Kishan Sharma	22000	6600	4400	5000	38000	2000	36
11	Jan. 2008	Susan Jacob	17000	5100	5100	2500	29700	2500	27
12	Feb. 2008	Ram Kishore	25000	7500	7500	7000	47000	5000	42
13	Feb. 2008	Rupali Varma	20000	6000	3000	3500	32500	4000	28
14	Feb. 2008	Surjeet Singh	16000	4800	2400	3500	26700	3000	23
15	Feb. 2008	Susan Jacob	17000	5100	5100	2500	29700	1000	28
16	Feb. 2008	Dharam Singh	11000	3300	2200	1000	17500	1500	16
17	Mar. 2008	Kishan Sharma	22000	6600	4400	5000	38000	3000	35
18	Mar. 2008	Rupali Varma	20000	6000	3000	3500	32500	2500	30
19	Mar. 2008	Susan Jacob	17000	5100	5100	2500	29700	3000	26
20	Apr. 2008	Ram Kishore	25000	9250	7500	7000	48750	5000	43
21	Apr. 2008	Kishan Sharma	22000	8140	4400	5000	39540	3000	36
22	Apr. 2008	Surjeet Singh	16000	5920	2400	3500	27820	3500	24

Datasheet View of the Query



Seeting of Criteria and Sorting of Data in a Query



Creation of Form

INTEXT QUESTIONS 38.2

Fill in the blanks :

i. _______________ are meant to create the SQL compatibel query statement, store data and retrieve both data and information.

ii. _______________ is used to create various reports as per the requirement of the end user.

iii. _______________ has certain capabilities, which bring it closer to an ideal Database Management System.

38.4 CREATING TABLES IN ACCESS

Follow the following steps to create Tables in Access

1. Click at *Tables* object of Access followed by double click at create *table by design view*. A table window appears which has three columns: Field Name (*refers to the column name of the table being created*.), Data Type (*attribute of each defined column, refer figure 2*) and Description (*It is optional and the designer can provide description of the column for clarity.)*. Here you define the structure of the Table.

Text	It is used for a string of characters i.e., words or numbers not subjected to any kind of arithmetical calculations. The maximum length for a text field is 255 characters.
Memo	Used for storing comments and accommodates 65,536 characters.
Number	*Stores numbers and are subjected to arithmetical calculations.*
Date/Time	Stores dates, times or a combination of both.
AutoNumber	*It is a numeric data automatically entered by Access.*
Currency	Stores numbers in terms of Dollars, Rupees or other currencies.
Yes/No	Declares a logical field which may have only one of the two opposite values alternatively given as Yes or No.
OLE object	Stands for Object Linking and Embedding, Refers to object such as photograph, bar code, image or any other document created in another application.
Hyperlink	This data type stores Universal Resource Locator (URL) and email addresses.

2. Once the data types is specified, Access allows designer to define properties of each column. In the context of text data type, the general properties relate to:

Field size	Refers to the maximum number of characters allowed in each column. In case of numbers, it refers to the type of numbers being stored as per the requirements.
Format	Indicates as to how the field's contents are displayed.
Decimal places	Applies to single, double or decimal types of numbers.
Input mask	Formats data entry that includes punctuation. It works only for text and date type fields.
Caption	It is a label used for the field in datasheet and on forms and reports.
Default value	It is used for specifying a value for new entries of data records.
Validation rule and text	Checks data to eliminate incorrect entries. Validation criteria is specified for this property. If the entered data does not satisfy the validation criteria, the validation message is displayed.
Required and Indexed	Required property must be provided value Yes/ No. Indexing a field results in speeding up sorting, searching and filtering of records on that field.
Allow zero length	This property is available only for text fields. Setting it to Yes/No determines whether a text string with zero length is a valid entry or not.

INTEXT QUESTIONS 38.3

Fill in the blanks :

i. Memo is used for storing comments and accommodates ___________ characters.

ii. OLE object stands for ______________.

iii. _______________ formats data entry that includes punctuation. It works only for text and date type fields.

iv. _____________ is a label used for field in datasheet vie and on forms and reports.

Skill Review 1

1. Adjusting Column Widths; Finding and Editing Records; Adding and Deleting Records

a) Start Access and open the Employee1.accdb database.

b) Create Employees table.

c) Adjust all columns to Best fit.

d) Fill in the table with data.

e) Use FIND command to locate the records. Edit Salary, Date of Birth, Hire Date.

f) DELETE record.

g) Add new records to the table.

2. Sorting and Filtering

a) With Employee1.accbd file, open the employees table.

b) Sort the table in ascending order by Last_Name.

c) Sort the table in descending order by Annual_Salary.

d) Sort the table in ascending order first by Department and then by Last_Name.

e) Preview the table in the Print preview window.

f) Filter table to display only those employees who work in the European distribution department.

g) Close the database.

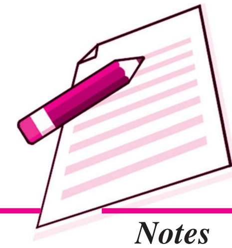
3. **Mr. Jai Prakash,** instructor in the Theatre Arts Division, has been called out of town to attend a family matter. The grades for Middle semester II have to be entered into the database by the end of the today. Jai has provided you with the following grades:

Seema	A+	Kavita	C
Meena	C	Asha	A
Sarika	B+	Babita	B+
Aashita	D	Jaya	A
Tannu	C	Mamta	B
Susan	A+	Richa	C+

To Do:

a) Open Grades 1.accdb database.

b) Create Middle semester II table



Notes

c) Adjust column widths to *Best fit*.

d) Enter the grades provided in Step1 in the appropriate columns.

e) Preview table.

f) Close the table.

g) Close the database.

4. Creating the Job Search Company Database

a) You are starting to plan for your job search after graduation. You decide to maintain a database of company information in Access.

b) Search the Internet for at least eight companies in your field of study. Include company name, address, telephone and fax numbers and a contact person in their human resource department, if possible.

c) Open jobsearchcompanyinfo.accdb database.

d) Open the companyinformation table.

e) Enter at least eight records for the companies you researched on the internet.

f) Adjust column widths as necessary.

g) Sort the records in ascending order by the company name field.

h) Preview the table.

i) Format all records to a smaller font size.

j) Change the page layout to fit the table on one page.

k) Save the file.

l) Close the database.

5. Create Employee2.accdb database and enable content.

a. Create a table .Enter the following details:

Field Name	**Data Type**
Employee_No	Text
Supervisor_LastName	Text
Supervisor_FirstName	Text
Annual_Review_Date	Date/Time
Salary_Increment_Date	Date/Time
No_Teaching_Periods	Number

b. Define Employee_No as the primary key field.

c. Save the table and name it Annual_Review

d. Switch to Datasheet view and then enter the following two records:

Field Name	Data Value1	Data Value 2
Employee_No	1015	1030
Supervisor_LastName	Sharma	Gupta
Supervisor_FirstName	Anand	Dipankar
Annual_Review_Date	5/20/09	1/23/09
Salary_Increment_Date	7/01/09	3/02/09
No_Teaching_Periods	2	10

1. Adjust all columns to Best fit.
2. Save changes to the datasheet layout.
3. Switch to design view and then make the following changes to the field properties:
   a. Change the field size for the *Employee_No* to 4.
   b. Create a validation rule for the *No_Teaching_Periods* field to ensure that no number is greater than 10 is entered into the field. Enter an appropriate validation text error message.
   c. Save the table, click yes at each message that indicates same data may be lost, and test data with new validation rule.
   d. Save the table. Switch to data sheet view and add the following two records.

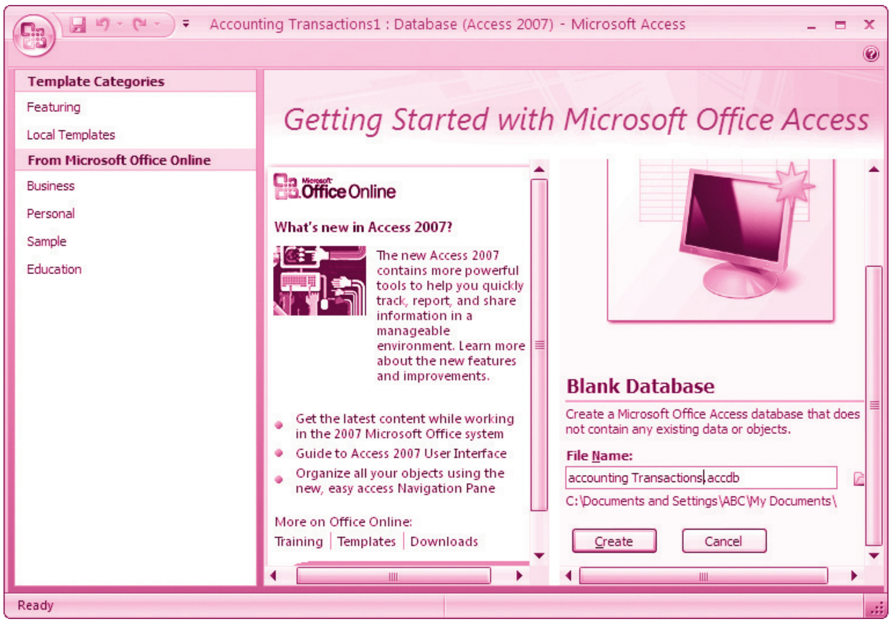
Field Name	Data Value1	Data Value 2
Employee_No	1035	1040
Supervisor_LastName	Faroqui	Jacob
Supervisor_FirstName	Samaira	Ann
Annual_Review_Date	14- March-09	10-March-09
Salary_Increment_Date	01-May-09	01-May-09
No_Teaching_Periods	8	6

4. Display the datasheet in print preview.
5. Change page orientation to landscape.
6. Close print preview and close Annual _Review table.

38.5 CREATING ACCOUNTING DATABASE FOR UNIQUE ELECTRONICS (USING MS ACCESS- 2007)

Using our conceptual design for Unique Electronics, we will now design a database for recording accounting transactions.

1. Create file Accounting Transaction



2. Create Table1, Table 2 and Table 3 and save as Account type, Accounts and Vouchers respectively.

3. In the design view, define the data fields as shown below:

Table: Accounts

Field 1: code	[Primary key, Text]
Field 2: acc_name	[Text]
Field 3: acc_type	[Number]

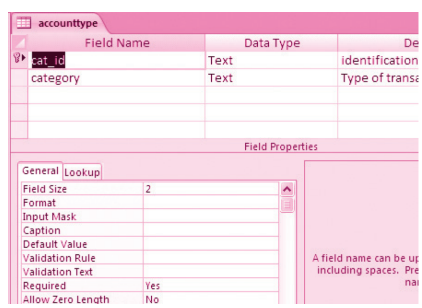


Table: Account type

Field 1: cat_id	[Number]
Field 2: category	[Text]

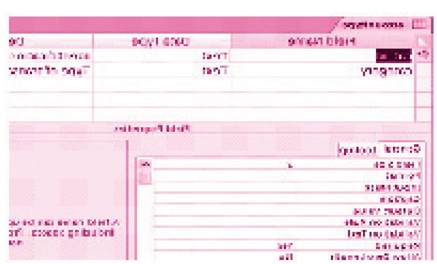


Table: Vouchers

Field 1: v_no	[primary key, Text]
Field 2: v_date	[Text]
Field 3: dr_code	[Number]
Field 4: cr_code	[Date/Time]
Field 5: dr_acc_name	[Text]
Field 6: cr_acc_name	[Text]
Field 6: Narration	[Text]
Field 7: Amount	[Number]

4. Fill in the data in the tables.

Vouchers | Accounts | AccountType

Code	Acc_Name	Acc_Type
1201	Purchases	1
1202	Carriage Inwards	1
1203	Fuel, Power and Electricity	1
1204	Wages	1
1210	General Expenses	1
1216	Rent	1

Vouchers | Accounts

Cat_Id	Category
1	Expenses
2	Income
3	Assets
4	Liabilities
5	Capital

Vouchers | Accounts | AccountType

Vno	Debit	Amount	Date	Credit	
A1	3215	500,000	01-Apr-12	5001	Sar
A10	3217	175,000	09-Feb-12	3211	B/F
A11	1229	5,500	17-Feb-12	3216	Ins

Access basics for creating Forms

A Form in Access is designed for data entry, display of data stored in database, editing existing data and adding new data records.

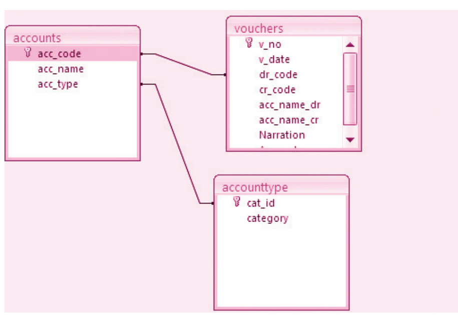
- Data Entry: Form is used for entering, editing and displaying data
- Application flow: Forms are used for navigating through an application.
- Printing information: It can be used for providing hard copies of data entry information.

5. Establish a relationship between tables.

   Having completed the designs of all data tables, the relationships are established between different tables.

   Click at: ***Database tools*** ⟶ ***Relationships*** ⟶ ***Show/Hide***

   In the **Show Table** dialog box, select a table and click ***Add.*** Add all the tables in the relationship window and close the box by clicking ***Close*** button. In the working area, all the tables will be shown along with their defined field names.



6. Create query and Generate Reports

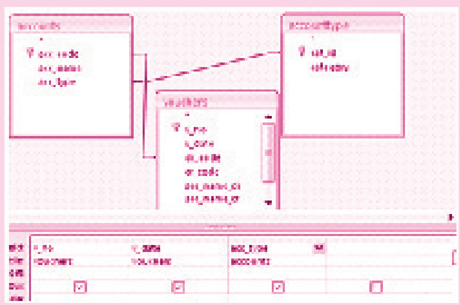
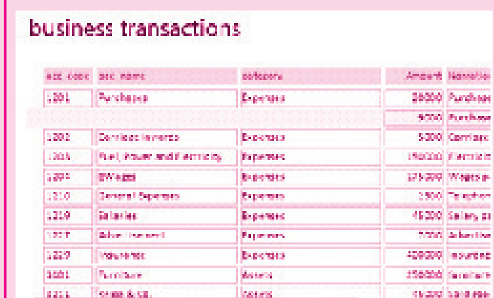
   Query provide real power to a database in terms of its capabilities to respond to user requests. In case of Access, Queries combines data from multiple tables and placing specific conditions for the retrieval of data.

   Click on : ***Create*** ⟶ ***Query Design***

   A ***Show Table*** dialog box appears with a ***Query Table*** in the back ground. In the Show Table dialog box, select a table and click ***Add*** button to add it in the relationship window. Close the show Table dialog box by clicking ***Close*** button. In the working above ***the Query Table*** you will notice the table objects with complete list of their fields along with the relationships established earlier. In the portion below the Table object, you will see the blank columns that represent columns in the query results datasheet, also called ***Design Grid***. Carefully fill different fields from Table object into the design grid in the same order in which we want to display in our query results.

Click : ***Run*** button under ***Results*** group of ***Design*** Tab to see the query results.

An accounting system without reporting capability is incomplete. Reporting is one of the main objectives for which an accounting system is designed, implemented and operated. There are two formats of presenting information through reports: Columnar and Tabular. Columnar and tabular format displays the caption of each field on a separate line in a single column down the page. A tabular format displays the caption of fields on the same line so that respective information contents appear in the next line.

Creation of queries	*Accounting reports*
	

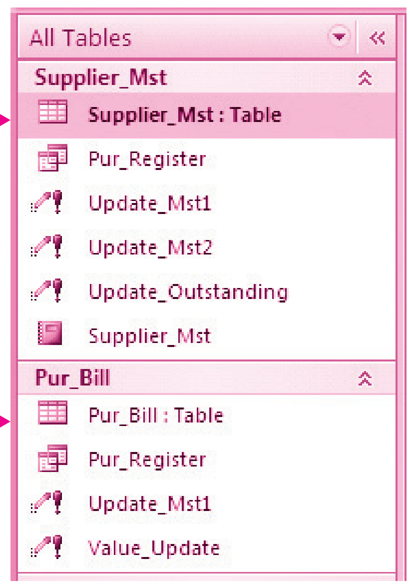
Skill Review 2

Accounting Tasks for preparing Purchase Journal for an organisation

I Preparation of purchase journal: conceptual design

Step 1: Create Tables

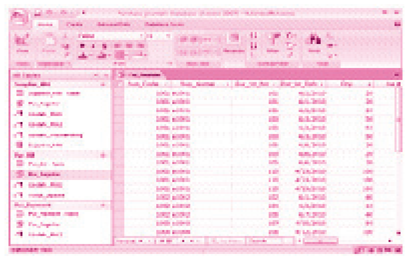
Table 1: Supplier_Mst		
Sup_code [Primary Key]	Number	
Sup_name Text	25	
Tot_Pur_Amt	Number	Decimal
Tot_Amt_Paid	Number	Decimal
Outstanding_Amt	Number	Decimal
Table 2: Pur_Bill		
Pur_vr_no [Primary Key]	Number	Long Integer
Pur_vr_Date	Date/Time	Short date
Sup_code Number	Long Integer	
Qty	Number	Decimal
Rate	Number	Decimal



Notes

Bill_Amt	Number	Decimal
Updated	Yes/No	
Table 3: Pur_Payment		
Pay_vr_no [Primary Key]	Number	Long Integer
Pay_vr_Date	Date/Time	Short date
Sup_code Number	Long Integer	
Amt_paid Number	Decimal	
Updated	Yes/No	

Step 2 : Maintain updated Purchase Register

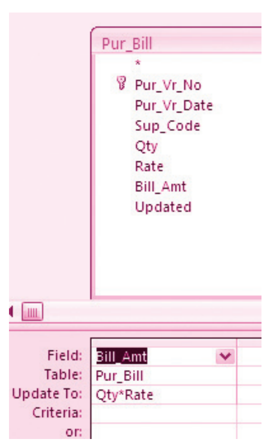


1. Since the purpose is to prepare the updated purchase register for the day, the **Table Supplier_Mst** has to be updated automatically with the occurrence of the every new transaction.

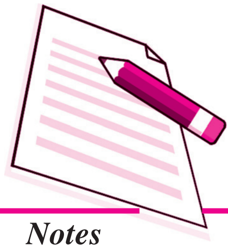
2. Every new transaction is recorded through the Table Pur_bill and has to be updated accordingly for the updation of Supplier_Mst Table. For this, we will be using the query type: UPDATE for the calculation of

   :i. bill_amt *(save the query as 'Value_update'; refer figure-)*

   ii. Outstanding_Amt *(save the query as ' update outstanding'; refer figure)*



3. [Supplier_Mst].[Tot_Pur_Amt]-[Supplier_Mst].[Tot_Amt_Paid]

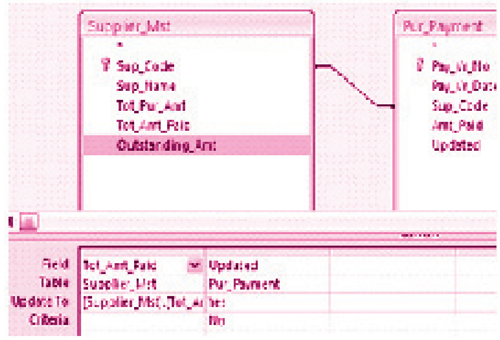


Notes

4. Similarly, the Table Pur_payment also updates the Table Supplier_Mst for the outstanding amount due to the suppliers. For this, we will be using the query type: UPDATE as shown in figure—— for the calculation of outstanding amount. The formula used will be:

   [Supplier_Mst].[Tot_Amt_Paid] + [Pur_Payment].[Amt_Paid]

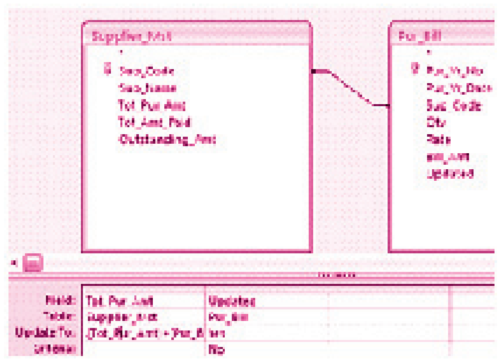
   (Save the query as Update_Mst2)



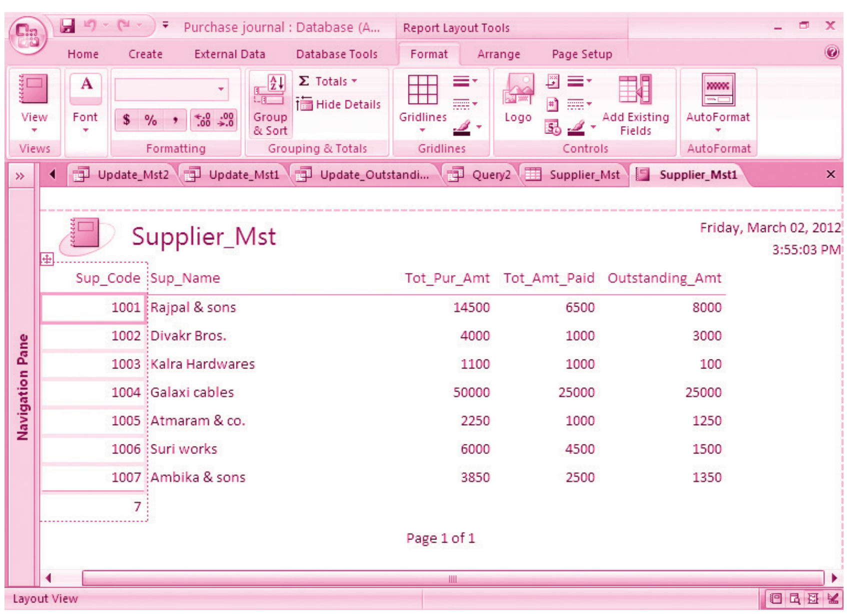
5. Since the Master Table should contain the information of total purchases made by a specific supplier, which in our case is Table Supplier_Mst , we will now create a UPDATE query. The formula used will be:

   [Supplier_Mst].[Tot_Pur_Amt] + [Pur_Bill].[Bill_Amt]

   (Save the query as Update_Mst1)



In this manner, the purchase book can be generated for a business organisation as shown below:



Skill Review 3

Preparing Sales Register for an organisation

1. Open the database file sales.acdb in the attached CD and enable the content
2. Create the following tables and define fields (as shown in figure—)
3. Generate the Sales Register

Table 1:		
Sup_code [Primary Key]	Number	
Cus_name	Text	25
Tot_sales_Amt	Number	Decimal
Tot_Amt_Recd	Number	Decimal
Outstanding_Amt	Number	Decimal
Table 2: sales_Bill		
sales_vr_no [Primary Key]	Number	Long Integer
sales_vr_Date	Date/Time	Short date
cus_code	Number	Long Integer
Qty	Number	Decimal
Rate	Number	Decimal
Bill_Amt	Number	Decimal
Updated	Yes/No	
Table 3: Sales_Receipt		
receipt_vr_no [Primary Key]	Number	Long Integer
receipt_vr_Date	Date/Time	Short date
cus_code	Number	Long Integer
Amt_recd	Number	Decimal
Updated	Yes/No	

INTEXT QUESTIONS 38.4

Multiple Choice Questions :

i. 'DBMS' stands for :

a) Drawing Board Management Software

b) Dividend Based Marking System

c) Data Base Management System

d) Data base Marking Software

ii. MS Access is a :

a) Word processing Software   b) Presentation Software

c) Spread Sheet Software   d) Data Base Management Software

iii. The term 'field' as applied to database table means :

a) Vertical column of the table   b) Size of the table

c) Horizontal row of the table   d) Name of the table

iv. SQL stands for :

a) Simple Questions Language   b) Simple Que line up

c) Singular Quantity Loading   d) Structured Query Language

v. The default extension of MS Access (2007) file is :

a) .accbd   b) .exl   c) .doc   d) .exe

vi. In order to retrieve select data meeting a specified criteria from two different tables of Access database, we may make use of :

a) Table   b) Query   c) Form   d) Report

vii. To expect a well formatted printable data from Access database, we may use :

a) Table   b) Query   c) Form   d) Report

WHAT YOU HAVE LEARNT

- Database Management System (DBMS) provides a variety of software tools for organising, processing and querying data in a flexible manner.

- In DBMS, data is organised in tables (similar to a file). A table has a number of rows (or records) and columns (or fields or attribute). Each row contains a records of information, for example of an account head or a party or a transactions as per the need. The information in a row consists of a sequence of columns or attributes, such as transaction number, transaction date, etc, or it could be party's name, party's address, etc.

- One of the tasks in analysis of requirement is to identify and list out the information required including its elements. These elements of information become columns (attributes) in appropriate tables.

- Data (set of attributes) should be logically structured so as to put them in various tables. The goal of such structuring is to reduce data redundancy, to achieve data consistency as well as to enhance efficiency for adding, updating and querying operations on database. Data redundancy can be removed by normalisation process.

- Since the data stored in different tables may be related, such relationship is implemented by establishing links between tables. The database created on the basis of such relationships between different tables is called relational database.

- Relationship between tables is established with the help of primary key and foreign key. Primary key consists of minimum possible one or more than one attributes of a table, which uniquely identifies each row of that table. Foreign key consists of set of attributes, which from primary key in another (related) table.

- Most of Computerised Accounting Systems are multi-user systems. These systems use 'server database' unlike single-user (or desktop) systems using 'desktop database'. In a multi user system, a user interacts with the software though the user interface, which is also termed as 'front-end'. Database, which is kept on a server, is termed as a 'back-end'.

- MS-Access is an example of 'desktop database'. Oracle, SQL Server, IBM-DB2 is examples of 'server databases', Desktop databases may be satisfactory for SOHO (Small Office Home Office) organisations as they offer inexpensive and simple solutions to many of business data storage and processing requirements.

- In order to provide security and consistency of data, database is not directly accessible to users. Any addition or retrieval of information from database is done by user-friendly programs. Database is thus rightly referred to as 'back-end' while the interactive program, that includes user interface, is termed as 'front-end' of a database application.

TERMINAL EXERCISE

1. What do you understand by DBMS. Give names of two commonly available DBMS software?
2. With suitable example, illustrate the meaning of 'attributes' as applied to database?
3. Why do we seek to split up information into different tables rather than confine it to a single table?
4. What do you understand by terms 'key field', 'primary key' and 'secondary key' in a database?
5. List the conventions that you will follow, while naming different fields of a table?
6. What are the uses of 'query' object in Access program?
7. What do you understand by 'Form' object in Access and how are they useful?
8. What is the purpose of 'report' object in Access program?
9. What do you understand by database? What are the ways in which data is stored and queried in an Access database?
10. What are the advantages of Access over Excel?
11. Describe in brief the function of 'Table', 'Query', 'Form' and 'Report' object of Access program?

ANSWERS TO INTEXT QUESTIONS

38.1 i. requirement analysis ii. relationships iii. five

38.2 i. queries ii. report object iii. access

38.3 i. 65536 ii. object linking and embedding
iii. Input mask iv. caption

38.4 i. c ii. d iii. a iv. d v. a vi. b vii. d

SENIOR SECONDARY COURSE
ACCOUNTANCY
(320)
SAMPLE QUESTIONS PAPER

Time : 3 Hours *Max. Marks: 100*

Instructions:

i. Answer all the questions on separate sheet of paper.

ii. Marks are indicated against each question.

iii. Check your answer from the points given in the lessons.

iv. Do not send your answer sheet to National Institute of Open Schooling.

1. It is the amount paid to the person who looks after the functioning of the organisation but is not the employee of the organisation. (1)

   a) Salary   b) Honorarium   c) Subscription   d) Donation

2. The interest on Capital Accounts of partners under the Fluctuating Capital Account Method is credited to (1)

   a) Interest Account   b) Profit and Loss Account

   c) Partners Capital Account   d) None of these

3. Premium on issue of shares can be used for (1)

   a) Issue of fully paid bonus shares   b) Distribution of profit

   c) Transferring to General Reserve   d) None of the above

4. Depreciation is charged on : (1)

   a) Stock of Goods   b) Current Assets

   c) Fixed Assets   d) Liquid Assets

5. When A and B, sharing profits and losses in the ratio of 3 : 2, admit C as a partner giving him 1/5th share of profits. This will be given by A and B. (1)

   a) Equally   b) In the ratio of their profits

   c) In the ratio of their capital   d) In the ratio of 2 : 3

6. A, B and C are partners sharing profits in the ratio of 2 : 2 : 1. C retired. The new profit sharing ratio between A and B will be : (1)

   a) 2 : 1   b) 1 : 1   c) 3 : 1   d) 1 : 2

7. Debenture interest is paid (1)

a) At a pre-determined rate b) At variable rate

c) At a rate based on net profit of the company

d) At a rate as determined by the company from time to time

8. When Shares are forfeited, Share Capital Account is debited with : (1)

a) Nominal value of shares b) Called up value of shares

c) Paid up value of shares d) Market value of shares

9. Debenture holders are : (1)

a) The owners of the company b) The creditors of the company

c) The vendors of the company d) The customers of the company

10. Distinguish between Receipts & Payment Account and Income and Expenditure Account on the following basis : (3)

(a) Opening Balance (b) Nature (c) Capital and Revenue items

11. State the difference between General Reserve and Specific Reserve. Give one example of each. (3)

12. X,Y,Z and W shared the profits as 5:3:2:1. X retired and surrendered 1/5 of his share in favour of Y. Z's share increased to 5/11 and W's share increased by 1/11. Find out new ratio and the gaining ratio. (3)

13. Jayant, Rahim and Rajender were partners in a firm sharing profits in proportion to their capitals. On 31st March 2014, their Balance Sheet was as follow:

Balance Sheet of Jayant, Rahim and Rajender

as at 31st March 2014

Liabilities	₹	*Assets*	₹
Creditors	17000	Cash at Bank	8,000
Bills Payable	14,000	Stock	16,000
General Reserve	10,000	Bills Receivable	21,000
Jayant's Capital	50,000	Debtors 27000	
Rahim's Capital	30,000	Less Prov 2000	25,000
Rajenders Capital	20,000	Land and Building	71,000
	1,41,000		**1,41,000**

On 30th June 2014, Jayant died.His executors were entitled for

(a) Balance of capital of Jayant

(b) Share of profit till the date of death, the annual profit was estimated ₹ 60,000

(c) Goodwill of the firm was valued at ₹ 20,000

(d) Share in undistributed profits.

(e) His drawings till the date of death were ₹ 6,000

Prepare Jayant executor account. (5)

14 Punjab Gas Ltd. forfeited 200 shares of ₹ 10 each issued at a premium of ₹ 4 per share for non payment of the allotment money of ₹ 7 including premium, the first and final call of ₹ 2 per share. Out of these 160 shares were reissued at ₹ 12 per share fully paid. Give journal entries in the books of the company. (5)

15. Define issue of debentures as collateral security with the help of an example. (5)

16. How would you deal with the balance of the Forfeited Shares Account if: (5)

(a) all the forfeited shares have been re-issued.

(b) Some of the forfeited shares have been re-issued.

17. Sanjay keeps books on single entry system. His positon is as follows :

Particular	*31 Dec 2014*		*31 Dec. 2015*
	(₹)		*(₹)*
Cash in Hand	400		2,000
Cash at Bank	4,000		12,000
Stock in Trade	18,000		19,000
Sundry Debtors	9,000		16,000
Plant & Machinery	28,000		28,000
Furniture & Fittings	2,000		2,000
Sundry Crditors	25,000		30,000

During the year, he introduced ₹ 8,000 as fresh capital in the business and withdrew ₹ 1,000 per month. Calculate his profit or loss for the year ended 31st Dec 2015. (5)

18. United Health Education Club of Bengal received ₹ 40,000 as total subscription from its members in year 2010. Subscription due for the year 2009 was ₹ 16,000 and out of this amont only ₹ 14,500 were received in 2010 and the remaining is still due.

Subscription received in advance in the year 2009 for the year 2010 was ₹ 3,000 and Subscription received during 2010 as advance for the year 2011 was Rs. 1,800.

Subscription for the year 2010 is still due for ₹ 2,500 as on December 31,2010. (5)

Show how much subscription will be credited to Income and Expenditure Account. Also show the position of the Opening and Closing Balance Sheets of the United Health Education Club of Bengal.

19. Jay and Vijay were partners in a firm sharing profits and losses in the ratio of 3:2. On 31st March, 2013 they admitted Sanjay as a partner for 1/4 th share in the profits. Sanjay brings ₹ 50,000 as his capital. The Balance Sheet of Jay and Vijay before Sanjay's admission on 31st March, 2013 was as follows :

Balance Sheet of Jay and Vijay

as at 31st March, 2013

Liabilities		*Amount*	*Assets*	*Amount*
Creditors		20,000	Cash	15,000
Bills Payable		9,000	Sundry Debtors	24,000
General Reserve		21,000	Stock	18,000
Capitals :			Furniture	27,000
Jay	75,000		Machinery	45,000
Vijay	65,000	1,40,000	Building	61,000
		1,90,000		**1,90,000**

The following were agreed :

(i) Sanjay will bring ₹ 24,000 as his share of goodwill(premium).

(ii) Building was valued at ₹ 75,000 and Machinery at ₹ 40,000

(iii) A Provision for Bad and Doubtful Debts was to be created @5% on Sundry Debtors.

Prepare Revaluation A/c, Partners' Capital A/cs and Balance Sheet of the new firm. (6)

20. Laxmi Ltd. invited applications for issuing 200000 Equity shares of ₹ 10 each at a premium of ₹ 3 per share. The amount was payable as follows:

On Application ₹ 3 per share

On Allotment ₹ 5 per share (including premium)

On First and Final Call Balance

Application for 250000 shares were received. Shares were issued on pro-rata basis to all the applicants. Excess money received with applications was adjusted towards sums due on allotment. All calls were made and were duly received except the final call on 850 shares. These shares were forfeited. Pass necessary journal entries for the above transactions in the books of Laxmi Ltd. (6)

21. From the following Trial Balance of M/s B.G. Traders as on 31.03.2013.prepare (a) Trading and Profit & Loss Account for the year ended on 31.03.2013 and (b) the Balance Sheet as at that date:

Trial Balance of B.G. Traders

as at 31.03.2013

Particulars	*Debit Balance* ₹	*Particulars*	*Credit Balance* ₹
Stock (01.04.2012)	12,500	Capital	75,000
Purchase	78,500	Bills Payable	17,000
Wages	9,600	Sales	1,46,800
Land and Building	90,000	Discount	500
Plant and Machinery	37,000	Creditors	5,000
Bills Receivables	11,000	Interest	3,000
Debtors	15,600	Loan	28,500
Cash	8,750		
Rent	3,400		
Insurance	5,400		
Furniture	4,050		
	2,75,800		2,75,800

Adjustments :

(i) Stock on 31.03.2013 was ₹ 15,000

(ii) Write off depreciation on Furniture at 10% and on Plant and Machinery at 20%. (10)

OR

From the following Receipts and Payments Account of Good Health Club, prepare Income and Expenditure Account and Balance Sheet:

Receipts & Payments A/c of Good Health Club

For the year ended 31.12.2012

Receipts		*Amount*	*Payment*	*Amount*
To Balance b/d		2,000	By Electricity	1,200
To Subscriptions :			By General Expenses	1,800
2011	500		By Honorarium	2,500

2012	10,000		By Books	3,000
2013	1,500	12,000	By Newspapers	500
To Sale of Newspapers		400	By Furniture	2,000
To Sale of old Furniture			By Fixed Deposit into Bank	
(Book value - ₹ 1,200)		900	(on 1.1.2012 @ 10% p.a.)	5,000
To Rent received for use of Hall		2,000	By Balance c/d	3,800
To Profit from Entertainment		2,500		
		19,800		19,800

Additional Information :

(i) Club has 110 members each paying an annual subscription of ₹ 100.

(ii) Subscriptions outstanding on 31.12.2012 were ₹ 1,000

(iii) On 31.12.2012 General expenses outstanding were ₹ 200.

(iv) On 01.01.2012 club owned Building valued at ₹ 60,000; Furnitue ₹ 8,000 and Books ₹ 7,000.

22. The Balance Sheet of Rohit, Nisha and Sunil who are partners in a firm sharing profits according to their capital as on 31st March 2014 was as under:

Liabilities		***Amount***	***Assets***		***Amount***
Creditors		25,000	Machinery		40,000
Bills Payable		13,000	Building		90,000
General Reserve		22,000	Debtors	30,000	
Capitals :			***Less :*** Provision for		
Rohit	60,000		bad debts	1,000	29,000
Nisha	40,000		Stock		23,000
Sunil	40,000	1,40,000	Cash at Bank		18,000
		2,00,000			2,00,000

On the date of Balance Sheet, Nisha retired from the firm, and following adjustments were made :

(i) Building is appreciated by 20%

(ii) Provision for bad debts is increased to 5% on Debtors.

(iii) Machinery is depreciated by 10%.

(iv) Goodwill of the firm is valued at ₹ 56,000 and the retiring partner's share is adjusted.

(v) The capital of the new firm is fixed at ₹ 1,20,000.

Prepare Revaluation Account, Capital Accounts of the partner and Balance sheet of the new firm after Nisha's retirement.

OR (10)

The following is the Balance Sheet of Dee Pee and Pee Cee as at 31st December 2013. Partners shared profits in the ratio 4 : 3.

Balance Sheet of Dee Pee and Pee Cee
as at 31st December, 2013

Liabilities		*Amount ₹*	*Assets*	*Amount ₹*
Sundry Creditors		40,000	Cash at Bank	32,000
Bills Payable		26,000	Sundry Debtors	30,000
Pee Cee's Loan		20,000	Stock	40,000
Reserve Fund		14,000	Machinery	60,000
Capital :			Investments	30,000
Dee Pee	60,000		Fixtures	8,000
Pee Cee	40,000	1,00,000		
		2,00,000		2,00,000

The firm was dissolved on December 31, 2013. Assets were realized and liabilities are settled as:

(a) Sundry Debtors ₹ 28,000, Stock ₹ 32,000, Machinery ₹ 48,000.

(b) Investments were taken over by Dee Pee at ₹ 32,000.

(c) Fixtures were value less.

(d) Bills payable were paid in full and creditors were settled at 10% discount.

(e) The expenses incurred on realization were ₹ 4,000.

Prepare Realization A/c, Partners' Capital A/cs and Bank A/c.

SECTION - B
OPTION - I

23. Raw material purchased is shown in the Statement of Profit and Loss as: (1)
(a) Purchase of Stock-in-Trade (b) Cost of Materials Consumed
(c) Change in Inventories of Finished Goods, Work-in-Progress and Stock-in-Trade;
(d) None of the above

24. If net profit of a company before interest and tax is ₹ 60,000, its net fixed assets are ₹ 6,00,000 and working capital is ₹ 1,50,000, calculate its return on investment ratio. (3)

25. (a) Name any four methods of analysis of financial statements. (2)

(b) From the following income statement of Khosla Ltd. Prepare comparative statement of profit and Loss A/c (3)

Income Statement

for the year ended 31st March 2014

Particular	*Note No.*	*2013-14*	*2012-13*
Revenue from operation		2,00,000	175,000
Other incomes		40,000	25,000
Total Revenue		2,40,000	2,00,000
Cost of Revenue from operations		1,70,000	1,10,000
Tax Rate		50%	50%

26. From the following information calculate the amount of opening stock and closing stock :

Sales during the year - ₹ 2,00,000

Gross Profit on Sales - 40%

Stock Turnover Ratio - 5 times

Closing Stock - ₹ 6,000 less than the Opening Stock. (5)

27. Prepare Cash Flow Statement on the basis of the information given in the Balance Sheet of P.S. Ltd. as at 31st March, 2014 and 31st March, 2013 :

Particulars	*Note No.*	*31st March, 2014 (₹)*	*31st March, 2013 (₹)*
I. EQUITY AND LIABILITIES			
1. Shareholders' Funds			
(a) Share Capital		2,50,000	2,00,000
(b) Reserves and Surplus	1	70,000	50,000
2. Non-Current Liabilities			
Long-term Borrowings (12% Debentures)		80,000	1,00,000
3. Current Liabilities			
(a) Trade Payables	2	1,60,000	60,000
(b) Other Current Liabilities (Outstanding Liabilities)		20,000	25,000
Total		**5,80,000**	**4,35,000**
II. ASSETS			
1. Non-Current Assets			

(a) *Fixed Assets :*			
(i) Tangible Assets :Land and Building		2,80,000	2,00,000
(ii) Intangible Assets : Patents		2,000	10,000
(b) Long-term Loans and Advances		1,30,000	1,00,000
2. Current Assets			
(a) Current Investment		5,000	3,000
(b) Inventories		90,000	70,000
(c) Trade Receivables		60,000	40,000
(d) Cash and Cash Equivalents		13,000	12,000
Total		**5,80,000**	**4,35,000**

Note to Accounts

Particulars	***31st March, 2014 (₹)***	***31st March, 2014 (₹)***
1. Reserves and Surplus		
Surplus, *i.e.,* Balance in Statement of Profit & Loss	70,000	50,000
2. Trade Payables		
Creditors	60,000	40,000
Bills Payable	1,00,000	20,000
	1,60,000	60,000

(6)

OPTION - II

(Application of Computers in Financial Accounting)

23. What is Electronic Spread Sheet. (1)

24. Explain the various items of deductions used in payroll accounting. (3)

25. Describe the steps to move, resizing, and re-position a chart. (5)

26. Create an imaginary accounting database for a company using MS Access - 2007. (5)

27. What do you understand by database? How forms are created in Microsoft Access. (6)

SENIOR SECONDARY COURSE
ACCOUNTANCY
(320)
MARKING SCHEME

Time : 3 Hours *Max. Marks: 100*

Instructions:

i. Answer all the questions on separate sheet of paper.

ii. Marks are indicated against each question.

iii. Check your answer from the points given in the lessons.

iv. Do not send your answer sheet to National Institute of Open Schooling.

Q. No.	***Answer/Value Points***	***Distribution of Marks***	***Total Mark***
1.	(b)	1	1
2.	(c)	1	1
3.	(a)	1	1
4.	(c)	1	1
5.	(b)	1	1
6.	(b)	1	1
7.	(a)	1	1
8.	(b)	1	1
9.	(b)	1	1

10.

Basic	***Receipts and Payment Account***	***Income & Expenditure Account***
a) Opening Balance	It starts with the opening Balance of Cash in Hand or Cash at Bank.	There is no balance in the beginning.
b) Nature	It is a summary of the Cash Book.	It is the Summary of Revenue Income and Revenue Expenditure.
c) Capital and Revenue items	In receipts and payment account both capital and revenue nature items are recorded.	In Income & Expenditure account only revenue nature items are recorded.

(3)

11. (a) General Reserve : It is a reserve which is not created for any specific purpose. It can be used for any purpose in future eg. General Reserve or Contingency Reserve etc.

(b) Specific Reserve : These reserves can be used only for the purpose for which these have been created by the companies eg. Divided Equalisation Reserves, Investment Fluctuation Reserve etc. (3)

12. Y's Share = $\frac{3}{11}+\left(\frac{5}{11}\times\frac{1}{5}\right)=\frac{4}{11}$

Z' Share = $\frac{5}{11}$

W's Share = $\frac{1}{11}+\frac{1}{11}=\frac{2}{11}$

New profit sharing ratio : Y : Z : W = 4 : 5 : 2

Gaining ratio :

Y = $\frac{3}{11}-\frac{4}{11}=\frac{1}{11}$ gain   Z = $\frac{2}{11}-\frac{5}{11}=\frac{3}{11}$ gain

W = $\frac{1}{11}-\frac{2}{11}=\frac{1}{11}$ gain (3)

$\therefore$ Gaining Ratio = 1 : 3 : 1

13. **Jayant's Executors Account**

Particulars	*Amount (₹)*	*Particulars*	*Amount (₹)*
Drawings	6,000	Jayant's Capital A/c	50,000
Executor's Loan	66,500	General Reserve	5,000
		Rahim's Capital	6,000
		Rajender's Capital	4,000
		Profit & Loss Suspense A/c	7,500
	72,500		72,500

(5)

14. Share Capital A/c Dr. 2,000

Securities Premium Reserve A/c Dr. 800

To Forfeited Shares A/c 1,000

To Share Allotment A/c 1,400

To Share First & Final Call A/c 400

(Being forfeiture of 200 shares of ₹ 10 each non-issued at a premium of ₹ 4 per share, for payment of allotment and first & final call money)

Bank A/c	Dr.	1,920	
To Share Capital A/c			1,600
To Securities Premium Reserve A/c			320
(160 shares re-issued @ ₹ 12 each)			
Forfeited Shares A/c	Dr.	800	
To Capital Reserve A/c			800
(Forfeited shares A/c in r/o 160 shares transferred to capital Reserve A/c)			

(5)

15. Collateral security means security given in addition to the principal security. It is a subsidiary or secondary security. When a company takes loan from bank or any financial institution it may issue its debentures as secondary security which is in addition to the principal security. Such an issue of debentures is known as issue of debentures as collateral security.

Example : A company issued 1,00,000; 9% debentures of ₹ 100 each to bank as colateral security against a loan of ₹ 60,00,000. (5)

16. (a) Balance of the forfeited shares account will be transferred to Capital Reserve Account. 2½

(b) Only Balance of the forfeited shares account of reissued shares will be transferred to Capital Reserve A/c and the remaing will stand in forfeited shares A/c. 2½ (5)

17. Profits 16,600 (5)

18.

Particulars of Income		(₹)
(i) Subscription received during the year 2010		40,000
(ii) Add : Subscription due at the end of the year 2010		
(a) for 2009	₹ 1,500	
(b) for 2010	₹ 2,500	4,000
		44,000
(iii) Less : Subscription due at the end of 2009		16,000
		28,000
(iv) Add : Subscription received as advance in 2009 for 2010		3,000

(v) Less : Subscription received as advance in 2010 for 2011	1,800
Subscription income to be taken to Income & Expenditure Account	29,200

(5)

19. **Revaluation Account**

Dr. Particulars	Amount ₹	Particulars	Cr. Amount ₹
To Machinery	5,000	By Building	14,000
To Provision for Bad debts	1,200		
To Profit transferred to :			
Jay	4,680		
Vijay $\frac{2}{5}$	3,120		
	14,000		14,000

1½

Partners' Capital A/cs

$\frac{3}{5}$

Dr. Particulars	Jay	Vijay	Sanjay	Particulars	Jay	Vijay	Cr. Sanjay
To Balance	1,06,680	86,120	50,000	By Balance b/d	75,000	65,000	
				By Cash			50,000
				By Profit on Revaluation A.c	4,680	3,120	
				By General Reserve	12,600	8,400	
				By Premium	14,400	9,600	
	1,06,680	86,120	50,000		1,06,680	86,120	50,000

3

Balance Sheet of the New Firm

Dr. Particulars		Amount ₹	Particulars		Cr. Amount ₹
Creditors		20,000	Cash		89,000
Bills Payable		9,000	Sundry Debtors	24,000	
Capital :			*Less :* Provision	1,200	22,800
Jay	1,06,680		Stock		18,000
Vijay	86,120		Furniture		27,000
Sanjay	50,000	2,42,800	Machinery		40,000
			Building		75,000
		2,71,800			2,71,800

1½ (6)

20.

	Particulars	L.F.	Cr. (₹)	Dr. (₹)	
(i)	Bank A/c ...Dr.		7,50,000		
	To Equity Shares Application A/c			7,50,000	½
	(Received application money for 2,50,000 shares @ ₹ 3 per share)				
(ii)	Share Application A/c ...Dr.		7,50,000		1
	To Share Capital A/c			6,00,000	
	To Share Allotment A/c			1,50,000	
	(Applications money transferred to share Capital A/c and excess adjusted towards allotment)				
(iii)	Share Allotment A/c ...Dr.		10,00,000		1
	To Equity Share Capital A/c			4,00,000	
	To Securities Premium Reserve A/c			6,00,000	
	(Allotment money due @ ₹ 5 per share)				
(iv)	Bank A/c ...Dr.		8,50,000		½
	To Equity Share Allotment A/c			8,50,000	
	(Remaining allotment money received)				
(v)	Share First and Final Call A/c ...Dr.		10,00,000		1
	To Share Capital A/c			10,00,000	
	(Share First and Final call due @ ₹ 5 per share)				
(vi)	Bank A/c ...Dr.		9,95,750		1
	To Share First and Final Call A/c			9,95,750	
	(First and Final Call received)				
(vii)	Share Capital (850 x 10) A/c ...Dr.		8,500		1
	To Share Forfeited A/c (850 x 5)			4,250	
	To Share First and Final Call A/c			4,250	
	(Forfeited 850 shares for the non-payment of First and Final call)				(6)

21. **Trading and Profit & Loss A/c of B.G. Traders**

for the year ended on 31.03.2013

Dr. Particular		Amount (₹)	Particulars	*Cr.* Amount (₹)
To Opening Stock		12,500	By Sales	1,46,800
To Purchases		78,500	By Closing Stock	15,000
To Wages		9,600		
To Gross Profit c/d		61,200		
		1,61,800		1,61,800
To Depreciation :			By Gross Profit	61,200
Furniture	405		By Discount	500
P & M	7,400	7,805	By Interest	3,000
To Rent		3,400		
To Insurance		5,400		
To Net Profit transferred to Capital A/c		48,095		
		64,700		64,700

6

Balance Sheet of B.G. Traders

as on 31.03.2013

Liabilities		*Amount* ₹	*Assets*		*Amount* ₹
Capital	75,000		Land and Building		90,000
Add: Net Profit	48,095	1,23,095	Debtors		15,600
Bills Payable		17,000	Cash		8,750
Loan		28,500	Stock		15,000
Creditors		5,000	Bill Receivable		11,000
			Plant & Machinery	37,000	
			Less: Depreciation	7,400	29,600
			Furniture	4,050	
			Less : Depreciation	405	3,645
		1,73,595			1,73,595

4 (10)

OR

Balance Sheet *as on 1.1.2012*

Liabilities	*Amount*	*Assets*	*Amount*
Capital Fund	77,500	Cash in hand	2,000
(as on 1.1.2012)		Outstanding Subscriptions	500
		Building	60,000
		Furniture	8,000
		Books	7,000
	77,500		77,500

2

Income & Expenditure A/c of Good Health Club
for the year ended on 31.12.2012

Particulars		*Amount* ₹	*Particulars*	*Amount* ₹
To Loss on Sale Furniture		300	By Subscription (110 x 100)	11,000
To Elecrticity		1,200	By Sale of Old Newspaper	400
To General Expenses	1,800		By Rent Received from use	
Add : O/S	200	2,000	of Hall	2,000
To Entertainment		2,500	By Profit from Entertainment	2,500
To Newspapers		500	By Accrued Interest on Fixed	
To Surplus		9,900	Fixed Deposits	500
		16,400		16,400

5

Balance Sheet of Good Health Club
as on 31.12.2012

Liabilities		*Amount* ₹	*Assets*		*Amount* ₹
Capital Fund	77,500		Cash		3,800
Add : Surplus	9,900	87,400	Fixed Deposits		5,000
Outstanding General Exp.		200	Accrued interest on FD		500
Advance Subscription		1,500	Building		60,000
			Furniture	8,000	
			Less : Sold	1,200	
				6,800	
			Add : Purchases	2,000	8,800
			Book	7,000	
			Add : Purchased	3,000	10,000
			O/S Subscriptions		1,000
		89,100			89,100

3 (6)

22.

Revaluation Account

Dr. Particulars		Amount ₹	Cr. Particulars	Amount ₹
Provision for Bad debt A/c		500	Building A/c	18,000
Machinery A/c		4,000		
Profit transferred to				
Capital Accounts (3:2:2)				
Rohit	5,786			
Nisha	3,857			
Sunil	3,857	13,500		
		18,000		18,000

3

Capital Account

Dr. Particulars	Rohit ₹	Nisha ₹	Sunil ₹	Particulars	Rohit ₹	Nisha ₹	Cr. Sunil ₹
Sunil Capital	9,600		6,400	Balance b/d	60,000	40,000	40,000
Bank		66,143		General Reserve	9,428	6,286	6,286
Balance c/d	72,000		48,000	Revaluation (Profit)	5,786	3,857	3,857
				Rohit Capital		9,600	
				Sunil Capital		6,400	
				Bank	6,386		4,257
	81,600	66,143	54,400		81,600	66,143	54,400

5

Balance Sheet

as on 31st March 2006

Liabilities		*Amount* ₹	*Assets*		*Amount* ₹
Creditors		25,000	Building		1,08,000
Bank overdraft		37,500	Machinery		36,000
Bills Payable		13,000	Debtors	30,000	
Capital :			*Less :* Provision for		
Rohit	72,000		bad debts	1,500	28,500
Sunil	48,000	1,20,000	Stock		23,000
		1,95,500			1,95,000

2 (10)

Working Notes :

i. a) Profit sharing ratio is 60,000 : 40,000 : 40,000 *i.e.* = 3 : 2 : 2

b) Gaining Ratio : Rohit = 3/5 - 3/7 = 21/35 - 15/35 = 6/35

Sunil = 2/5 - 2/7 = 14/35 - 10/35 = 4/35

= 6/35 : 4/35

= 6 : 4 = 3 : 2

c) Nisha Share of Goodwill = 56,000 x 2/7 = ₹ 16,000.

Share of Goodwill in the gaining ratio by the existing partner, *i.e.*

Rohit = 16,000 x 3/5 = ₹ 9,600

Sunil = 16,000 x 2/5 = ₹ 6,400

Bank Account

Dr. Cr.

Particulars	***Amount (₹)***	***Particulars***	***Amount (₹)***
Balance b/d	18,000	Nisha's Capital A/c	66,143
Rohit's Capital A/c	6,386		
Sunil's Capital	4,257		
Balance c/d (Bank overdraft)	37,500		
	66,143		66,143

(ii) Bank overdraft is taken to pay the retiring partner amount.

(iv) New Capital of the firm is fixed at ₹ 1,20,000.

	Rohit (₹)	***Sunil (₹)***
New Capital (Rs. 1,20,000 in the ratio of 3 : 2)	72,000	48,000
Existing Capital (After Adjustments) *i.e.,* partner capitals	65,614	43,743
Cash to be brought by the remaining partners	6,386	4,257

OR

Realisation A/c

Dr. Cr.

Particulars	***Amount (₹)***	***Particulars***		***Amount (₹)***
Sundry Debtors	30,000	S. Creditors		40,000
Stock	40,000	Bills Payable		26,000
Machinery	60,000	Bank :		
Investments	30,000	Debtors	28,000	
Fixtures	8,000	Stock	32,000	
Bank :		Machinery	48,000	1,08,000
Bills Payable	26,000	Dee-Pee Investments		32,000
S. Creditors	36,000	***Loss :*** Dee Pee		16,000
Realisation Expenses	4,000	Pee Cee		12,000
	2,34,000			2,34,000

6

Capital A/c

Dr.					Cr.
Particulars	***Dee Pee***	***Pee Cee***	***Particulars***	***Dee Pee***	***Pee Cee***
Loss on Realisation	16,000	12,000	Balance b/d	60,000	40,000
Realisation	32,000		Reserve Fund	8,000	6,000
Bank	20,000	34,000			
	68,000	46,000		68,000	46,000

2

Bank A/c

Dr. Cr.

Particulars	***Amount (₹)***	***Particulars***	***Amount (₹)***
Balance b/d	32,000	Pee Cee's Loan	20,000
Realisation :		Realisation-liabilities settled	62,000
Assets realized	1,08,000	Realisation A/c (expenses)	4,000
		Dee Pee	20,000
		Pee Cee	34,000
	1,40,000		1,40,000

2 (10)

SECTION - B
Opetion - I
(Analysis of Financial Statement)

23. Analysis of Financial Statement refers to establishing meaningful relationship between various items of two financial statements. 1

24. Return on Investment ratio = $\dfrac{Net\ \ profit\ before\ \mathrm{int}\,erest\ \&\ Tax}{Capital\ \ Employed} \times 100$ 3

Capital Employed = 6,00,000 + 1,50,000 = ₹ 7,50,000

ROI = $\dfrac{60{,}000}{7{,}50{,}000} \times 100$, 80%

25. a) Any four of the following tools :
    i. Comparative Financial Statement
    ii. Common size statement
    iii. Trend analysis
    iv. Ratio analysis

v. Funds flow analysis

vi. Cash flow analysis

b) Comparative Income Statement : 2

Particulars	*2012-13*	*2013-14*	*Absolute Change*	*% change*
Revenue from operation	1,75,000	2,00,000	25,000	14.28%
Add : Other Income	25,000	40,000	15,000	60%
Total Revenue	2,0,000	2,40,000	40,000	20,000
Less : Cost of Revenue from operations	1,10,000	1,70,000	60,000	54.54%
Net Profits before tax	90,000	70,000	(20,000)	22.22%
Less : Tax 50%	45,000	35,000	(10,000)	22.22%
Profits after tax	45,000	35,000	(10,000)	22.22%

3 (5)

26. Sales = 2,00,000

Less Gross profit 40% of 2,00,000 80,000

Cost of goods sold 1,20,000

$$\frac{Opening\ Stock + Clo\sin g\ stock}{2}$$

Average stock = 1,20,000 ÷ 5 = 24,000

OR

Average stock =

$$24{,}000 = \frac{x + x - 6{,}000}{2}$$

$2x = 48{,}000 + 6{,}000$

$2x = 54{,}000$

$x = 27{,}000$

$\therefore$ Opening stock = ₹ 27,000

Closing stock = 27,000 - 6,000

= ₹ 21,000 (5)

27.

P.S. Ltd.

Cash Flow Statement

for the year ended 31st March, 2014

Particulars		₹
I. Cash Flow from Operating Activities		
Closing Balance of Surplus, *i.e.,* Balance in Statement of Profit and Loss		70,000
Less: Opening Balance of Surplus, *i.e.,* Balance in Statement of Profit and Loss		(50,000)
Net Profit before Tax and Extraordinary Items		20,000
Add : Non-cash Expenses : Patents Amortised	8,000	
Non-operating Expenses : Interest on Long'term Loans*	12,000	20,000
Operating Profit before Working Capital Changes		40,000
Add : *Increase in Current Liabilities :*		
Increase in Creditors	20,000	
Increase in Bills Payable	80,000	1,00,000
		1,40,000
Less : *Increase in Current Asset and Decrease in Current Liabilities :*		
Decrease in Outstanding Expenses	(5,000)	
Increase in Trade Receivables	(20,000)	
Increase in Inventories	(20,000)	(45,000)
Cash Flow from Operating Activities (I)		95,000
II. Cash-Flow from Investing Activities		
Purchase of Land and Building		(80,000)
Loans and Advances		(30,000)
Cash Used in Investing Activities (II)		(1,10,000)
III. Cash Flow from Financing Activities		
Proceeds from Issue of Equity Shares		50,000

Repayment of Long-term Borrowings		(20,000)
Interest on Long-term Loans		(12,000)
Cash Inflow from Financing Activities (III)		18,000
IV. Net Increase in Cash and Cash Equivalents (I + II + III) **3,000**		
V. Cash and Cash Equivalents in the beginning of the year		
(₹.3,000 + ₹ 12,000)		**15,000**
VI. Cash and Cash Equivalents at the end of the year (IV + V)		
(₹ 5,000 + ₹ 13,000)		**18,000**

(6)

Option - II

23. Electronic Spreadsheet is a combination of rows and columns. Visually, the spreadsheet looks like any other matrix with rows and columns. It is also known as a worksheet. This worksheet is so large that the human eye cannot view all its rows and columns at a point of time. Therefore, user focuses on few rows and columns and keeps changing the focus to the required part of the worksheet, as and when required. It is normally used for calculations and comparison of numerical or financial data for arriving at the desired information for reporting. An electronic spreadsheet is a computer program that allows the user to add and process data. (1)

24. **Professional Tax (Applicable in some states) (PT) :** It is a statutory deduction according to the legislature of the State Government. 1

- **Provident Fund (PF) :** It is a statutory deduction, as part of social security. It is decided by the Government under the Provident Fund Act and is computed as a percentage of (Basic Pay + Dearness Pay, if applicable).
- **Tax Deduction at Source (TDS) :** It is a statutory deduction, which is deducted monthly towards Income Tax liability of an employee. It is essentially an apportionment of yearly Income Tax liability over 12 months. 1
- **Recovery of Loan Instalment (LOAN) :** Any amount signified by the employee for deduction on account of any loan taken up by him/her.

25. Resizing of the chart means changing size of the chart as desired. This option can be used independently for the **fonts, title, legends** easily. The first step is to select the chart by clicking the left button of the mouse.

Move the cursor on the corners or middle of the borders of the chart/graph which will provide the figure (the cursor will take the shape of a two headed arrow). By pressing the left button, and drag/ pull as desired to resize the chart. 1 (3)

26. 1. Create file Accounting Transaction

2. Create Table1, Table 2 and Table 3 and save as Account type, Accounts and Vouchers respectively.

3. In the design view, define the data fields and fill in the data in the tables.

4. Establish a relationship between tables.

5. Create query and Generate Reports

(5)

27. A database is a collection of data for generating useful and decision worthly information. If consists of an organised collection of interelated data for one or more users, in a digital form.

The Microsoft Access provides two primary mechanisms to achieve this goal. The first method is to simply bring up the table in a window by double clicking on it and adding information to the new blank row at the botton. We can also make changes in any other row as one would do in case of a spreadsheet. You can save the changes in the table by clicking on the save button on the Quick Access toolbar.

As second mechanism for information handling (*i.e.* addition, modification and deletion). The Access provides a user friendly forms interface that allows users to enter information in a graphical form, and this information transparently passes to the underlying database. This method is more user friendly for the data entry operator, through it may ential a little more work on the part of the database designer.

(5)